



Traditional Knowledge Panel

Workshop On Implementation Of The DFO Policy For The Management Of Fish Habitat

January 27-28, 2004 EMAB Board Room Yellowknife, Northwest Territories

FINAL WORKSHOP REPORT

Prepared for: Environmental Monitoring Advisory Board Yellowknife, NT

Prepared by:



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1.0 Introduction

The following is a summary report of the Environmental Monitoring Advisory Board's Traditional Knowledge Panel Workshop on the Implementation of the DFO Policy for the Management of Fish Habitat. The workshop took place on January 27-28, 2004 in Yellowknife, Northwest Territories.

Participation

Thirteen (13) participants, including representatives from communities and resource people, attended the workshop. It should be noted that the Dogrib Treaty 11 representatives appointed to the Panel were not able to participate. Board Chair Robert Turner (North Slave Metis Alliance) and John McCullum (Executive Director, EMAB) observed periodically over the two days.

Appendix A provides a list of participants. Full translation services were provided throughout the workshop.

All participants reviewed the report with the EMAB Board member representing them and signed off to agree that the report accurately reflected their input and could be released to the public.

Workshop Reference Binder

Terriplan Consultants planned and facilitated the workshop. Advance materials, including a 'plain language' summary of key materials and concepts, were provided to the participants. In addition, a detailed Reference Binder was prepared and utilized throughout the workshop.

Workshop Report Organization and Presentation

The workshop report is organized and presented in the actual sequence in which the discussion occurred. The workshop began with a review of the "No Net Loss" principle with the Traditional Knowledge Panel, and the related issues identified by EMAB with respect to the Diavik mine. Nine (9) key questions were identified by EMAB to obtain advice from the Traditional Knowledge Panel regarding "No Net Loss" principle/ habitat compensation. Each question and the Panel's response is summarized within this report, as well as any other issues or questions of relevance to the Board.



2.0 Workshop Summary

Workshop Purpose and Objectives

(Facilitator – Andy Swiderski, Terriplan Consultants)

Andy Swiderski reviewed the workshop purpose and objectives. The purpose of the workshop was to provide advice to the Environmental Monitoring Advisory Board (EMAB) from the Traditional Knowledge (TK) Panel on the implementation of the Department of Fisheries and Ocean's (DFO's) "No Net Loss" principle in relation to the Diavik mine on Lac de Gras.

The two main workshop objectives were:

- 1. To review the "No Net Loss" principle with the TK Panel, and the related issues identified by EMAB with respect to the Diavik Diamond Mine.
- 2. To provide advice to EMAB from the Panel on implementation of the "No Net Loss" principle, particularly habitat compensation.

If time allowed, the following additional objectives were identified by the EMAB:

- 1. Input to DFO's studies to test the effectiveness of habitat enhancement techniques in an Arctic lake environment.
- 2. Discussion of the potential contribution of DFO's proposed catalogue / database of habitat enhancement/reclamation opportunities, and provision of suggestions regarding possible opportunities for consideration.
- Suggestions on how to effectively present and communicate the issue of habitat replacement/ compensation in communities, to ensure that the concepts and issues are understood. Specific suggestions on addressing the difficulties related to translation of these ideas/issues will be sought.

Agenda Review

(Facilitator)

Participants reviewed the workshop agenda (a copy is included as Appendix B). The two-day workshop agenda aimed to provide the necessary information to answer the specific issues and questions relating to "No Net Loss" and habitat compensation.

Initial Overview of EMAB's Perspective On Fish Habitat

(John McCullum, EMAB Executive Director)

John McCullum, EMAB's Executive Director, provided words of welcome on behalf of the Board. McCullum informed participants that the implementation of DFO Policy for the management of fish habitat has been a challenging issue for EMAB. McCullum provided a brief overview of the chronology of events surrounding the issue by informing participants that when the mine was built, it affected where fish can live. The Fisheries Act provides that whatever fish habitat the mine destroys it must replace so that there is once again a balance. DFO is in charge of how this is done. EMAB wants to find a way that this policy can be implemented in a manner that is



workable given realities of the northern environment and supported by Aboriginal people. EMAB felt that this issue was a perfect opportunity to get advice from a Traditional Knowledge Panel made up of elders from each of the Aboriginal communities affected by the Diavik Diamond Mine in order to gather traditional knowledge about fish habitat. It was recognized that when the term Traditional Knowledge (TK) is used, it includes the Inuit equivalent of IQ. This is in respect to the transboundary participation in the workshop.

