

## WICCI Science Council Meeting

Tuesday, February 4, 2007  
DNR Science Operations Center  
12:00 PM

### ATTENDANCE

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#### Science Council Members

- Scott Craven (SC)
- Chris Kucharik (CK)
- John Kutzbach (JK)
- Dick Latrhop (DL)
- John Magnuson (JM)
- Sandra McLellan (SM) [over phone]
- Ken Potter (KP)
- Dan Vimont (DV)
- Bill Walker (BW)
- David Webb (DW)
- Darrell Zastrow (DZ)

#### Nonmembers

- Pete Nowak (PN)
- Steve Pomplun (SP)
- Angela Engelman
- Kevin Gibbons

### ABSENT MEMBERS

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- Sharon Dunwoody
- Bud Harris
- George Kraft
- Philip Moy
- Jonathan Patz
- Sarah Shapiro-Hurley

### SUMMARY OF ACTION ITEMS

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- SM and DL will decide on who will give a presentation about WICCI during the Milwaukee conference.
- Working groups and experts in different areas will send slides to DL so that they can be arranged in put together into a presentation for WICCI.
- CK, DV, and JK will produce a two-page proposal for the climate change working groups that outlines how money would be spent.
- KP will adjust the Water Working Group proposal and distribute a copy to Science Council members.
- Outreach should make WICCI documents available privately on the website so that WICCI members can have access to them.

## MEETING PROPER

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### ***Introductions and Presentation of Agenda***

12:00 – DL and JM call meeting to order

PN presents agenda (*see Appendix*).

The formal news release regarding the formation of the Wisconsin Initiative on Climate Change Impacts (WICCI) is anticipated in the next few days. This will be a joint release through both DNR and UW-Madison. Individuals on the WICCI Science Council need to be aware of this as your names and contact information will be part of the news release. If there are questions from the media where you are unsure of the answer, please refer them to one of the co-chairs, SP or PN, or your supervisor.

### ***Milwaukee Conference***

DL and JM talk about the conference in Milwaukee that they have been planning with SM and others.

JM notes that Milwaukee conference would involve a presentation of WICCI in Milwaukee. They point out that there may be an opening for a 15-minute WICCI presentation. SM said Dick or someone who is working closely with the Milwaukee working group could present.

***Action Item: SM and DL will decide on who will give a presentation about WICCI during the Milwaukee conference.***

SM noted that there will be a meeting in the next two weeks regarding working group and Milwaukee presentation. SM and Ann will work on the agenda and the title of the presentation at the Milwaukee conference.

### ***Earth Day Conference***

Science Council members discuss program and layout the Earth Day Conference that SP and PN have been organizing for the Nelson Institute. The group came up with many points regarding the presentations. Highlights:

- (JM) There should be some summary of recent Wisconsin climate trends, as they relate to global trends and climate change mitigation.
- The presentation could be a lunch presentation.
- (BW) A presentation over lunch might not be the best time because people would be less attentive.
- (KP) The WICCI presentation should focus on how we make decisions and how adaptation is just decision-making in its different forms.
- (PN) The presentation should stress that adaptation is just as important as mitigation, essentially making the case for adaptation.

- (DV) People do not need to take home all the details from the discussion; they should just have a better concept of the bigger picture, which should be that the climate may be changing and that WICCI is important in addressing those concerns.
- The WICCI presentation could be two parts: a "Foley-type" climate talk and an overview of WICCI as an organization.
- Jonathan Pershing from the World Resources Institute was suggested as a possible speaker/presenter, and that he could possibly present over lunch.
- (JK) CK could talk about climate history and DV would discuss the IPCC overview.

JM closes the discussion, noting that SP and PN have suggestions and that Science Council members would be happy to participate in making the talks local and helping with the overview of WI climate better.

DL petitions climate group, forestry, and other groups for slides that could improve the WICCI presentation.

