

Northwest Arctic Borough Science Steering Committee

April 24 -25, 2014 Committee Meeting Minutes

Members Present:

Raymond Lee, Sr., Village Representative, Buckland
Morgan Johnson, Village Representative, Ambler
Norma Ballot, Village Representative, Selawik
Stanley Hawley, Village Representative, Kivalina
Alex Whiting, Village Representative, Kotzebue
Cyrus Harris, At-Large Village Representative, Kotzebue
Roland Booth, At-Large Village Representative, Noatak
Michael Macrander, Shell
Molly McCammon, Alaska Ocean Observing Systems, Independent At-Large Member
Henry Huntington, Pew Foundation, Independent At-Large Member
Richard Glenn, Arctic Slope Regional Corporation, Independent At-Large Member
Michael Brubaker, Alaska Native Tribal Health Consortium (ANTHC), Independent At-Large Member

Guests:

Robert Suydam, North Slope Borough **Louis Brzuzy**, Shell **Erling Westlien**, Shell

Borough Staff:

Christine Hess, Northwest Arctic Borough **Noah Naylor**, Northwest Arctic Borough
Zach Stevenson, Northwest Arctic Borough **Glenn Gray**, Note Taker

Executive Summary

The first meeting of the Northwest Arctic Borough (Borough) Science Committee occurred in Kotzebue May 24 – 25, 2014. As part of the Borough’s new science program, the Science Committee will provide guidance for research funded by a grant from Shell Oil. The meeting began Thursday afternoon after the conclusion of the Science Symposium. During the afternoon session, committee members gave opening remarks about their expectations for the committee.

The Friday morning meeting began with an overview of research proposals completed by the Native Village of Kotzebue that are ready for funding. It continued with an initial discussion of the purpose and priorities of the committee.



The Borough and Shell Oil entered into an initial agreement that provides \$1.2 million for establishing a science department, organizing a science committee, and funding research projects. Assuming the agreement is extended, additional funds will be provided to complete baseline science projects in future years.

Committee members discussed potential areas of research and the need to have a big picture, coordinated approach. The Borough's top 3 priorities are food security, marine transportation, and safe and responsible resource development.

The committee elected Cyrus Harris as chair and Henry Huntington as vice-chair. It will meet at least 2 times the first year and quarterly thereafter. The committee made the following decisions.

- **Survey:** Morgan, Norma, Stanley, Raymond, and Roland will serve on a subcommittee to finalize a village survey and Henry will act as an advisor. Noah and Christine will work with the subcommittee to draft questions.
- **Assessment:** With the assistance of other scientists, Henry will prepare a brief assessment of the state of current knowledge and critical information gaps for the region.
- **Laboratory:** Christine and Noah will contact agencies to see if there is interest in establishing a laboratory in Kotzebue that could be used by local and visiting researchers.
- **Research:** After revising the budget, Noah and Christine will determine whether funds are available to fund one or two small projects this year. They will develop a list of potential projects for consideration by the committee.
- **Next Meetings:** The committee will meet by teleconference for a 2-hour meeting the week of June 9 and in person during late July.

Thursday Afternoon, April 24, 2014

Opening Remarks

At the conclusion of the Science Symposium, the Science Steering Committee began its first formal meeting. No agenda was prepared for the meeting to provide flexibility for the committee to determine its priorities and how it wished to organize. Richard Glenn agreed to be the facilitator until a chair was elected. He began the meeting by asking committee members to give some opening remarks.¹

Morgan Johnson said he was glad the Borough established the committee and he appreciated the collaboration. He said research is needed on marine mammals and fish. He mentioned that whitefish are getting sores on their gills and sometimes they are not edible. Mike Brubaker said this was a potential area of collaboration with the North Slope Borough because they are observing similar sores on fish. He offered to facilitate communications.

Norma Ballot said all the information provided over the past few days was overwhelming. She mentioned that Alex had indicated there is a need for a science laboratory in the region, and she said it would be good to put all the information in one place for local people to access. Norma indicated this

¹ The names of the primary speaker are bolded. Comments of the primary speaker sometimes generated discussion among the committee members.

resource would allow people to track what is being studied in one place. Richard said the North Slope operates under what they call a voluntary science tax where researchers are asked to share information with locals (e.g., get on the radio, meet with schools, or contribute to the tribal newsletter). The North Slope Borough requires permits for researchers in some situations, but not all federal agencies apply for the permits. Morgan said there should be some requirements for providing information to the villages.