McCullum closed his remarks by informing participants that this is the first Traditional Knowledge Panel ever to be established by EMAB and thanked them for coming to the workshop to share their knowledge and ideas regarding fish habitat compensation.

Summary of DFO Policy on Fish Habitat

Andy Swiderski provided an overview of the *Fisheries Act* and *Policy for the Management of Fish Habitat.*

The *Fisheries Act* says that activities that harm fish habitat are illegal. When impacts do happen, the *Policy for the Management of Fish Habitat* gives the Department of Fisheries and Oceans (DFO) guidance as to what can be done. The Policy calls for an increase in the 'productive capacity' of fish habitat. Productive capacity is the ability to make the plants and animals that fish need, so that they are available, healthy and safe to eat.

The Policy also has a Guiding Principle for "No Net Loss" of the capacity to produce fish. The "No Net Loss" Principle is used in the review of projects like a mine. When a project harms fish habitat, the developer must make up for the loss by making an equal amount of fish habitat – it is an effort to "rebalance" things in the aquatic environment.

The *Habitat Conservation and Protection Guidelines* (1998) has options for putting the "No Net Loss" Guiding Principle into action. These are shown in Diagram 1 on the next page. In order of preference they are:

1) Relocation - Physically moving a project or part of a project.

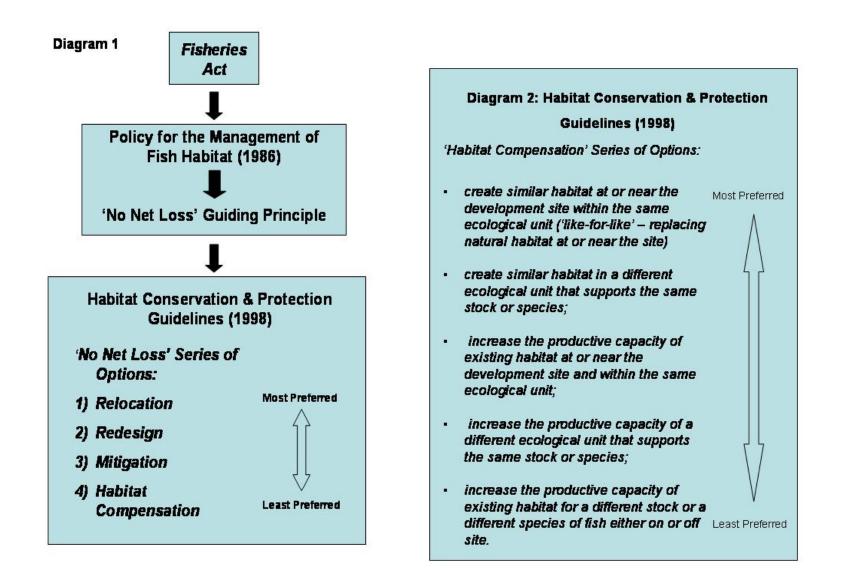
2) Redesign - Changing the project design.

3) *Mitigation* – Taking steps to lessen impacts (such as changing the timing of an activity)

4) Habitat Compensation - Replacing habitat or improving natural habitat at other locations (the least-preferred option; used only when others options are not practical)

Habitat compensation is planned using options. These are shown in Diagram 2 on the following page. If possible, the habitat will be in the same area, and will be the same kind of habitat that was harmed. If not, habitat could be made away from the site, damaged habitat somewhere else might be fixed, or an existing habitat improved.







3.0 TK Panel Discussion of 'No Net Loss' Principle and Habitat Compensation

Question #1

Are there times or circumstances when 'like-for-like' habitat compensation might work? If yes, how can it be done to meet communities' needs? If not, what are other approaches?