***Action Item: Working groups and experts in different areas will send slides to DL so that they can be arranged in put together into a presentation for WICCI.***

### ***Designating Working Groups***

DL went over the key questions proposed by the Science Council in the last meeting on "List of WICCI Proposed Questions" (*see Appendix*) that are grouped by topic area.

Attendees discuss at length the criteria for defining the working groups. Highlights:

- (PN) The Science Council should determine the criteria/decision points that are needed to designate a group as a "working group." Is that sufficient? Do we need anything more?
- (JM) A working group would need to be anointed by the Science Council. The designation should depend on the bottom-up push from these groups to be pushed into being a priority.
- (JM) The Science Council's role is to determine which of the list are valuable topics and which have strong science and people behind the research. Science Council would listen to the input of a person proposing a group and decide whether or not the particular group/issue should be prioritized.
- (SC) The number of topics needs to be limited to make sure that we have the time and resources to address them.
- (SC) There is not that kind of bottom-up push from the wildlife issue. It could complement other issues or be used to improve the case of other issues. It could push forward if needed, but SC put more priority on getting these groups moving.
- (DZ) The Science Council should ask, "What can we do for these groups?" There must be energy to make it happen.

- (DL) The working groups should be the boxes on the organizational chart that was worked out. Should Ken's flood data be a working group, or would the working group be water?
- (KP) He is more interested in how we make decisions, and how sensitive these issues are to climate change. The flood plane data is just one part of that.
- (KP) the topic should be narrow enough to make concrete recommendations so that the working group could give strong data and make their case, rather than being too general.
- (JM) Specific probe projects should be pushed forward, instead of focusing on umbrella groups.
- (SC) The umbrella group (e.g. water) could be in place as the specific issue (e.g. flood data) is undertaken so that we could at least have some things in place while the data is being analyzed and that umbrella group could take up more topics and put more work into progress.
- (KP) "What are we going to be proud of and be able to show after two years of having these working groups?" He noted that we need better monitoring, and this monitoring could be started tomorrow. He thinks it's important to any adaptation strategy we come up with.
- (JM + KP) These groups should focus on the decision makers and getting pertinent information to them.
- (BW) At first, he saw the working groups as research bodies, but they could be more policy bodies since WICCI do not have any money or resources to work with. He noted that we could possibly be more involved with policy and accepting people's preferences and think less about actually getting involved in the science and research, which would require research and limit the scope of WICCI's work.
- (DL) The broad working group concept could address multiple issues and coordinate researchers in the best way possible.
- (SC) Research would require a lot of time and resources. Working groups should really just focus on coordinating research and making sure that it informs the process.
- (BW) The Science Council's or the working group's role could be to identify the people and figure out who is doing the work. Working groups could be more of a virtual space for people to contribute knowledge and expertise - a type of clearing house, bringing in the data and getting it to the right decision makers.
- (JM) Working groups should be able to make recommendations to policy makers.
- (KP) Recommendations will bear fruit if decision makers are closely involved with the working group.

JM moved the discussion along by saying that each attendee should voice his or her concern regarding the working groups:

- (BW) There are two views now: one that we have groups address certain problems and two that we have umbrella working groups with experts that could field data and address issues.
- (KP + DV) The latter of BW's proposal would be difficult to make happen logistically because certain topics need to be answered and specifics need to be addressed before WICCI as a body can gain weight.
- (PN) Researchers can only work with money. Climate science will drive WICCI. Those resource issues that are most vulnerable to climate change should be the priority of WICCI. Predictions from the climate scientists should prioritize issues. The more political/coordinating role of the working groups seems more feasible because of a lack of funding, and WICCI can be a legitimate source of information to those working groups, as opposed to working groups that publish articles in peer-reviewed journals.
- (DL) Information from climate would be first synthesized from initial information. He likes the model for the working groups to bring in various experts under umbrella groups and referred back to the organizational chart that was created. From his point of view, if it were any other way, the chart would not be relevant.
- (SC) It is difficult to prioritize working groups without climate data that would paint a more accurate picture of the climate.
- (DV) There has not been any money allotted to the climate scientists. Climate scientists need to know more about what information is needed so that they can address specific questions from the working groups before they can delve into issues and reveal certain truths.
- (SM) The broader working groups seem feasible, and these groups should push issues forward to get the ball rolling.
- (JK) For each umbrella working group, we should find a person who has connections to the policy bodies that relate to the issue who could be permanent members of these groups and that the science issues could filter through them and they could inform the issues. His sense is that one or two permanent members in these 6-8 groups could continue to work with changing subgroups and see that they get to the right challenge. There would be a permanent person, but there would be lots of flexibility to address specific issues.
- (KP) has a different vision. He sees working groups as short-term projects that could be completed and spin off on different issues and ideas that would then inspire other groups.
- (JM) A mixed model might be okay and that this identification of decision-makers is part of the process.

