APPROVED
Natural Heritage System for the Niagara Watershed
Scenario Development Team

Thursday September 9, 2010
1:00 – 4:30pm
NPCA Boardroom

Meeting Minutes

Attendees:
Jon Whyte – Niagara Homebuilders Association
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
Valerie Cromie – Niagara River Remedial Action Plan
Albert Garofalo – Niagara Land Trust
John Potter - Peninsula Field Naturalists
Joe Schonberger – Niagara South Federation of Agriculture
Kristen Maddalena – Niagara Region
Francesca Berardi – Niagara Falls (Area Planners)
Austin Kirkby – Niagara North Federation of Agriculture
Tony VanOostrom – Ontario Power Generation
Mike Scott – Ontario Sand, Stone and Gravel Association
Barbara Wiens – Town of Niagara-on-the-Lake

Project Management Team
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad, Niagara Peninsula Conservation Authority

Regrets:
John Middleton – Brock University (recommended Brad May as rep.)
Peter Minkiewicz – County of Haldimand
Maureen Miller – Ontario Sand, Stone and Gravel (sending Mike Scott in her place)

1. **Welcome and Introductions (D. Lindblad, P. Hubbard)**
   D. Lindblad welcomed everyone on behalf of the Region of Niagara and the NPCA. She
   also introduced Pamela Hubbard as the Facilitator for this process.
   P. Hubbard gave the group their first task: 5-7 minutes to find out about their partner,
   their organization and their hopes, concerns and questions.

   The group introduced themselves.

   The following are their hopes, concerns and questions:
   HOPES:
   -goals and objectives compatible with the sustainable Niagara initiative;
   -align criteria for Niagara RAP with this project;
   -retain as much wetland as possible;
   -NHS process will align with other existing planning processes and consideration of land
   use planning in communities;

-this process won't infringe on the ability for farmers to make a living (tender fruit and grapes groups);
-process will lead to workable process and document seamless;
-a collaborative effort – all concerns taken into account, ensure a voice for development and a balance between natural heritage and development;
-significant socio-economic concerns are incorporated;
-updates existing natural heritage tools (mapping and policy) to be more in line with current circumstances;
-align with OPG restoration program;
-Land Trust can use to focus/lead procurement;
-approach reflects that in other areas (MARXAN) easier information sharing;

CONCERNS:
-do we need technical people for this Committee;
-how to do the process without ticking people off;
-how to find consensus between different groups;
-process doesn't end up as meaningless exercise;
-impact on municipalities through collaborative efforts, NHS and environmental objectives are diluted/diminished;
-hope it's a useful process;
-agriculture and aggregates will be a tough issue;
-concerned for the growers of crops;

QUESTIONS:
-how does agriculture fit in?
-does everyone understand negative impacts of environmental protection on agricultural industry?
-how to address important rare ecosystems or community types?
-how to "nest" eg. Wetland types or should they stand on their own? Also, unique features – what could this be? Eg. types of habitat;
-how do socio-economic issues get addressed in this process?
-how does this process work with the planning act? Natural Heritage separate in the planning act? Balancing act now and later in the planning act?
-is this process based solely on science?
-are agricultural uses completely at odds with NHS, or a type of community for animal species?

2. **Introduction to the Process (D. Lindblad, G. Verkade)**
   D. Lindblad presented information about the Natural Heritage System process. She defined and gave examples for the Socio-political Constraints, Biodiversity Representation, Hydrological Function, Ecological Function- Course Scale Wildlife Habitat, Species Habitat – Fine Scale.

   G. Verkade presented the details of the MARXAN Model being employed. He outlined how the model works explaining that it is a site selection tool that searches the possibilities on the landscape based on the data we put into it.

   He also explained that it does not contain an ecological algorithm but is purely statistical and that it is based on "simulated annealing".

   The model runs multiple iterations and produces more than one nearly optimal

solution. Those scenarios are then assessed by the Committees. Once the scenarios are presented, we can decide to run different scenarios i.e: what would happen if there were no constraints? Or, what if we only wanted to preserve half of the habitat for a given species?

Finally, G. Verkade explained that the database associated with the final output will allow us to determine exactly why certain cells have been included or excluded in the Natural Heritage System. It tells us how many times a cell was chosen (i.e: out of 100 iterations, a cell was chosen 80% of the time). He showed the group the example of the Reeb Quarry Development Proposal.

ACTION ITEMS (D. Lindblad):
QUESTION: how are other groups dealing with agriculture as part of the natural heritage system, are they including agriculture as natural heritage?

ftp site include: intro. presentation, reference materials from Hamilton and Leeds/Grenville, NAI info., MNR pilot project,

email: minutes, agenda for first full say session, ftp site info, preliminary list of constraints to consider in first meeting.

Add Curt Benson to the distribution list.