Based upon the discussion that took place throughout the workshop, it was agreed by all participants that the 'No Net Loss' principle does have merit. Participants also noted that while the goal is always to avoid damage to the environment in the first place, there are circumstances when damage to a water body does occur and is unavoidable (ex: sewage lagoon).

In circumstances when 'like-for-like' habitat compensation might work, the types of comments and observations that were raised related to:

- Habitat compensation should be applied in lakes and/or rivers located close to communities and trap lines.
- Habitat compensation could be applied in order to clean up existing damaged areas.
- Traditional Knowledge/ Inuit Qaujimajatuqangit (TK/IQ) is a key component for determining what is appropriate compensation.
- 'No Net Loss' principle needs to be applied on a permanent and ongoing basis (ie: will the re-balancing be minimal beyond the initial effort).
- Industry needs to understand the living resources' value of use (not just the commercial use and value of the resource).
- The degree of accessibility to a fixed lake.

Note:

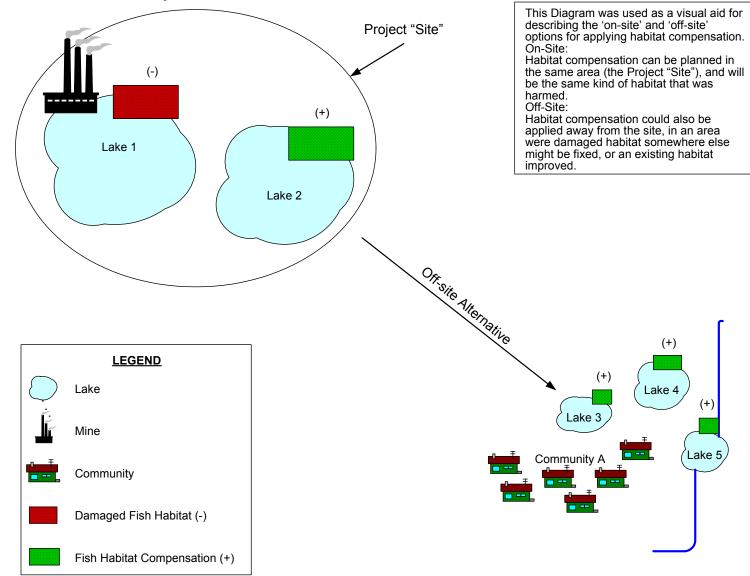
Diagram 3 (found on page 6) was used to aid in the discussion regarding when 'like-for-like' habitat compensation may work and subsequently whether habitat compensation should occur 'on-site' or 'off-site.'

However, there are circumstances when 'like-for-like' habitat compensation may not work. The following factors can be used to aid in determining when 'like-for-like' habitat compensation may not work and therefore not be appropriate:

- Need to consider the impact of explosives used in mining activities. Explosive residue is carried by the wind and is dispersed across a large area and deposited into the water systems and the land. Habitat compensation should not be applied to these areas that may also have been contaminated from the explosive residue.
- Understand the Aboriginal term 'dead' means that the land has been permanently contaminated and cannot be reclaimed (Example: Nanisivik Mine). Dead land should not be considered for habitat compensation.
- There is a strong need to consider a lake or rivers' ability to support fish habitat.
- Some lakes may simply be too contaminated (whether by reasons of natural or human impact) to support fish habitat.



Diagram 3: Fish Habitat Compensation



Participants identified the following approaches for addressing circumstances when the 'like-for-like' habitat compensation will likely not work:

- Dead lakes could be covered to reduce the risk of further contamination of both animals and people.
- Through public education programs, such as street signs to promote the need to keep lakes clean and protect fish habitat.
- Clean up abandoned fishing nets and lines to prevent additional damage to fish and wildlife.
- Monetary compensation.

When the non-monetary compensation approaches are not feasible, the Panel agreed that monetary compensation could be a possible alternative. The Panel made the following observations regarding monetary compensation:

Participants recognized the fact that the idea behind the "No Net Loss" principle is to give back to the land what was taken away, but it was noted that there are circumstances when it is impossible to give back to the land, and monetary compensation may be an option. Discussion then took place on whether monetary compensation should go to the individual or the impacted community or communities. The identified strengths and weakness of both options were considered and are summarized below in Table 1.