PN noted that the Advisory Group is difficult to form until we know what the emergent working groups are formed.

## ***Climate Working Group***

CK opens up talk about climate working group. He, JK, and DV have been talking about the budget that they have been working on for the group. They want to produce a detailed report, a poster, and a variety of issues. They are somewhere between \$85,000 and \$125,000 for the budget for the first year. CK notes that there is \$10,000 from DNR, and he needs to know from LG whether or not they will get the full amount of money from the Nelson Institute.

Science Council members discussed the problems with budgeting for a while. Some key points:

- (DL) As it currently stands, they can only contribute \$40,000 maximum per year from the Nelson Institute.
- (DW) mentioned that he is a part of the research forum for the Energy Center. There has been an initiative to use money from utilities to fund environmental projects. He has a feeling that there will be a theme directly related to climate change and that there will be the possibility to get these funds. The call for proposals would be in spring, and the money would be released in fall.
- (DW) Regarding the importance of the issue and DNR's difficulty in allocating money, the media release would make it a real entity from the DNR's standpoint. But nothing is real until there is a box and an initiative. There would no longer be a question of what WICCI is. He has posed in the next biennial budget that there be a petition for dollars specifically to address climate change. He agrees that there needs to be a greater emphasis on the issue, but there needs to be a lot of work behind the scenes to get institutional momentum behind climate change.
- (DZ) The reallocation of funds is also a problem, in regards to the lower state budget.
- (BW) DNR has been watching its staff being cut right and left. They have been hit hard by recent events.
- (KP) If the Science Council were able to pool all the interest groups that are interested in these climate issues, we may be able to acquire a long-term source of funding by petitioning some of those people.

DV talked more about progress on the climate change group. There is a table for the information that would be deliverable. They petitioned members to tell them which variables interest them and which would they like to know. DV noted that researchers at UC Santa Clara have condensed IPCC data to a small area, and that using this method, the climate group could come up with precipitation and temperature data, but it is a lot of data.

PN noted that there should be a focus on precipitation and temperature variance. DV noted that variance is the hardest to pull out of the data and could only be produced from the historical record.

JK, DV and CK can produce a proposal for the first year with estimates of how exactly the working group could spend the money in the first year. PN and outreach could take the proposal and present it to different foundations.

JK said that the climate scientists are good at getting federal money, but they would have difficulty getting that money for a job specific to Wisconsin.

KP suggested having a Climate Change Coordinating Council could be arranged just like a Groundwater Coordinating Council (GWCC). The GWCC coordinates with different agencies that solicits proposals every year and gets proposals funded. This agency with climate change could take in proposals from different sources and help produce good scientific work.

CK said that they could present a two-page proposal by the end of the week that would detail how the money would be spent. CK would send it to the entire Science Council and have someone else figure out where the money is going to come from.

***Action Item: CK, DV, and JK will produce a two-page proposal for the climate change working groups that outlines how money would be spent.***

*The climate working group receives the approval of the Science Council.*

### ***Agricultural Working Group***

CK passed out proposal outline. His idea for the working group was more in the vein of the larger umbrella working group. He has the interest in exploring interesting topics that people would like to understand better.

He would like to get a big group together to look over agriculture as a whole. There are some people that need to be around a table working on these topics.