3. **Overview of the Terms of Reference (Vision and Goals, Finalize the Roles and Responsibilities) (P. Hubbard)**
P. Hubbard gave the group the task to look over the vision and goals and the roles and responsibilities and highlight any questions or concerns.

The group made the following comments on their contribution:
V. Cromie asked about the Niagara Parks Commission as a participant on this committee. **ACTION: ask NPC to participate**.
J. Whyte will provide info for Hamilton Homebuilders Association. **ACTION: J. Whyte to provide contact info.**
A. Kirkby to provide info on contact for tender fruit grower. (specialty crop area with special protection). **ACTION: A. Kirkby to provide contact.**
Others: **Carolinian Canada, Hydro One (T. VanOostrom to provide contact info.), Ministry of Transportation (St. catharines office), Bruce Trail Conservancy, organic growers assoc. ?? ACTION: A. Garofalo to send info.**

Needs to be fact based and validated datasets.
Dataset for local SAR from MNR?
ACTION: G. Verkade to provide a list of available data to be used in this process.
Privacy issues, MFTIP data from Trees Unlimited.
RAP criteria for delisting – coming.
A. Kirkby – can any data be included as long as it is fact based, D. Lindblad: data standards might exist that need to be considered.
G. Verkade: There may be times when a dataset is not available and make recommendations to fill the gaps.

D. Lindblad: Can call in experts when we need them.

V. Cromie: asked for clarification about what providing direction meant. G. Verkade highlighted that it refers to consensus.

B. Wiens: Outreach and education committee to develop the tools, P. Hubbard highlighted that it also means that the reps have the obligation to maintain communications with their organizations.

P, Hubbard explained that she is always open to discussions about what we need to make these meetings run smoothly.

Other meeting places for these meetings:
Suggestions were made: Ball's Falls Centre, Rittenhouse Hall, Region of Niagara.
ACTION: D. Lindblad to look into alternate meeting spaces.

T. Van Oostrom asked what the end product will be? D. Lindblad explained that

Other comments on the Terms of Reference:
A. Kirkby wants to add to guiding principles – wants a bullet point stating agriculture…
2.3 consider impacts to agriculture
For vision: while recognizing impacts to agriculture.
Decided to leave it for now and revisit down the road if Austin's concerns are not addressed through the process as we imagine they will be.

A. Kirkby explained that there are real impacts because of natural vegetation.
F. Berardi explained that this is covered potentially under the economic values…

J. Whyte outlined that this is not necessary since socio-political refers to all including agriculture, development, etc…
L. Hamilton: the term in balance addresses this.
G. Verkade: explained that this is about site selection.

CHANGE: Eg. vineyards from ie: vineyards.

Kirkby: Outreach and Education Committee: stakeholders need to be aware that agricultural land is included.

4. **Work Plan (D. Lindblad)**
   D. Lindblad reviewed the work plan with the group highlighting when this group will meet and what those meetings will be about.
   ACTION: D. Lindblad Send meeting announcements including full list of actual dates.

5. **Rules of Engagement**
   Deferred until the next meeting. To look at Rules of Engagement and Consensus Building.

6. **Next Meeting – October 7, 2010   9:00am – 4:00pm**

   M. Scott; still lots of issues but good start, feeling good about it.
   T. VanOostrom: feeling good, learned a lot. Likes the consensus approach.

J. Potter:Exhausted but progress is being made.
A. Garofalo: feeling good, looking forward to nuts and bolts.
V. Cromie: looking forward to working with the group, revising statement under hopes –
instead of align, make it apply delisting criteria towards this project.
A. Kirkby: queasy but looking forward to development of the process.
D. Kirk: good comfort level, good in house info (NAI) and GIS expertise.
L. Hamilton: feel good about today, can't wait to get into the nitty gritty but I have an
impending sense of dread. Hoping we can work through it and come up with something
good.
F. Berardi: better understanding and looking forward to some pretty maps being
generated.
J. Schonberger: still wrapping my head around a different use of English and terms we
use.
K. Maddelena: very informative, good direction even if bumpy road ahead.
J. Whyte: I think we are getting somewhere..from the steering committee meetings
seemed airy fairy but now with Marxan seems clearer, happy to hear that the need for
buy in is important. If there is to be buy in there needs to be consensus.
B. Wiens: I have some of my questions answered. Fells a bit clearer about process. A
sense of uneasiness about what it is we are going to be faced with, not easy and tough
decidisons bneed to be made but I think good product and valuable tool.
G. Verkade: available to answer questions. Encouraged about what we hear around the
table….I am hearing process and that makes me happy since the process is really what
is most important out of this.
D. Lindblad: Relieved whenever you put this many people with potentially conflicting
interest, you never know how it will go. I have faith in the process and am glad that what
I thought would happen, did! Relived and hopeful!