Community Compensation	Individual Compensation	
 Monetary compensation could be used to fund educational programs for youth on traditional knowledge and the importance of keeping the environment clean. 	 Fear exists that monetary compensation to individuals may not be used effectively and as such not contribute to re-balancing. 	
 Monetary compensation to the community would be a means of ensuring that the community as a whole benefits, not just an individual. 	 Individual monetary compensation would put a dollar value on a resource. 	
Monetary compensation could be given directly to a designated community organization who could then decide how to spend the funds.	 Individual monetary compensation is appropriate at times when there is a direct and demonstrated personal loss, such as a cabin or trap lines. 	
• The compensation action must be accountable to all community members.	 Individuals should be compensated when their livelihood is taken away. 	

Question #2

What is your advice to EMAB regarding Habitat Compensation for the Diavik mine project?

The Panel had the following advice to give to EMAB regarding habitat compensation for the Diavik mine project:

- The long-term environmental impacts of the mine's activities need to be understood before future developments take place. There is a need to think about the future today.
- EMAB should have community based and managed studies on the environmental impacts of mining on fish habitat (and the communities who rely upon it).

- When determining how to apply habitat compensation, EMAB should build upon traditional knowledge and science.
- When considering and choosing a site for habitat compensation, it is necessary to consider the impacts of possible future mines.
- EMAB should be aware of the dependence by other animals on fish, and maintain this natural balance. While the focus is on aquatic life, the relationship between and across species must be respected.
- EMAB should make a long-term commitment to monitoring the environmental impacts of habitat compensation activities.
- Learn from past mistakes and make this a continuous part of learning.
- Develop a more efficient way of working together with communities, government departments and Diavik to protect the 'land' from contamination.

There is a proposal to test habitat enhancement techniques in the field on lakes near the Diavik site. Do you have suggestions as to the questions that should be studied in the tests? How can traditional knowledge contribute to these tests?

The Panel had numerous suggestions on the types of questions that should be studied in the proposed tests and how TK/IQ could contribute to these tests. These suggestions are summarized below:

- Take a large ecosystem approach and study lakes and fish habitat closer to communities, rather than just the Diavik site.
- Ensure that Aboriginal people are supportive of the areas that are proposed to be studied.
- Ensure that a site inspection and field work is done together with Aboriginal people.
- Ensure that the "No Net Loss" principle is applied and maintained on a permanent and ongoing basis.
- Take the necessary actions to ensure that developers are aware of and respect TK/IQ. TK/IQ can be used to teach others of the values and beliefs of Aboriginal people.
- Ensure that TK/IQ holders are involved in monitoring activities.
- Use TK/IQ and generational stories to increase understanding of the area and predict environmental impact/changes.
- TK/IQ holders should be involved in monitoring activities.
- Develop questions to test and thereby increase understanding of the impact of blasting on fish and fish habitat. This includes dispersion by wind.
- Clarify what rationale was used to establish "preference" for the *Habitat Conservation & Protection Guidelines*. There is a need to clarify whose "preference" is being expressed.

What is your advice to EMAB on field testing?

In regards to field testing, the Panel had the following advice to give to EMAB:

- The proposed site for habitat compensation should be inspected in partnership with the Aboriginal communities and TK/IQ holders.
- The proposed habitat compensation site should be visited in the spring.
- The site visit should be the basis for planning and decision-making.
- TK/IQ should be applied at the time of site inspection (idea that 'seeing is believing' and can use TK/IQ to search for alternatives after being on-site).

Question #5

DFO is preparing a catalogue of 'habitat restoration opportunities', locations where off-site habitat compensation might be done. What factors should be considered in identifying these locations? Can you identify locations of value to your community where fish habitat restoration might be done? Why do these habitats need to be fixed? What benefits would improving these specific habitats provide to your community? To others?