Molly McCammon began her remarks by saying she would not be able to attend the Friday session. She said that although there is currently a one-year commitment for funding, the committee should assume the effort will be funded for at least 5 years. She recommended the committee focus on what it wants to accomplish. Molly said communication is important, and there should be a way to package the information so it is understandable. She said researchers are more likely to conduct research in an area when there is local capacity (e.g., communities where locals are trained to support research or conduct observations). She said it might be possible to leverage village IGAP staff or Borough employees. As an example, she said AOOS would like to use gliders in the Chukchi Sea, but it would need local support system to use them on a regular basis. Her recommended areas of research are sea ice, fish, nearshore, and community observers.

The Committee members briefly discussed local observation programs. Robert noted it is important to give proper training to ensure that data can be used. Molly spoke about the Canadian Ranger program which involves trained individuals to assist with science projects.

Henry Huntington recommended the committee consider 3 things. First, he said the committee should address the role of new studies to make sure there are ways to get more out of these studies. He said there is a lot of information out there that not everyone knows about. Second, he said rather than reacting, the committee should think of itself as a catalyst to make things happen. Third, he said there is a need to develop a way to keep track of what is going on in the region, perhaps in a format similar to the Arctic Report Card.

Stanley Hawley said the committee should consider views of environmentalists because they know an oil spill in Arctic waters would be devastating. He said the waters are too cold and the oil won't go away. Stanley said the older folks need to be made aware of that in their own language and there is a need to go to the villages and explain the risk of oil spills, environmental change and climate change. He said development might not be worth the risks of an oil spill.

Roland Booth said it is always interesting to see what comes to this region and that he has had the benefit of seeing things through a traditional subsistence lifestyle, from hunting muskrats to where we are now. He said during the past few days listening to the speakers, he was daydreaming of things from his childhood. He said many of these things were known by local people but never recorded. He said he was most interested about what drives animals to the area and keeps them there. He continued by saying that since information was not recorded, it is necessary to relearn things again. Roland said he hoped the committee's work would continue through future generations. He said he would not be able to attend the meeting tomorrow.

Michael Macrander summarized why Shell is involved in the research initiatives with the North Slope and Northwest Arctic boroughs. He said residents have repeatedly said they want information to answer questions. He said the North Slope effort started from a letter from Mayor Itta to Shell and that it will be important to focus on questions relating to offshore oil and gas activities. He said it was important to build capacity to assess changes that are coming to the Borough and that impacts may be more related to onshore activities, including potential impacts to caribou from a pipeline. Michael said it was important that this program answers questions that may be raised in a future EIS.

Raymond Lee said the committee will be an important way to get information to the people. He said one thing the committee could do in the future is to have shorter presentations with more opportunities for questions. In answer to a question from Molly, Raymond said it would be a good idea to have mini science symposiums in the villages. He mentioned there is a need for more information about researchers and that in the past people have shot at airplanes in response to disturbance to animals.

Morgan added to Raymond's comments by saying it would be expensive to hold symposiums in each community. Christine said it might be possible to have smaller subgroups to work with the communities about accessing information that would make subsistence travel safer or where to build community infrastructure.

In answer to a question from Molly about building capacity for oil spill response, Michael Macrander said a possible role for the committee would be to answer questions about oil spills, such as the value and sensitivity of shorelines. Richard asked whether information about the evaluation of oil clean up techniques would be appropriate. Michael answered by saying that kind of information would fall under communication and that the committee could act as an agent of truth. He said in addition to hard science, the committee could pull together existing information. Molly added that the committee needs to figure out just what its focus should be in order to address both what communities want and what Shell needs. Michael Macrander emphasized the need to answer questions that are important to the residents now rather than when an EIS is being written.

Michael Brubaker said he wrote down study questions and process suggestions (see attachment). He said he has been listening through the lens of community health and food security. He said people's identity is closely related to their subsistence activities and that people need to protect their homes from coastal erosion and watershed change. Mike emphasized the need for updated flood maps, integrated flood scenarios, and tidal stations. He said it is important to develop the capacity to measure those things now or there won't be a baseline. He continued by saying it is important to have integrated information about sea ice change, erosion, permafrost thaw, and what borough infrastructure is at risk. He said better maps will be one answer. Mike identified impacts of climate change on water systems would be another emphasis. He concluded by saying installation of radiation measurement instruments in communities would be a goodwill effort in case something were to happen in the future.

Cyrus Harris agreed that food security is an important topic. He also said he heard a lot about a need for a research center in the region during the past week. He also said he heard a lot about estuaries and the need to learn more about the Kobuk and Selawik waterbodies.