Adjournment: 4:35pm

<p style="text-align:center">APPROVED</p>

Natural Heritage System for the Niagara Watershed
Scenario Development Team

Thursday October 7, 2010
9:00 am – 4:00pm
Ball's Falls Centre for Conservation

Meeting Minutes

Attendees:
Silvia Strobl – Ontario Ministry of Natural Resources
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
Dan McDonnell – Niagara River Remedial Action Plan
John Potter - Peninsula Field Naturalists
Joe Schonberger – Niagara South Federation of Agriculture
Travis Mac Beth – Niagara Region
Curt Benson – Niagara Region
Jon Whyte – Niagara Homebuilders Association
Francesca Berardi – Niagara Falls (Area Planners)
Austin Kirkby – Niagara North Federation of Agriculture
Anne Marie Laurence – Niagara Escarpment Commission
Ian Thornton – Ontario Ministry of Natural Resources
Tony VanOostrom – Ontario Power Generation
Barbara Wiens – Town of Niagara-on-the-Lake
Peter Minkiewicz – County of Haldimand
Donald Kirk – Ontario Ministry of Natural Resources

Project Team:
Geoff Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority

Regrets:
John Middleton – Brock University (recommended Brad May as rep.)
Moreen Miller – Ontario Sand, Stone and Gravel (sending Mike Scott in her place)
Albert Garofalo/ N. Kiers – Niagara Land Trust
Cathy Plosz – City of Hamilton

1. **Welcome and Introductions (D. Lindblad, P. Hubbard)**
   D. Lindblad welcomed everyone on behalf of the Region of Niagara and the NPCA. She also introduced Pamela Hubbard as the Facilitator for this process.

   The group introduced themselves. They also gave an indication if there was any feedback from their organizations about the project to date.

   The group approved the Minutes from the September 9 meeting with a few minor changes.

2. **Rules of Engagement (P. Hubbard)**
   P. Hubbard gave the group their first task, 5-7 minutes to read over the information provided and then 15 minutes to discuss in small groups.

   How do we work together?

   - **Silence as Agreement and it is important to have the conversation to support the silence.**
   - **Topics need to be open to account for reflection and discussion with organizations.**
   - **Feel free to ask questions (No question is a silly question).**
   - **Plain English PLEASE (limit acronyms or technical language).**
   - **Challenge ideas, not values.**
   - **Facilitator keeps meeting on topic.**
   - **Start on time, end on time.**
   - **Limit side conversations, use of cell phones, and personal data assistants.**
   - **Different ideas are welcome.**
   - **Everyone participates and if you can't, please send an alternate.**
   - **One conversation at a time.**
   - **Listen to others ideas and emotions.**
   - **Ideas and information deserve to be acknowledged and respected.**
   - **Voice opinions and feelings openly and explore conflicts in ideas.**
   - **Confirm/ consult with your organization regularly and report back.**
   - **Don't make assumptions.**
   - **Respect one another.**
   - **Logically organized agenda.**
   - **Remember you are here to represent others.**
   - **Clear expected outcomes from meetings.**

   Group discussed the notion of "silence as agreement". Silence may not mean agreement but may mean that the person requires more time to further develop their thoughts or may need more information. It is also important to communicate if either of the above are the case rather than remaining silent.

   It will be important for the group to touch base at the beginning of each meeting to confirm that what people agreed to the previous meeting is still okay.

   Open discussion is key to the success of this project.

   The group went through the list provided and added to it to produce the list above.

   NEEDS
   -ability to confirm with your organization and report back.
   -review previous targets, decisions at the beginning of each session.
   -Parking Lots: for issues needing more discussion/ more information.
   -CA open to presentations to organizations.
   -check in re: next agenda

3. **Consensus Building Exercise (P. Hubbard)**
   P. Hubbard gave the group 5-7 minutes to review information provided including examples of processes used in other areas.

Participants split up into small groups to discuss how they would like to proceed towards consensus building for the project.

Prior to the groups presenting their discussion, S. Strobl gave an overview of the process and the expected outcomes. Using P. Hubbard's diagram of the process, S. Strobl explained that in previous processes, experts developed the natural heritage systems and then brought the outcome to the stakeholders for their opinion.

In beginning this process, the CA has been working for 4 years to develop a dataset and mapping through the Natural Areas Inventory. Natural areas throughout the watershed were documented and now we are looking at which ones we want to keep and why we need to keep them. Government cannot do it all, the issues are too complex. This is true stakeholder engagement.

S. Strobl explained that the Steering Committee developed the Terms of Reference and will be responsible for guiding the process. The Scenario Development Team has the "most fun" in the process. Starting with what the project team believed will be the easiest, Socio-political constraints. These will be the boundaries or the frame that the system will be built within.

There are 4 types of constraints we will be setting:

Excluded
Conserved
Preferred
Available

Gaps in data will be identified. They will become obvious through this process. It is an opportunity to highlight the gaps and maybe give them more weight to be addressed.