The Panel identified the following criteria to aid in determining a site for habitat compensation:

- Water levels and run-off impacts.
- Size of lake.
- Depth of lake (and shape of the lake bottom).
- Water quality/chemistry.
- Preference by users (historical, spiritual, cultural).
- Risk of over-populating a 'fixed' lake that is already at carrying-capacity.
- Availability and reliability of knowledge (TK/IQ & science) of the receiving lake and surrounding area.
- Degree of historical disturbance.
- Whether or not fish have to be physically relocated (compared to re-stocking with frye).
- Impact of relocating fish on the receiving lake and its ecosystem.
- Lake is not currently productive or not likely to remain productive.
- Project area is too contaminated to be sustainable.
- Are or will the fish be safe to eat.
- Degree of accessibility by people.

Once these criteria have been used to identify a possible site for habitat compensation, on-site visits should occur between DFO, EMAB and TK/IQ holders. On-site visits have been conducted in the past between the parties and provide an 'hands-on' opportunity for the party's to work together, exchange of knowledge and learn from each other.

What is your advice to EMAB on other locations for habitat compensation?

When EMAB is considering other locations for habitat compensation, it is important to remember that water is fundamental to sustainability of life. Lakes and rivers must be kept clean in order to keep animals abundant and healthy. The traditional importance of fish, both spiritually and as a food source, must be recognized and respected. Contaminated water can have a negative effect on traditional medicine, as plants, berries and other natural substances that are used in traditional healing cannot be used to make medicine when they are contaminated. As a result, the Panel recommended that when considering other possible sites for habitat compensation, the focus should be on the above criteria including the degree to which it is accessible to people and near communities.

Question #7

How can the questions & concepts about fish habitat compensation be effectively presented to the communities?

To begin with, it was stated by participants that everyone (EMAB, DFO, and the Panel) have a contribution to make in effectively presenting questions and concepts about fish habitat compensation to the communities. The Panel suggested the following methods for effectively presenting the questions and observations about fish habitat compensation to communities:

- Hold face-to-face meetings with community members.
- Have slides, pictures and maps available in the communities so they can see and understand what is taking place on the land. (This includes making use of the materials prepared for this workshop. Materials should be translated where possible).
- Host site visits for youth and community members so they can see first hand what is taking place on the land.
- Involve key people from the communities who regularly do site visits and are knowledgeable about the mining activities taking place and the effects they are having on fish and fish habitat.
- Have DFO host meetings and workshops in communities on a regular basis. These meetings would provide an opportunity for DFO to share scientific knowledge gathered from various studies they have done on fish and lakes in the northern environment. In return, communities can share TK/IQ. This would include a 'lessons learned' component.
- Educate youth on the need to keep the land and water clean.
- Educate teachers about the value of land and fish so that youth can be educated on traditional knowledge through the school systems.

What do you see as the possible issues related to translation of these questions and concepts?

The Panel agreed that providing translation is key to effectively presenting and communicating the issue of habitat compensation in communities, and to ensure that the concepts and issues are understood.

Question #9

What is your advice to EMAB on talking about fish habitat compensation with the communities?

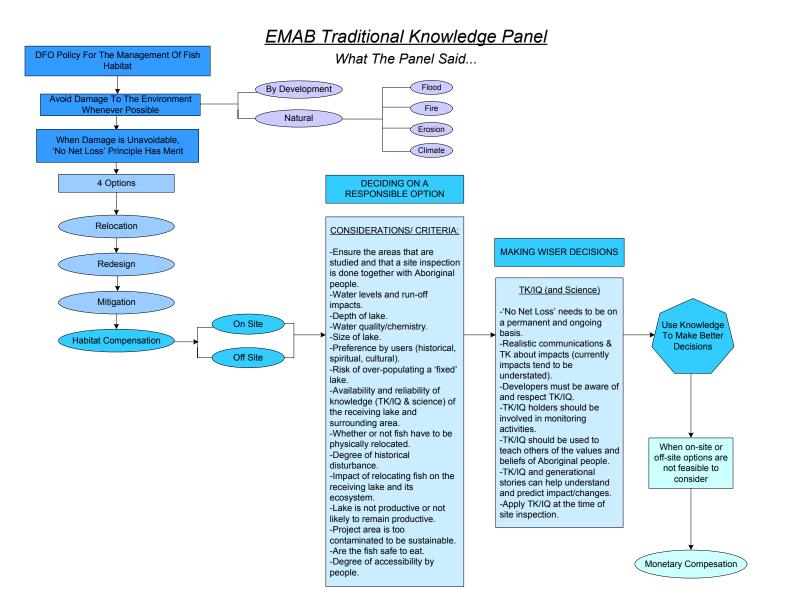
The suggested methods for effectively communicating about fish habitat compensation to the communities are summarized below:

