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Climate Change Sub-Cabinet meeting
May 22, 2007 Anchorage, Alaska
Convened: 10:00 AM

Sub-cabinet members:

In Person: Commissioner Larry Hartig, Department of Environmental Conservation (Chair); Commissioner Emil Notti, Department of Commerce, Community and Economic Development; Buck Sharpton, Vice Chancellor for Research, University of Alaska Fairbanks Liaison to the Sub-Cabinet

By Phone: John Katz, Office of the Governor, Washington, D.C.; Commissioner Denby Lloyd, Department of Fish and Game; Bob Swenson, Representing the Commissioner of the Department of Natural Resources; Mary Siroky, Representing the Commissioner of the Department of Transportation

Representing Alaska Climate Impact Assessment Commission:

Representative Reggie Joule, Co-Chair; Michael Hurley, Bob Polowski (In Person)

Citizen: Ethan Berkowitz

Agency staff: DEC Air Quality Director Tom Chapple; DEC Public Information Officer Lynda Giguere (in person); Sam Bishop, Washington, D.C. (by phone).

Presenting by phone: John Walsh, IPCC Fourth Assessment Report: Findings for Alaska.

Introductions and opening remarks:

Commissioner Larry Hartig explained the draft Administrative Order—which is broken down by research needs, mitigation, and adaptation. The sub-cabinet is charged with developing a draft strategy for the Governor’s consideration to be adopted for the state. The AO will serve as its roadmap for developing the strategy. The 13th listed element in the AO is a “place holder” for tasks that are not otherwise listed in the AO but which the sub-cabinet thinks important.

Alaska’s focus will be a little different from other states’ action plans, which are primarily focused on setting goals for capping greenhouse gas emissions.

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While this goal is also important for Alaska, our primary and more immediate concern is adaptation and how to respond to climate changes.

The primary goal of this meeting is to walk through the elements of the draft administrative order, discuss actions that should be considered under each element and finish the day with enough information to allow us to start developing a rough outline or framework for a written working draft of a proposed strategy. This draft will be very preliminary, and there will be changes to it as we progress, but it will at least provide a working framework for our future discussions.

Notable points:

- The public recognizes that climate change is an important and immediate issue: they expect the state to have a unified, coordinated strategy to address the issue.
- It is important for Alaska to be at the table when national or regional climate change initiatives are being discussed, or we will lose the opportunity to share in federal funding or tailor those initiatives to better meet Alaska's specific needs.
- Creating a sub-cabinet recognizes that we're all in the same learning curve and need to work together to maximize and prioritize our resources. Helping the governor develop a state position must be a collective effort.

John Katz reported on the Washington, D. C. perspective. He has never seen a greater focus on a single issue in Congress. This interest is manifesting itself in additional research, mitigation, adaptation and funding sources, along with overlap in other existing issues such as energy policies and listings under the endangered species act.

The process is a work in progress. There are two or three major legislative initiatives, with varying degrees of restrictiveness focused on cap and trade. Not sure where all this is headed or whether Congressional leadership knows; however, Alaska's timing is very good. Although we are not at the beginning of the process we are still where we can influence the federal process.

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Thus far Alaska has been focused on funding mechanisms for coastal erosion and adaptation. We should play in national arena and be cognizant of other areas where we can have an impact (a more discrete universe); the impact of global warming on polar bears, for example, which is of national attention. With that focus is an opportunity to present some alternatives.

Commissioner Denby Lloyd, Department of Fish and Game: The sub-cabinet will help fish and game formalize their process. This effort will force us into becoming more formalized and comprehensive in our approach.

Fish and Game's focus is on invasive species, wildlife distribution patterns, ocean acidification, seasonal production cycles, polar bears. Given climate models and projections, some species have engendered concern on a national level. The Commissioner anticipates a number of ancillary issues, such as allocation for fishermen, lower productivity regimes in place, subsistence issues, and increased demand on limited resources.

Bob Swenson, Department of Natural Resources: DNR has a number of different responsibilities for mitigation and management across the state that due to climate: forest land management, oil and gas leasing programs, gathering and analyzing natural processes research, management of recreation opportunities, coastal zone management, fish habitat, etc.

There is a full spectrum of people's understanding of what climate change is, what's causing it, and this is not the venue for this group; however, important to point out that it's really an awareness that we're dealing with now.

Reference graph on Page 6 in Summary: Important to note that we have been adapting. There's certainly better ways to do things, but it's not like this hasn't been happening for a number of years and that we haven't been adapting in a number of ways through mitigation. How we improve that will be an important part of the process.