Outcomes will include many near optimal solutions in the least amount of area.

We have the ability to run "what-if" scenarios.

We want to get to a Preferred Solution. Final product is not just a map but maybe more importantly, the database and rationale (the information piece).

Groups presented their views, thoughts, and concerns on Consensus Building:

-Building consensus is time consuming.
-D. McDonnell: Consensus might not be necessary. If a group fundamentally disagrees with the final preferred scenario, they can choose not to adopt it.
-B. Wiens: has the potential to be very hard. If we can't get there what happens?
-A. Kirkby: If you don't agree, you need to say so. If you need more time, the decision can be deferred until more info. is available. The ability to do this is important. In this case, we will record the inability to reach consensus and reasons why.
-T. MacBeth; stalling of process- need time to report to groups, defer to a vote (high %). Is there a pre-determined end date? D. Lindblad expaliend that the end date is linked to the funding that runs out in June 2011.
-D. McDonell: May be important to ask for an endorsed statement from groups about why they are opposed if this becomes a problem.

-A. Kirkby: Agrees with the ability to block but not voting.
-G. Verkade: if we are at an impass, this strongly suggests a "what-if" scenario to be run through the model. We can explore both sides.
-P. Hubbard: provide info to those that need more between meetings.
-S. Strobl explained that there are different levels of concern around not reaching consensus. It is less of a problem in the target setting phase, it becomes more of an issue in the adoption of a preferred scenario.
-P. Hubbard: explained that if we have used the agreed upon ground rules all the way through, it should not be so much of a problem when we get to a preferred scenario.

P. Hubbard explained the model of using "the five fingers" (see handout) to show how you are feeling about the decision. She explained how it is different than voting.

*** Group agreed to continue with the Consensus based approach. ***

4. **Presentation on the NHS Approach (S. Strobl)**
   See above
   "It is no longer good enough for governments to say this is the way it has to be." S. Strobl

5. **Overview of Project Deliverables (G. Verkade)**
   G. Verkade reminded the group that at the end we arrive at a vision we can agree on.

   T. VanOostrom asked what we get in the end?
   G. Verkade explained that we are working towards a map and a document that shows all of the decisions. The map is generalized to five hectare hexagons, it is not the detailed map that we are used to.

   The end product will be presented to Region, municipalities, and stakeholders as good information and good science arrived at by consensus. It is not policy.

   The final report should include examples of how the data can be used. The information piece is not a regulatory tool or a policy tool, but will inform those business areas.

6. **Overview of Important Terminology (S. Strobl)**
   A copy of the glossary was posted on the wall throughout the meeting and will be used in subsequent meetings. The terminology is also included in the planning manual developed for the SDT.

   J. Schonberger suggested that the name of the project is confusing given that the term natural heritage has so many meanings. He thought that "The Marxan Project" might be better.

7. **Socio-Political Constraints – Conservation Lands**
   G. Verkade began this discussion with a presentation of the base data. He explained the Natural Areas Inventory Community Series data and mapping.
   He showed a series of slides (screencaps of the GIS mapping for the Community Series work).

   G. Verkade went over the 3 questions we need to ask ourselves for each constraint:
   -Is it constraint worthy?

-are features mapped adequately?
-assign a constraint type: -excluded, preferred, available, conserved

Greenbelt Plan/Act: this first constraint discussion involved an explanation of what the final mapping will look like and a discussion about setting the constraint where there is a coincidence of the MARXAN hexagon with an underlying natural heritage feature from the NAI mapping.

I. Thornton provided background on the Greenbelt Plan/ Act and the policy within it in order that the group has a basic understanding to make a decision.

A. Kirkby expressed concerns about the features found within the legislated Greenbelt Plan area. There was a discussion about not just accepting the Greenbelt Area as a whole but rather mapping back where available to the features.

S. Strobl: Explained the pecking order of the site selection.

G. Verkade: outlined in general terms how the model selects sites.

Group asked for a list of the socio-political constraints. G. Verkade went through the list being used as a starting point.

Provincial Parks: CONSERVED
D. Kirk: suggested Conserved. Provincial Parks are strongly regulated, crown land and the best examples of a natural environment feature.

There were also discussions about refining the model to run smaller hexagons.