- Integrate TK/IQ and science through workshops. Combining TK/IQ and science will allow a better understanding of the overall impacts of the mine.
- Companies need to report any environmental changes to the communities in a realistic and straightforward manner. Currently, environmental impacts tend to be understated.
- Have a community contact, such as an elder, to act as a liaison between EMAB and the communities.
- Explain the use and impact of the dykes and diversion ditches used in constructing the mine.
- Explain to the communities how it is sometimes difficult to 'heal' a lake from contaminants resulting from mining activities.
- Explain how the process of moving fish will occur and how this will be done without killing the fish.
- Explain the risks involved in relocating fish (compared to re-stocking with frye).
- DFO and Diavik have preferred options on how to address the issue of habitat compensation. Why these options are preferred over others should be communicated to communities.
- EMAB should help communities understand the changes that have already taken place on the land and what changes may occur in the future.
- Additional information on the scope and mandate of EMAB should be provided to the communities.

The TK Panel's discussion and observations relating to the nine (9) key questions that were identified by EMAB to obtain advice from the TK Panel regarding "No Net Loss" principle/ habitat compensation are summarized in Diagram 4 on the following page.



Diagram 4: Traditional Knowledge Panel Discussion Summary





4.0 Workshop Wrap-Up

Outstanding Questions/Issues

Four (4) questions/issues remained outstanding at the end of the workshop and are summarized as follows:

- What is the total budgeted amount for habitat compensation proposed by Diavik?
- How is the dollar value of fish habitat that is destroyed calculated?
- What is the future role/contribution of this TK Panel on fish habitat compensation?
- Are the mining winter roads monitored for environmental impacts?

Other Issues Raised at the Workshop of Relevance to the Board

During the workshop, there were some issues raised that, while not directly related to fish habitat compensation, should be noted by the Board. These included:

- EMAB should be a monitoring authority, not play an advisory role.
- There is a need for a 'regional' monitoring authority.
- Concern was expressed over the environmental impact of winter roads.
- Send information to southern developers, fisherman, and tourists in aim of increasing awareness and respect for the strong value Aboriginal people place on the land.
- The historical impacts of the Nanchu Lake power plant development should be used as an example of the adverse effects that can result when the environment is permanently changed.
- The land must be kept clean for future generation to use and live off of as their ancestors have done.
- It is important to recognize the growing need and importance of freshwater by other countries.

Recommendations to the Board

The TK Panel made several recommendations to the Board. These recommendations are summarized below:

- Winter roads should be closely monitored and annual clean up should be conducted.
- The Board should meet with the TK Panel to provide an opportunity to express each party's role and expectations and clarify to the Panel what powers the Board has to implement their recommendations.
- The Board should build upon the work done at this workshop.
- The next TK Panel workshop should be held at the Diavik site.

Closing Comments

(Facilitator/John McCullum, EMAB Executive Director)

At the end of the workshop, the facilitator thanked everyone for their contributions to the workshop:

- The resource people, the Board members, and community representatives for their information, questions and comments over a very ambitious and intensive two-day agenda; and
- Those doing translation of the meeting.



In addition, John McCullum EMAB Executive Director thanked the participants and resource people for attending the workshop. He informed participants that the next Board meeting would be held in February 2004 and the Board plans to read the workshop report, review it, and decide how to move forward then. EMAB will use the comments received from the TK Panel to make recommendations to DFO and ensure that the "No Net Loss" principle works better in the northern environment.