Alex Whiting said he supported a local science lab and that a science library would help with communications. He said he has a list of science projects. He recommended having a request for proposal (RFP) system for the communities to develop and conduct research with others. Alex said one of the projects he has ready to go is a passive acoustic recorder for belugas at the mouth of Kotzebue Sound. Robert Suydam said the North Slope Borough-Shell agreement would likely provide about \$75,000 for that project with additional in-kind support. Cyrus added that a cooperative relationship with the tribes would allow villages to get training from scientists and for villagers to train scientists.

Michael Macrander asked the committee if it would be alright to hear from two Shell employees, Louis Brzuzy and Erling Westlien, who would likely work with the committee in the future.

Louis Brzuzy said he is new to this region but not new to oil and gas operations. He said this committee has discussed a number of positive things and that it could work to improve local understanding of oil spills and oil spill response. He continued by saying that research results must be communicated so that everyone understands them.

Erling Westlien said this kind of agreement with local government is a game changer. He said he heard two things today that impressed him, first being the need to retain of critical traditional knowledge. He said it's important to prevent recreation of lost information. He said there is a lot of information that can be gained from existing studies rather than always starting new studies. He said the second thing that impressed him related to Stanley's comments about oil spill risk. Erling said it will be important to discuss the real risks and uncertainties of oil spills which may eliminate fear. In terms of projects from Shell's perspective, he cited hydrodynamic and wave modeling, storm surge modelling, erosion, and caribou migration as being important. He said another key issue is how to conduct research without disturbing subsistence practices. He concluded by saying that changing Arctic conditions makes social research important.

Morgan suggested that the village IGAP program could be used for people to speak about oil spills in their own language.

Noah Naylor summarized his experience with the subsistence mapping project where it was overwhelming at first, but became more manageable once the project was focused. He said the Borough's science effort will likely be similar because it won't be possible to do everything.

Robert Suydam said Noah's comments were helpful for answering the question of why the committee is here. He said it appears the committee's charge is to find out what information is important to the communities and what questions will address their concerns. He suggested that Shell provide some guidance about their recommends regarding the committee's effort. Robert said the committee's focus

might be a communication effort to get science into the community, it might emphasize answering questions about oil and gas impacts, or it might be another focus. He cautioned that it is not easy to do RFPs so some thought is needed in that regard.

Christine Hess said the main things to be considered are meaningful and, useful research with the top priority being food security. She said it is important to communicate with the villages using their own language, involve the tribes using traditional knowledge, and to include the schools and youth as partners. Regarding process, she said it seemed like two subcommittees would be appropriate, one for RFPs and the other for communications.

Zach Stevenson summarized the process used for focusing the work of the subsistence mapping project. He also recommended the committee consider recommendations for research developed during an April 2013 workshop in Kotzebue as well as a paper on subsistence research priorities by Jim Magdanz.

Glenn Gray said that regarding research needs, it might be useful to list the recommendations from the science presentations earlier in the week as well as priorities identified by the committee. He also added that it would be useful if the committee established criteria for determining its focus as well as criteria for selecting research projects.

Richard Glenn concluded the Thursday meeting by saying he wanted to listen and learn first before offering his recommendations.

Friday, April 24, 2014

Richard Glenn welcomed the committee members and Raymond Lee gave the invocation.

Kotzebue Sound Projects

In response to a discussion that occurred the previous afternoon, Alex Whiting gave an overview of research proposals developed by the Native Village of Kotzebue that are ready for funding:

Beluga whale genetics in Kotzebue Sound, installation of beluga under ice acoustic ecological recorders (EAR), whitefish in Kotzebue Sound, transcription of a journal by a local naturalist, baseline information about hydrocarbon levels in marine mammals, samples from marine mammals experiencing unusual mortality, stock assessment of ringed seals through skin samples, remote monitoring of integrity of ringed seal dens, toxicology dangers to fish, and an examination of traditional knowledge about shorefast ice.

Committee members discussed the beluga whale acoustic recorder project extensively, and Robert said it would likely be funded by the North Slope Borough. Committee members also discussed some of the other projects, including methods for subsistence harvesting of whitefish near Cape Krusenstern. Robert said many of the projects presented by Alex would be appropriate for collaboration with the North Slope Borough.

Committee Purpose and Priorities

Henry Huntington asked Christine and Noah what they need from the committee. Christine said the year-one agreement with Shell provided about \$1.2 million, and so far, few funds have been expended. She said the Mayor views this committee as a long-term effort to serve as a conduit for research in the region that may include future funding from other organizations. She said there may be funding for one or two small projects during the first year, but the committee needs to establish a process for deciding how and where research should occur.