G. Verkade: as part of the end products, the report will include an example of how to map back to the features.

AM. Laurence: conserved
A. Kirkby: conserved
F. Berardi: conserved
N. Liwin: conserved
J. Potter: conserved
J. Whyte: conserved
B. Wiens: conserved
T. MacBeth: conserved
D. McDonell: conserved
D. Kirk: conserved
C. Benson: conserved
I. Thornton: conserved
J. Schonberger: conserved or preferred
L. Hamilton: conserved
T. VanOostrom: conserved

Conservation Authority Properties/ Conservation Areas: CONSERVED
T. VanOostrom: conserved
J. Schonberger: conserved or preferred
L. Hamilton: conserved

I. Thornton: conserved or preferred
C. Benson: conserved
D. Kirk: conserved
D. McDonell: conserved
T. MacBeth: conserved
AM. Laurence: conserved
J. Potter: conserved
B. Wiens: conserved
J. Whyte: conserved
N. Litwin: conserved
A. Kirkby: conserved
F. Berardi: conserved

Questions about how the model deals with conflicting constraints for features within the same hexagon were raised. G. Verkade explained the pecking order within the model.

8. **Wrap up**
   D. Lindblad addressed the group about changes in venue and date for the next two meetings. She will contact all with the changes.
   She thanked the group for their participation.

9. **Next Meeting**
   Thursday November 4, 2010
   Venue to be determined.

Adjournment:
3: 21pm

APPROVED
Natural Heritage System for the Niagara Watershed
Scenario Development Team

Thursday November 4, 2010
9:00 am – 4:00pm
Niagara Region-Public Health Building
200 Division Street, Welland

Meeting Minutes

Attendees:
Donald Kirk – Ontario Ministry of Natural Resources
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners Rep.
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
John Potter - Peninsula Field Naturalists
Travis Mac Beth – Region of Niagara
Mark Buma – Niagara Parks Commission
Jarmo Jalava – Carolinian Canada Coalition
Mike Scott – Stone, Sand and Gravel Association
Peter Minkiewicz – County of Haldimand
Joe Schonberger – Niagara South Federation of Agriculture
Francesca Berardi – City of Niagara Falls – Area Planners
Austin Kirkby – Niagara North Federation of Agriculture
Jon Whyte – Niagara Homebuilders Association
Albert Garofalo – Niagara Land Trust
Ian Thornton – Ontario Ministry of Natural Resources
Dan McDonell – Environment Canada – Remedial Action Plan
Brian Skye – Six Nations
Lee Gibson – Six Nations

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Liz Spang – Ontario Ministry of Natural Resources
Silvia Strobl –Ontario Ministry of Natural Resources

Regrets:

1. **Welcome and Introductions (D. Lindblad, P. Hubbard)**
    D. Lindblad welcomed everyone on behalf of the Region of Niagara and the NPCA. She
    also introduced Pamela Hubbard, Facilitator.

The group introduced themselves. They also gave an indication if there was any feedback from
their organizations.

B. Wiens – stated that she presented the project to the area planners. They expressed that they would like the opportunity to review anything dealing with Urban Lands prior to a decision being made.

A. Kirkby – expressed that the agriculture sector if very concerned about the outcomes of this process and the possibility that this will become policy.
J. Whyte – stated that the Homebuilders Association has concerns about the uptake of this information at the end but will wait to see what comes out of it.

2.   Review of the Minutes from October 7, 2010
The group approved the Minutes from the October 7th meeting with a few changes.

J, Schonberger brought up the issue of potentially renaming the project to move away from the wording Natural Heritage System in order to avoid confusion as the term is used in other planning processes in this area. The group discussed their views on the need for a change to the name. Natural Heritage System is seen as being important to include in the title but the title may need to be more descriptive and it should be clear that the project applies to e.g. agriculture, aggregate, and urban land when communicating the project to the public.
Since the Steering Committee has previously addressed this, the discussion at this committee will be communicated to them and to the Outreach and Education Committee.

A. Kirkby and J. Whyte both pointed out that the result of this project has the potential to be incorporated into policy by government agency at a later date this should be made be clear.

ACTION ITEM: D. Lindblad to communicate the concerns around the name of the project to the Steering Committee and the Outreach and Education Committee and report back to this committee on their decision.

3.   Overview of the Project Deliverables and MARXAN Model (G. Verkade)
G. Verkade went over the deliverables of the project again. He explained the information product and went through an example of what the final output will look like.

He also led the group through an example of how MARXAN does its site selection (using the mouse, butterfly, fish examples).

S. Strobl explained the scenarios and G. Verkade added information about some of the Learning Scenarios that we can run such as: a Baseline (based on targets and constraints as laid out by SDTeam).   Others that can be run for comparison are a Wildcard (no constraints – Best of the Best), Best Half (of what is left), etc…

S. Strobl explained that in Leeds - Grenville, they are running 8 scenarios simultaneously and it takes 7 hours to run on the computer.

L. Spang showed the scenario maps from Leeds – Grenville example for several of the What-if Scenarios.

J. Potter asked about whether it would be possible to do something as specific as run a what if scenario that takes out all of the Ash trees? G. Verkade and S.Strobl explained that the data doesn't exist in all areas for that kind of analysis. G. Verkade mentioned that this sort of data gap analysis is an important outcome of the project.