Appendix A: Workshop Participants

Traditional Knowledge Panel Workshop on Implementation of the DFO Policy for the Management of Fish Habitat January 27-28, 2004 EMAB Board Room Yellowknife, NT



WORKSHOP PARTICIPANTS

Panel Members

Frank Ikpakohak Isaac Klengenberg Albert Boucher J.B.Rabesca Frank Camsell Fred Turner Alfred Baillargeon Paul Mackenzie

Translators

Isidore Zoe John Komak Sara Basil

EMAB Resources Person

John McCullum Bob Turner

Facilitators

Andy Swiderski Jill Kelln Kitikmeot Inuit Association Kitikmeot Inuit Association Lutsel K'e Dene First Nation Lutsel K'e Dene First Nation North Slave Metis Alliance North Slave Metis Alliance Yellowknives Dene First Nation Yellowknives Dene First Nation

Translator- Dogrib Translator- Innuinaqtuun Translator- Chipewyan

Environmental Monitoring Advisory Board Environmental Monitoring Advisory Board

Terriplan Consultants Terriplan Consultants



Appendix B: Workshop Agenda

Traditional Knowledge Panel Workshop on Implementation of the DFO Policy for the Management of Fish Habitat January 27-28, 2004 EMAB Board Room Yellowknife, NT Working Agenda



Day 1: Tuesday, January 27, 2004 8:45 - 9:00 a.m. Arrival and Coffee/Tea 9:00 – 9:30 a.m. 1. Workshop Introduction/Opening Remarks **Opening Prayer** Community elder, TBD Workshop purpose and objectives, agenda Andy Swiderski, Terriplan Questions/discussion All 9:30 – 10:15 a.m. 2. Initial Overview of EMAB's Perspective on Fish Habitat Overview of the history of fish habitat issues Andy Swiderski /John and discussion to date / chronology of events -McCullum (EMAB EMAB, DDMI, DFO Executive Director) 10:15-10:45 a.m. **Coffee Break** 10:45 - 12 noon Summary of DFO Policy on Fish Habitat 3. Andy Summary of the Fish Habitat Policy and related concepts/ principles / guidelines 12:00 – 1:15 p.m. Lunch (not provided) 4. TK Panel Discussion of 'No Net Loss' 1:15 – 2:45 p.m. Andy /All Principle and Habitat Compensation Open discussion on specific issues / questions related to "No Net Loss" and habitat compensation. 2:45 - 3:15 p.m. **Coffee Break** 4. TK Panel Discussion of 'No Net Loss' 3:15 – 4:45 p.m. Andy /All Principle and Habitat Compensation (cont'd) 4:45 – 5:00 p.m. 5. Day 1 Wrap-Up Andy



Day 2: Tuesday, January 27, 2004

8:45 – 9:00 a.m.	Arrival and Coffee/Tea	
9:00 – 9:15 a.m.	 6. Day 2 Introduction/Overview Brief Recap of Day 1/ Review Agenda 	Andy
	 Questions and discussion 	All
9:15 – 10:15 a.m.	 4. TK Panel - Summary of Advice to EMAB on 'No Net Loss' Principle and Habitat Compensation (cont'd from Day 1) Summarize the TK Panel's advice on the 'No Net Loss' Principle and habitat compensation 	Andy /All
10:15 – 10:45 a.m.	Coffee Break	
10:45 – 12:00 noon	7. Field Testing Habitat Enhancement Techniques in the Northern Environment	Andy /All
	 Discussion of proposal to test habitat enhancement techniques in the field on lakes near the Diavik site. Specific advice to EMAB on field testing 	All
12:00 – 1:15 p.m.	Lunch (not provided)	
1:15 – 3:00 p.m.	 8. Proposed Catalogue of Off-Site Habitat Enhancement/Reclamation Opportunities Discussion of a catalogue of locations where 	Andy /All
	 off-site habitat compensation might be done. Specific advice to EMAB on other locations for habitat compensation 	All
3:00 – 3:30 p.m.	Coffee Break	
3:30 – 4:30 p.m.	9. Community Communications and Understanding – Fish Habitat Compensation	Andy /All
	 Specific advice to EMAB on talking about fish habitat compensation with the communities 	All
4:30 – 5:00 p.m.	10. Day 2 Workshop Wrap-UpClosing prayer	Andy, Community elder, TBD