Christine said the Borough's top three priorities are food security, marine transportation, and safe and responsible resource development and that it might make sense for the initial focus to be on food security. Because there is no process for selecting research projects, she recommended establishment of a subcommittee that could meet by teleconference over the next couple of months to establish the RFP process. She said the tribes could be contacted to see what their interests are followed by an effort to hook up communities with a researchers who could help write proposals. Christine also suggested that staff could conduct a survey of the communities. She also said that she and Noah could look into the feasibility of establishing a laboratory in Kotzebue.

Morgan spoke about naturally-occurring asbestos around Ambler and the need for clean materials for construction projects, including needed improvements at the airport. He also said it would be important to know if the asbestos is impacting fish. Mike Brubaker spoke about a human impact assessment process from asbesto. He said asbestos impacts can be determined through cases of mesothelioma which is directly linked to asbestos. Mike offered to help identify funding sources for such an assessment.

Mike Macrander suggested the committee review the budget to determine the availability of funds. He said the first year funding was intended to focus on establishment of the committee and building capacity. He said it will be important to establish priorities first and that specific projects could be funded later.

Henry said it will be important to look at the bigger picture to avoid a mish mash of projects that don't fit together and don't address the reasons Shell is funding the research. He suggested the committee begin by taking stock of existing knowledge, determining what pieces of the puzzle are missing, and considering how different pieces fit together. He said "we need to be better consumers of science." He suggested creating a conceptual model of what we know, such as the currents in Kotzebue Sound, sea ice, whitefish, and caribou.

Noah suggested the first priority would be to build capacity by electing a chair and vice-chair, establishing subcommittees, hiring a science director, completing a survey, and determining how to work with the communities. Regarding the survey, Christine suggested looking at the survey Alex created for Kotzebue to see if the questions would be appropriate to identify village research priorities.

Christine asked Henry to speak more about the assessment. Henry said while it could be a daunting task, it could also be a brief assessment. He volunteered to do draft an evaluation of known information and information gaps before the next meeting.

Robert commented on the difficulties of organizing the committee and that the North Slope Borough's science committee shared many of the same challenges. He encouraged the committee to work with the North Slope Borough Baseline Studies Program and suggested that at least one member from each committee attend each other's meetings. He recommended the Buckland beluga traditional knowledge project be supported by both boroughs. Robert also recommended that the Northwest Arctic Borough committee consider adding funding to expand the beluga acoustic monitoring program to a larger area.

Regarding the survey, Robert suggested it not include a question asking what research is needed because the term "research" can be misunderstood. Instead, he suggested a question could be posed about their concerns about the environment. Alex said that was the approach taken for the Kotzebue survey. Michael Macrander agreed with this approach and suggested the village representatives on the committee be a conduit to the communities. He also suggested the committee consider distributing the assessment with the survey, if feasible.

Committee Organization and Operations

Richard reconvened the meeting after a break and opened the floor for nominations for committee chair. Henry nominated Cyrus and Alex seconded the nomination. Stanley suggested the committee wait to elect a chair until all committee members were present because he wanted to nominate Roland. Richard said Roland told him that he did not want to be the chair. Stanley nominated Morgan for chair and Morgan declined. Cyrus was then unanimously elected as the chair.

Cyrus said earlier this week people may not have known what they were getting into, but now everyone is on the same page. He opened up nominations for the vice-chair and Henry was unanimously elected as the chair. Cyrus said he would need help as chair and that he had spent most of his life in the countryside. Henry thanked everyone for the privilege of being elected vice-chair.

Christine recommended the committee decide how it would like to operate and whether to form any subcommittees. The committee decided it would operate by consensus whenever possible and use Roberts Rules of Order when needed. Michael Macrander said the North Slope Borough committee came to the same conclusion and that the process is working well.

Christine asked whether the committee would allow participation and voting by teleconference. Robert said it is important to clarify rules such as this and whether a quorum can be established by telephone. Christine said the agreement requires a quorum to include 10 members, including one external scientist, one member each from Shell and the Borough, and one village representative. The committee agreed that a quorum could be established by those participating by teleconference. It also agreed that members could vote telephonically or by email.

The committee discussed its membership, and clarified that the 4 external scientists still need to be appointed as well as the second Shell appointee in addition to Michael Macrander.