The group decided to change the name of the constraint status from CONSERVED to INCLUDED.
ACTION ITEM: Planning Manual to be updated to reflect this change.

4.   Overview of Decisions from October 7, 2010 (G. Verkade)
Provincial Parks – INCLUDED
NPCA Conservation Areas – INCLUDED

Discussion arising from Decisions made on October 7, 2010
P. Hubbard asked the group if everyone is still okay with the decisions from the last meeting. Everyone was in agreement.

D. Kirk- suggested that Conservation Reserves should be included with the Provincial Parks.
   According to the MNR representatives, they are offered the same level of protection.
All agreed with this.
Decision: these Reserves are INCLUDED and incorporated into Provincial Parks

J. Jalava –agreed with D. Kirk

S. Strobl- mentioned that we need to get the data on the Hamilton CA properties.

ACTION ITEM: G. Verkade to get the Hamilton CA properties in the buffer.

5.   Socio-political Constraints – Conservation, Urban, Cultural Lands

In considering socio-political constraints, the groups considered three questions:
1. Is this a constraint worthy category?
2. Is there adequate mapping?
3. What type of constraint should be assigned?

Several conservation owned properties are listed as one category. The group discussed each and decided on the following:

Nature Conservancy Lands (NCC) (Nature Reserves)
ACTION ITEM: Data- Nature Conservancy (Nature Reserves) -Lathrop Property is not included on the mapping.

Land Trust Property
The property shown on the slide is actually owned by Hamilton Naturalists' Club and should be shown as such.

Niagara Land Trust
This should be a separate category.

MNR- Conservation Reserves –
ACTION ITEM: G. Verkade to get updated shapefiles from D. Kirk.

Carolinian Canada Properties (CCC) – J. Jalava explained that these were identified about 25 years ago as the "best of the best" that hadn't had strong protection. Designated by the NGO

and many are privately-owned. The process of looking at the landscape has evolved from that point even within CCC. They are not under any kind of conservation easements.

ACTION ITEM: Separate these from other conservation lands as they are not owned for conservation and assign a constraint separately.

Ducks Unlimited Properties-
S. Strobl explained that these properties are owned by Ducks Unlimited Canada for the purpose of conservation.

Bruce Trail Conservancy Properties – J. Jalava and B. Wiens explained that more often now, these properties are purchased lands for conservation but they are also under conservation easements with private landowners and also some industrial properties for public access. I. Thornton explained that the easements are varied and thus we need more information about these.

ACTION ITEM: Confirm if our dataset includes only the properties owned by the Bruce Trail Association. This is what we should be considering. Bruce Trail Conservancy vs. Association which would deal with the trail and the associated lands.

Ontario Heritage Trust Properties–
ACTION ITEM: G. Verkade to add these properties

All of these lands are owned by groups that are charities that are audited by the government to ensure that the properties are kept for the purpose of conservation.

Conservation minded organizations (Ducks Unlimited, Bruce Trail Conservancy/Association, and Ontario Heritage Trust):

Decision:
Owned Properties: properties that are outright owned will be categorized as "included"; with the exception of land trusts for agriculture purposes.
Easements: It is difficult to know what the easements are for (e.g. could be access versus conservation) and G. Verkade explained we don't necessarily have mapping for all.
Decision: properties held through easement will not be considered in this project i.e. they are not constraint worthy.

Community Forests- only one in the study area (Ruigrok Tract) and it is owned by the NPCA.
Decision: **CONSERVED/ INCLUDED – add to Conservation Areas.**

Brady 1980 Candidate Environmentally Significant Areas (ESA) Report –
L. Hamilton explained that she uses this report on a daily basis, she said that they use it for information only since the report is out of date.

J. Jalava asked if they will be duplicated through another constraint.

L. Hamilton and D. Lindblad explained that they will not always be duplicated.

I. Thornton – preferred
J. Whyte – preferred

There was much discussion about the rules for trump within the model pecking order.
The group decided to include it as a What-if scenario.
A. Kirkby – available
F. Berardi – preferred
When do we balance what is included and what is excluded on the same property?
G. Verkade and S. Strobl explained that we can make these decisions once all of the constraints are set.
J. Schonberger: preferavailable? (preferred or available)
P. Minkiewicz: preferred
M. Scott: uncomfortable making a decision
J. Jalava: preferred
M. Buma: preferred
T. MacBeth: preferred
J. Potter: preferred
L. Hamilton: preferred
B. Wiens: preferred
D. Kirk: preferred
B. Skye: no comment
L. Gibson: no comment

Decision: Decision deferred until next meeting.
L. Hamilton reviewed the boundaries of the candidate ESA sites from the Brady report and the boundaries remain largely the same today. There has been little change.

ACTION ITEM: We will come back to this category to address limitations and look at conflicts with other constraints.
We will run a scenario with these ESAs removed.