CK proposed having more state-level type funding sources.

*Science Council members support the working group and suggest using the proposal as an outline for future working group proposals.*

### ***Water Working Group***

KP proposes water working group. He says that after the discussion of today, he said it should be a priority of water in urban areas, stormwater management, waste water, and such.

He would like to engage in the short term with all of the Wisconsin associations (e.g. water managers, consultants, and researchers) to brainstorm with people about what the working group to accomplish before making it into a proposal. He would like to be grounded in what could be done in a couple of years in a working group before submitting a proposal.

KP said that he would adjust the document and get it back to the group.

***Action Item: KP will adjust the Water Working Group proposal and distribute a copy to Science Council members.***

SP noted that the municipal stormwater management is what sold the WICCI idea well to the Baldwin grant, so as a condition of the funds coming to WICCI, they would like they funds allocated to that project in the first three years.

KP will have to figure out what he needs.

DL posed whether or not the water group should be separated out.

KP noted that the initial project should be urban water issues, possibly specific to SE Wisconsin.

JM proposed that the full proposal be presented at the next meeting before deciding on it.

SM suggested that this document and all others mentioned be made available to Science Council members on the website.

***Action Item: Outreach should make WICCI documents available privately on the website so that WICCI members can have access to them.***

### ***Northern Highlands Working Group***

DL presents draft issue brief on the group. The proposal is an integrative working group to assess all the impacts to these areas, because there is a direct tie between the resource base and the local economy (tourism, fishing, etc.). DL would like to see a working group to endorse them to move forward.

He noted that this poses an interesting example of a regionally based working group. This group would work locally, but they could not address the political issue and push these issues like the agricultural group.

JM suggested that the policy recommendations could be local and not state.

DZ noted that the statewide group, such as a forest of wildlife group, could be involved with these policy suggestions. This Northern Forest Group would be specifically to bring the issues to the forefront, but not really to do the legwork on policy issues. He supports the working group, but should make the tension that exists between the policy and such things.

DZ and DL noted that the agency is going through a lot of change and that the issue should be checked in with the powers that be in the DNR before pushing it forward to see if they support it, including other state agencies and the Dept of Agriculture.

Regarding the protocol for working with DNR, DZ says that there has yet to be a discussion with the DNR board to approve the issues. He said that it would be prudent to ask people in the DNR, because there are tensions within the DNR due to funding being reduced. It would be prudent to follow up with them.

DL noted that the Northern Highlands proposal should go through DNR because it would involve so many DNR people, but the Milwaukee proposal would not necessarily need to go through them.

DL and PN note that the economy there is so dependent on a winter environment. PN wonders whether or not all these issues should involve the paper industry, the dept of tourism, etc.

Everyone agrees that DNR should be consulted before it can be decided upon.

*JM adjourns meeting at 3:12pm. Next meeting is March 3.*

## APPENDIX

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### ***Meeting Agenda***

12:00 1. Welcome and Introductions

12:15 2. Approval of Minutes

12:20 3. WICCI Publicity Activities  
a. News Release (roll-out activities)  
b. Earth Day  
c. Milwaukee

12:30 4. General Discussion: *What should an ideal WICCI overview presentation include?*  
Generate discussion on potential themes and topics; identify/volunteer appropriate slides to be used, and themes that could be used with different audiences.

1:00 5. Summary of working group topics developed at last Science Council Meeting.  
Discussion and agreement of the process for working group initiation.  
a. Issue description and salience.  
b. Time table of activities?  
c. Funding issues?  
d. Who should be involved?  
e. Launch issues?  
f. Other?

1:30 6. Update on Climate Science Issues  
a. Make data available. Summary of dynamics and trends in climate data  
b. Use IPCC General Circulation Models to develop scenarios for Wisconsin  
c. Scientific processes associated with developing finer scale projections

2:00 7. Pending Initiative of Working Group Proposals  
a. Agriculture  
b. Water quantity  
c. Northern Highlands

2:45 8. Identify Candidate Working Groups for Launching Discussion at Next WICCI

3:00 9. Adjourn

**List of WICCI Proposed Questions**

This table breaks down the above bullets taken from Question 1 into previously created working group topics created by DNR staff and WICCI members. This is so we can continue building on previous efforts as the process continues, plus it simplifies things a bit.