Next Steps

Survey: The committee discussed various approaches to develop a survey of local research priorities which included an informal approach as well as establishment of a formal subcommittee. One option discussed would be to work with the tribes and have a local person conduct the surveys in person. Mike Macrander said the survey is an important step and a subcommittee would be appropriate. He said the subcommittee could work with community members to discuss the best process for the survey and bring the survey back to the entire committee for approval. He moved that that Morgan, Norma, Stanley, Raymond, and Roland be appointed to the subcommittee with Henry as an advisor. Richard seconded the motion and it passed unanimously. Staff will contact Alex to get a copy of the survey he used for Kotzebue. Christine suggested holding a teleconference the week of June 9 for the entire committee to review the survey and process to conduct it.

Assessment: Henry committed to coordinate development of a written assessment of the current state of knowledge and gaps in information for the region. He will work with a few scientists on this task and circulate the document among the committee members.

Budget: The committee discussed the process for revising the budget and agreed that Noah and Christine will work with Shell to produce a new draft that will be distributed to committee members. A summary will be placed up front with details attached.

Laboratory: Christine and Noah will also look into interest in establishing a laboratory in Kotzebue that could be used by local and visiting researchers.

Funding Research Studies: The committee discussed the possibility of funding one or two small projects this year. The consensus was for Noah and Christine to determine how much money could be dedicated to research this year and then compile a list of potential projects and costs. Robert committed to providing a cost estimate for the Kotzebue Sound acoustic monitoring project and the Buckland beluga TEK project which could be jointly funded through the Shell science agreements for both boroughs. Someone suggested that Alex may want to submit project estimates as well.

Henry asked the committee for guidance about a potential conflict of interest regarding the Buckland project since he has been asked to participate in it. Christine suggested that potential conflicts of interest be addressed as they arise by either having the person with the potential conflict recuse themselves from voting or go out of the room during the voting.

Upcoming Meetings: The committee agreed to have a 2-hour teleconference sometime between June 10 and 13 to discuss the village survey. Staff will contact committee members to confirm the date, possibly by using a "Doodle poll."

The committee also decided to have the next in-person meeting sometime during late July. Again, staff will contact committee members to confirm a date.

Communication: Glenn said he would get a draft of the minutes to Noah and Christine within a couple of weeks. Noah clarified that the committee minutes will be a separate document from the summary of the symposium.

Michael Macrander asked about the committee's preference for communications with the public. The committee discussed using the Borough's website, having village representatives talk at tribal and city council meetings, discussing the committee's work during Borough radio shows, having village committee members work with their local communities, and issuing press releases when appropriate. Michael requested that the Borough work with Shell informally prior to issuance of press releases.

Closing Comments

The committee members gave closing comments expressing optimism about the importance of the committee's work. Individual comments addressed the need to inform communities about development activities that may impact them, the value of getting input from stakeholders, and the importance of using the committee as a catalyst to get things done.

Northwest Arctic Borough Science Steering Committee

April 24 -25, 2014 Kotzebue Meeting Summary

Attachment – Mike Brubaker’s Potential Priority Science Questions

Committee member Mike Brubaker submitted the following science questions and process suggestions for distribution to the entire committee.

Potential Priority Science Questions

1. What is the status of subsistence resources (e.g., regular subsistence harvest surveys or a borough lab to provide capacity for subsistence monitoring)?
2. What is the status of sea ice (e.g., ice status, forecasting and scenarios)?
3. What is the status of the northwest climate (e.g., snow/precipitation measurements and climate stations)?
4. What is the change in sea level (e.g., data sharing with Red Dog and Kotzebue tide stations)?
5. What is the rate of coastal/watershed change (e.g., integrated flood scenarios and updated flood maps, sea level tide station – time lapse photography community projects)?
6. What borough infrastructure is at risk from thaw, erosion, flood, surge, etc. (e.g., topography and bathymetry monitoring)?
7. How does climate change affect freshwater systems and community water security (e.g., lake, river data loggers, and satellite imagery)?
8. What is the risk of radioactive fallout on food, subsistence, and community water (e.g., borough science department fallout Geiger counter instrumentation)?
9. What is the impact scenario from oil spills (vessels, exploration, etc.)?
10. What is the sensitivity of subsistence/species /system to oil spills?
11. How does increasing wind change salinity and pH of the water on the Selawik River (acidification, freshwater availability, fish, and habitat)?

Process Recommendations

1. Leverage capacity with neighbors (NSB, Kawerak, Norton Sound Health Corporation) through cooperative agreements.
2. Leverage capacity within region (Maniilaq, agencies, cities, tribes).
3. Engage research funders (and potential funders) from Day 1 and manage and coordinate science.
4. Be selective and specific for years 1-5 science activities.
5. Build a sustainable science program with realistic expectations for long term research and outcomes.