ACTION ITEM: G. Verkade: overlay a map of the Brady ESA sites with, significant woodlands and wetlands to see if the polygons get picked up by other constraints.

Important Bird Areas
J. Jalava: the process to establish these areas is not stringent enough to consider them. These are too coarse scale. The purpose of this designation is to highlight these areas and not to draw lines on maps.
J. Potter: many of the areas are limited to one species of bird, etc… or migratory water fowl.
Decision: Not constraint worthy and not adequately mapped.

Migratory Bird Areas
Not currently mapped for our area although the methodology exists.
Maps stop over habitat within 2 kilometers of the shoreline into 5 classes.
Decision: Do not consider as part of the constraints exercise. Treat this as an ecological function target rather than a constraint.
ACTION ITEM: Do some analysis on the Lake Erie and Lake Ontario shorelines and maybe present it as targets for each of the 5 classes.

Niagara Parks Commission Lands
M. Buma – really mixed land use.
Decision: Included

L. Gibson: included

B. Skye: no comment
D. Kirk: included
B. Wiens: included
L. Hamilton: included
J. Potter: included
T. MacBeth: included
M. Buma: included
J. Jalava: included
M. Scott: included
D. McDonell: included
P. Minkiewicz: included
J. Schonberger: included
F. Berardi: included
A. Kirkby: included, but concerned that we don't know what how the information generated from this study will be used in the future and she wants to be sure that by including it, it does not limit uses of e.g. the agricultural irrigation pump station for NOTL that falls on NPC lands.
J. Whyte: included

A. Kirkby asked, Is there a way that we can say that existing infrastructure is preserved in our final scenario?
G. Verkade said that we can map it explicitly and make it excluded in the final scenario.

A discussion ensued around compensation and trade-offs for development. S. Strobl explained that the information will be there to know what we would be giving up to the development, etc…

ACTION ITEM: M. Buma to give G. Verkade the NPC mapping of their lands.
The NPC has mapping that includes land use designations such as Environmentally Sensitive, Restored.

Biosphere Reserves
An international designation at a course scale.
Decision: Not constraint worthy

Municipal Parks and Open Spaces
There are various data sources available to determine where municipal parks are located.
These parks are mixed use (active recreation, passive) but may have natural heritage features.

J. Whyte: given that one of the end uses might be to use the data to target restoration, does it make sense to call them included so that they are part of that later discussion.
L. Hamilton: asked if that then meant that the model would choose an urban park over a woodlot outside the urban boundary.
B. Wiens: because of the varied ecological value, included might be extreme.
I. Thornton: agreed with B. Wiens.

I. Thornton: preferred
J. Whyte: preferred
A. Kirkby: preferred
F. Berardi: preferred
J. Schonberger: available
P. Minkiewicz: preferred

D. McDonell: preferred
M. Scott; preferred
J. Jalava: preferred
M. Buma: preferred
T. MacBeth: preferred
J. Potter: preferred
L. Hamilton: wants to wait until we know what weight we are giving to woodlands and wetlands outside of the urban boundary.
B. Wiens: available
D. Kirk: preferred
B. Skye: cultural significance to some of these parks due to the fact that First Nations play lacrosse there. No comment on status.
L. Gibson: no comment.

Decision: deferred to address comments

ACTION ITEM: When we capture the Best of the Best scenario, overlay the municipal parks to see how they contribute. Come back to B. Wiens and J. Schonberger's Available status.

EXISTING PREDECESSOR ATTEMPTS AT NHS
Carolinian Canada Big Picture Project:
J. Jalava: the idea was not to designate certain areas as protected but rather to get people thinking about connectivity on the landscape to promote healthy ecosystems for the future. There was lots of criteria and stakeholder engagement. It was also a computer modeling exercise based on the data that was compiled.

The data is now outdated so J. Jalava recommends not using it now as a constraint.
It would be interesting to overlay later on to compare.

ACTION ITEM: compare Carolinian Canada Big Picture to our Final Scenario.
Decision: Not constraint worthy.

Presentation by Brian Skye – Six Nations perspective
B. Skye began by stating that this is an informal presentation not in any way linked to the "duty to consult" of the Federal Government.

He explained that the Six Nations confederacy is made up of 6 distinct nations. Pre-European contact southern Ontario was "the dish", the area that all of the different confederacies (both from the current northern United States and southern Ontario), came to eat, forage, etc…

He stated that the Nanfan Treaty from 1701 is currently still being upheld. Conservatory lands also included 6 miles along the Niagara River pre-dating the Nanfan Treaty.

He explained that Six Nations have particular ties to the ancient paths that were used by the runners and that archeology supports the existence of the corridor.

Brian Skye works on behalf of the confederacy on environmental and archaeological issues. He helps the confederacy to better understand their place in the larger society.