Commissioner Emil Notti: Commerce's focus has been on what's happening due to rising sea levels; primarily how to pay for relocating villages experiencing severe erosion, such as Newtok. Rough estimate is that it will take \$15 million to solve their problems. There must be planning for the number of villages that are similarly affected.

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Buck Sharpton, University of Alaska: The University is searching for ways to better partner with various agencies, so as to coordinate scientific research and find approaches that maximize return on investment. The University is ready and willing to participate in these activities in any appropriate way. Applaud state's approach to looking into these issues. Charter [Administrative Order] is unbelievably ambitious but critical to get started.

Alaska is constantly described as canary in coal mine. There are good reasons for that. Alaska sees and recognizes critical issues on horizon, such as longer growing seasons, invasive species, increasing coastal erosion problems, sea ice warming at faster rate. It is important to take every step possible to minimize negative impacts and increase opportunities.

State Committee on Research is a fledgling organization chartered with the responsibility of informing agencies to identify areas to partner with the state and address challenges we're facing in coordinated, cost effective way.

For the second year, the State has provided \$2 million to enhance the high resolution imagery maps for state. It is critical to take snapshots to compare; the last time state was mapped was 1955; a half century where we've experienced considerable environmental change that hasn't been documented. The University is in the process of updating those maps and should have revised maps for state in two or three years.

SNAP is new project (Scenarios Network for Alaska Planning) to take all various data sets that are mappable and combine them with best climate data available from Intergovernmental Panel on Climate Change (IPCC). SNAP is a new way of integrating the University's basic research tools into products of benefit to government and private sector, as well. The University is committed to continuing funding.

Rep. Reggie Joule: Presented an Alaska climate impact assessment commission update. First organizational meeting elected Ralph Samuels chair, Joule co-chair and held its first hearing in Fairbanks; second in Juneau. Heard primarily from state agencies and started to get a picture of the impact to agencies and how they're interfacing with the public. A third hearing was held in Anchorage where the commission heard from federal agencies.

Each hearing included a lengthy comment period from public from whom we received a lot of anecdotal information that corroborates scientific data.

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Emissions are of major concern. It is clear that there is currently no focus point of leadership in state. Communities interface primarily with Division of Military and Veterans Affairs and the Division of Emergency Services.

Another meeting will be held at the end of June in Kotzebue and the commission will travel to Shishmaref and Kivalina June 27, to see on the ground impacts. Other rural hearings will be scheduled and another hearing in Anchorage in October.

Final report is due to the Legislature January 2008. Elements included are assessment problems (flooding, erosion, permafrost); examine mitigation measures; recommend land use measures; estimate cost to state, and citizens; possibly policy and regulatory changes. Public health, fish and game, forest impacts, economic, resource development, policy and regulatory aspects and state assets at risk will be focus with alternative energy sometime in the future.

The commission is scheduled to sunset in January of 2008; it will be up to the legislature to determine whether or not this commission goes away or is extended. It is important to engage the legislature in the climate change discussion for funding. Any future deliberation needs members of the legislature and potentially stakeholders at the table; whether small communities or other agencies.

Discussion of Elements of the Climate Change Strategy:

AO #4) Early assessment and development of an action plan addressing climate change impacts on coastal and other vulnerable communities.

Discussion: Resources are the GAO and Alaska Village Erosion Technical Assistance Report, Army Corps of Engineers that outline at-risk communities.

Wildfires were discussed as a serious issue, as health risk and physical threat.

Division of Forestry has program to work with communities to identify high risk communities that can be integrated into the strategy. It is important to get baseline data to actually monitor real effects to properly assess risks, particularly in Interior Communities.

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DOT's perspective is road infrastructure and effects on large and small communities. DOT is not doing anything formally; gathering anecdotal information; freeze, thaw cycle that causes most problems on roads.

ISER (Institute of Social and Economic Research) is doing an infrastructure analysis estimating cost and continually adding to their list of infrastructure items.

Commerce, Corps of Engineers, DOT, Department of Education and Early Development have information due to their work on moving villages. Mike Black, Division Director, is the contact.

Action: Identify what research and data are available and scale and quality of data for communities that may be considered most vulnerable. A list of most at risk and most vulnerable may already exist. Then can take to next step of identifying the most critical needs and have it geographically based; i.e., state digital mapping initiative. Anecdotal photography is of value.

Workgroups formation: Crisis planning workgroup (Mike Black is leading). Contact Mike Black, with crisis planning group and Denali Commission, Mike Marsh contact.

DNR: database GIS system, add data as gathered, for fire danger.