<b>Forestry</b>	<b>Fisheries</b>
<ul style="list-style-type: none"> <li>• What change in forest composition will occur over time with climate change?</li> <li>• Which native tree species have the genetic viability and variation geographically in the U.S. and have the greatest potential to migrate successfully into WI. Conversely, which species will be lost? This links to adaptation strategies.</li> </ul>	<ul style="list-style-type: none"> <li>• Fish and Fishery Changes – commercial, recreational, inland and great lakes</li> </ul>
<b>Tourism</b>	<b>Wildlife</b>
<ul style="list-style-type: none"> <li>• How will winter recreation be altered?</li> </ul>	<ul style="list-style-type: none"> <li>• Impact of climate change on distribution and abundance, and annual patterns of activity/movements of Wisconsin Wildlife (mammals, birds, reptiles, and amphibians).</li> </ul>
<b>Water Quality (surface and ground)</b>	<b>Great Lakes</b>
<ul style="list-style-type: none"> <li>• Water balances/groundwater</li> <li>• Changes in the hydrology of the Wisconsin River with potential impacts to dams, wastewater management, fish and wildlife habitat, and industry.</li> <li>• How will groundwater quantity, levels and temperature change</li> <li>• Projections of climate change influence on water management and the hydrologic budget for the irrigated agro-ecosystem of central Wisconsin and the impacts on water levels and stream flows.</li> <li>• WI inland water – lakes, streams, wetlands, and groundwater. What are the climate change impacts on quantity, quality, and biota?</li> </ul> <p>Projections of climate change influence on water management and the hydrologic budget for the irrigated agro-ecosystem of central Wisconsin and the impacts on water levels and stream flows.</p>	<ul style="list-style-type: none"> <li>• Coastal communities and coastal hazards</li> <li>• How will climate change the Green Bay ecosystem ecologically and economically?</li> </ul>

<b>Human Health Effects</b>	<b>Land Use</b>
<ul style="list-style-type: none"> <li>• What are the impacts of continued climate change on urban climate, human health, air pollution, and what is the magnitude of urban heat island in our larger cities such as Milwaukee and Madison?</li> <li>• What will be the impact of climate change on a piece of geographic megafauna such as Milwaukee?</li> </ul>	<ul style="list-style-type: none"> <li>• How will increase demand for biofuels coupled with increased rainfall variability impact Wisconsin's soils, and aquatic resources (biotic water quality and quantity).</li> <li>• What are the likely impacts of climate change and changing atmospheric chemistry on agricultural production and management?</li> </ul>
<b>Policy/Regulation</b>	<b>Energy and Infrastructure</b>
<ul style="list-style-type: none"> <li>• What are some of the key predictors of decision – making behavior change among Wisconsin policy makers and state residents?</li> </ul>	<ul style="list-style-type: none"> <li>• Design of infrastructure for managing storm water (volume, quality)</li> </ul>
<b>Economic Impacts</b>	<b>Other</b>
<ul style="list-style-type: none"> <li>• What are the “natural” or “baseline” states of change of various components of our economy?</li> <li>• How are the economic values of various ecosystem services likely to change? Eg. Value of water filtration, food control, etc.</li> <li>• How do economics fare when climate variability changes? In other words, how dependant is economics on a stable climate?</li> </ul>	<ul style="list-style-type: none"> <li>• Northern Highlands Ecological Landscape</li> </ul>

Working Group topics previously created but not mentioned during the last WICCI brainstorming exercise on January 10, 2008:

- **Wildlife diseases and human health effects**
- **Endangered species, State Natural Areas, and rare habitats**
- **Opportunities for Wisconsin in a changing climate**
- **Invasive/Exotic species**
- **Items for modeling**
- **Specific Impact Assessment Team**