Recommendation: integrate models with forestry information on fire risk.

DOT: need to identify someone to look at DOT managed infrastructure and what predictive modeling and data they need to evaluate risk.

Action: Mary Siroky will follow-up.

AO #5) Potential policies and measures to reduce the likelihood or magnitude of damage to infrastructure in Alaska and the effects of climate change.

Discussion: Future projections to determine long term problems due to climate change. What can science tell us?

The University looked at the problem; one of the issues is there are not really good models or expanded national flood insurance model into these areas of risk, but these are the questions that are coming forward. Temporary structures,

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such as ice roads are another concern. Low river flow for fuel barge delivery is yet another.

Discussed the SNAP project and its ability to use a variety of scenarios as guidance to predict expected impacts in certain regions in Alaska.

Action: Speak with John Walsh about SNAP potential to extract IPCC (Intergovernmental Panel on Climate Change) data for reasonably meaningful information. Perhaps, ask John to look at three regions: above Brooks Range, between Alaska and Brooks Range; South, Southeastern Alaska.

Discussion: How far are we away from having reasonable models for Alaska? There are 151 different models that went into IPCC report with a factor of 10 to 20 variations in those model results. The challenge is to hammer out the uncertainty and find the model that best predicts the future. For Alaska, very few of these models provide anything that approximates what we're seeing today from going back 30 years. There are factors in Alaska that have not been considered and are affecting reliability of models at a regional sense.

Action: Define what SNAP can do to predict specific impacts in moderate risk communities. Build into strategy that models have their limits. What level of risk are we able to take in a forward looking model? How far can we mitigate risk?

Determine from agencies what information they need.

Some initial scenarios should be available from SNAP within the next year; reasonably functional within 18 months.

Action: Access to data through a data warehouse where data can be shared. To help develop SNAP, data from DNR, DEC, Fish and Game need to be available. Look for opportunities to work together with federal and state agencies and others to build a data warehouse to allow data to be shared back and forth facilitate the development of these capabilities. Continue to participate in Climate Change Roundtable hosted by USFWS and USGS.

Need information from departments as to their perspective on risk which will help guide the approach to tuning scenarios where most useful, such as risk assessments.

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Recommendation: Advisory group to have members of SNAP and state agencies who work in GIS realm to interact and work through some of these issues. Once agencies see the range of predictions they can prejudice impacts.

AO #6) Potential policies and measures addressing anticipated changes to the marine environment due to climate change.

Discussion: Marine environment. Commercial and sport fishing issues, some intricate allocation plans in effect, subsistence resources may shift whereas communities may not shift. With interest in ocean planning out there, how can we join groups together to address climate change issues for Alaska? Is there a single forum best suited to working this topic?

Action: Present to Ocean Policy Sub-cabinet.

North Pacific Research Board, Alaska Ocean Observing System, National Marine fisheries Services, Jim Overland at Pacific Marine Environmental Lab

Discussion: With loss of sea ice, ocean routes will open across Northern Canada and Asia and we need to look at what are the ramifications for Alaska, particularly Adak? Area of arctic sea ice that has melted in the last 20 years is equal to a third of continental U.S. in size. There may be a whole new industry and more ship traffic; will certainly affect planning, ports, risk of vessel traffic. Major changes to consider.

Data available: Alaska Eskimo Whaling Commission, Walrus, polar bear, Beluga commissions. These user groups may have some interesting information, as well as quite a bit of work done by Pribilof Islands groups.

Recommendation for follow-up: Less potential for SNAP involvement here; need to determine who is doing predictive modeling for marine environment in Alaska.

AO #7) addressing anticipated changes in the quantity, quality, and location of fish and game due to climate change.

Discussion: number of agencies and orgs with information. USFWS, National Park, BLM, Forest Service, Regional Corps., also have fish and wildlife programs. Access fish and game advisory committee systems and fed subsistence boards regional advisory council system as we're evaluating

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changes impacting terrestrial mammals, endangered species; songbirds, small mammals, that are exhibiting changes in productivity and consumption.

Fish and Game has a statewide wildlife conservation strategy to look at indicator species trends, and possible ways to keep them from becoming species of concern which could fit nicely in climate change rubric.

Action: need to organize folks within Fish and Game and create an internal strategy to identify questions, information, context, and compile species group information.

Recommendation: Coordinate efforts of field research to collect information that can be shared, used by someone else. Institute of Arctic Biology and other UAF schools are resources.

Action: Fish and Game to work on its strategy for items 6, 7, 8 and 9, to incorporate into working draft for state.

Note: Ken Taylor, Deputy Commissioner, will be spearheading climate change sub-cabinet for Fish and Game.

Presentation by John Walsh, IPCC Fourth Assessment Report: Findings for Alaska.

Discussion: Use IPCC modeling information for specifics for Alaska in terms of temperature, permafrost melting, etc., to dial down into particular regions and decades. Ties in directly to SNAP initiative. Intended to take the IPCC model output and downscale it to specific locations, tailor to needs of planners. Seems to be a natural bridge between what the University is doing with existing model output and what planners would need. Can pursue further and have spoken with Park Service, Nature Conservancy.

Top 5 predicted models that stand out and have enough data to put into models to get reasonable, accurate predictions for regional areas of Alaska.

ISER is providing social and economic input for the SNAP projections; ISER has already completed an economic study on vulnerability of public infrastructure in Alaska to climate change.

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Recommendation: Identify types of info that planners, policymakers would find most useful and use SNAP to extract and present probable impacts in a useful form. SNAP should be able to do this within a year; rather than 18 months as mentioned earlier by Buck Sharpton. What can agencies provide? Lists, location specific, variable specific information that are most relevant, thresholds that are most noteworthy. This would allow U of A to plunge into SNAP and pull the information out of 5 models. (J. Walsh)

Extreme events should be of more concern. That is where the fertile ground is. The extremes and what they may do to ecosystem and infrastructure.(J. Walsh)

“People don’t die from changes in the mean, they die from changes in the extreme.”

The more the particular needs can be quantified, the faster we’ll connect to the models. The tailoring is what we need. Quality of data that goes into the model will dictate the outcome. Consistency among the models will dictate the ranges.

AO #9) Frequency and severity of disease (continued); to include human health.

Discussion: Vibrio example of what happened due to warmer water temperatures and dormant species blossoming to pass on diseases. Consider including H&SS in discussion. Fish and Game has invasive species program; however, only general in focus; not from a climate change perspective.

University is maintaining a database of invasive species and a program to alert residents and give them an opportunity to add to the database (Cooperative Extension services). Department of Agriculture doing some work, on ag worm, but not necessarily as an invasive species.

All familiar with invasive species but haven’t tied in with climate change.

Action: Assign internal workgroup to determine needs, other speakers, available research to identify and tie invasive species in with climate change.

Discussion: Staffing and resources, public involvement—At DEC, Tom Chapple is taking the lead for the agency for work behind the scenes. Hiring a summer intern from Stanford to work on climate change issues. A number of people at DEC are also very interested in the topic can contribute their expertise.

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Using program money, and looking for other grants. In other states consultants specializing in climate change topics, have assisted and identified available funding from charitable organizations, such as Pew, Rockefeller, etc.

DEC has contacted Pew, who is working with the state of California. They may be able to assist periodically, by directing us towards resources, etc. We could also make a strong attempt at contacting specialized consultants to pull strategy together.

DNR will brief the commissioner and get back to the sub-cabinet. Department of Interior will also be very crucial (healthy lands initiative, USGS and Mark Myers) will be important to collaborate with.

July 12th is the next meeting of the Climate Change Forum Executive Roundtable (a federal and state agency forum) which is being led by Mark Meyer of USCG and the Department of Interior.

Fish and Game will identify one or two people per division. Kim Titus, Ken Taylor, and others. Subsistence division for social effects in shift of resources to begin with.

DOT (M. Siroky) will also consult with Commissioner von Scheben and put forward names.

Recommendation: Think about people from outside our respective agencies to contribute.

Public involvement: AO requires periodic public meetings to weigh in on draft proposals. Several options: meetings, schedule time for public comment on particular points; or periodically have a public hearing on specific work product that needs public input, or both.

Open meetings that include presentations that may be of interest.

Suggestion: Separate closed from open meetings, not have part of meeting open and part of it closed.

Inform the public of progress being made in stages.

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For the next meeting: continue discussion of public outreach. Partners we can bring into the process, as far as individuals and workgroups, gather other information that is available.

Key in on what our respective department's needs and interests are; what's critical to each agency. The more specific we can be, the more helpful this will be.

Use today's information to begin outlining a strategy. Each agency needs to pick off pieces they know best to integrate into a total state strategy.

Tom C. will work with each department contact to gather this information; and develop a public website.

The task list is an outline of a strategy already; please feel free to begin filling in the gaps.

Commerce: Mapping; energy and alternative energy resources focus. Invite someone from AEA to speak and talk about mitigation.

Adjourn: 2:52 PM.