He offered that there is potentially useful data to be found in archeological sites, ie: war of 1812.

Six Nations are working with CA's, etc… and educating them about the fact that Six Nations are part of the natural system within the cycle of life. They will harvest for food and medicine and will continue to do that as part of their ceremonies, and their daily lives.

Presentations such as the one given to the Scenario Development Team help foster an understanding of this area and have it recognized.

Land Care Niagara – Ecological Framework

Was subjective and is at a coarse level, but we do have the data digitally.
B. Wiens: (a former member of Land Care Niagara) explained that the idea was to use this broad brush approach to target stewardship. It was not intended as a designation. It was based on a conglomeration of info. sources.

ACTION ITEM: compare Land Care Niagara – Ecological Framework to our Final Scenario.
Decision: Not constraint worthy.

Conservation Action Plans (CAPs)
J. Jalava: The idea of the CAPs is a high level assessment of issues and priorities specifically around Species at Risk. Mapping was based on Land Care Niagara. Ideally, this process will update the CAPs.

Recommendation is to not use the CAP as a constraint. Because the areas are hot spots, they are likely to come up in the NHS anyway.

Decision: Not constraint worthy.

Evaluated Wetlands
The wetland mapping for Niagara was updated by MNR through the process of the Natural Areas Inventory. The two agencies worked together to delineate all of the wetlands on the landscape.

If the members have a question about a site specific wetland, they can ask D. Lindblad and she will forward the question on.

G. Verkade showed the current updated wetland mapping.

Two main designations:
Provincially Significant (PSW) – protection under the Provincial Policy Statement (PPS)
Regionally/Locally Significant (LSW)

Provinicially Significant Wetlands (PSW's)
A. Kirkby: concerned about the designation of the irrigation ponds in NOTL. They need to be treated differently.
L. Hamilton: explained that these are not PSWs.

L. Gibson: included
B. Skye: No comment
D. Kirk: included
B. Wiens: included
L. Hamilton: included
J. Potter: included
T. MacBeth: included
J. Jalava: included
M. Scott: included
D. McDonell: included
P. Minkiewicz: included
J. Schonberger: included, concerns about the discrepancies between mapping in industrial areas and rural areas, particularly in agricultural areas
F. Berardi: included
A. Kirkby: included – has concerns about specific wetlands (Virgil, ON), will follow up with the CA.
J. Whyte: stand aside – as a representative of the homebuilders association, he can't comment since there are concerns about the validity of the mapping/ verification.

ACTION ITEM: Run two what-if scenarios around wetland percentages. The Best of the Best will pick out whether these will meet our targets.

Provincially Significant Wetlands
Suggestion: Run two scenarios A: Included and B: Available. No Decision

Non- Provincially Significant Wetlands (Non-PSW's)
D. Kirk: preferred
B. Wiens: preferred
L. Hamilton: preferred
J. Potter: preferred
T. MacBeth: preferred
J. Jalava: preferred
M. Scott: preferred, but has concerns about how LSW's are evaluated
D. McDonell: preferred
P. Minkiewicz:
J. Schonberger:
F. Berardi:
A. Kirkby: excluded, because the agricultural irrigation ponds in Virgil must continue to function as irrigation ponds.
J. Whyte:

Non-Provincially Significant Wetlands
Suggestion: Run two scenerios. A: Preferred and B: Available. No Decision

6. Wrap Up
Reflections on the Day
L. Gibson: thank you for inviting us
B. Skye: is glad to see that we are using the model of consensus used by the six nations. Positive things will come from coming with a clear mind. This could be a wonderful experience.
J. Whyte: I don't know
A. Kirkby: Still concerned. Not convinced that the mapping is accurate.

F. Berardi: moments of clarity and confusion.
J. Schonberger: sometimes things are clear and sometimes confusing. Not sure when things he says are causing trouble.
P. Minkiewicz: likes the positive approach of consensus. Working through process is not a start and finish but builds up over time.
D. McDonell: has concern about wetlands since they are a priority under the RAP.
M. Scott: was a tough day and will get tougher but we just have to get through it.
J. Jalava: was happy to participate and observe. Would like to attend in future.
T. MacBeth: "a dish with one spoon" statement by Brian was inspiring. Also liked the fish, mouse, butterfly example of how MARXAN works.
J. Potter: would like to hear more from Brian about the Six Nations approach.
L. Hamilton: we are starting to get it.
B. Wiens: glad we made some decisions today. Liked the "dish with one spoon" statement. Thinking about all of the elements in this one dish.
D. Kirk: highlights – Geoff's butterfly, mouse analogy was helpful. Protection designations and what they mean was a great discussion. Was glad that Jarmo was here.
S. Strobl: the discussion is almost more important than getting to the preferred scenario.
G. Verkade: encouraged, people are getting it.
L. Spang: appreciates coming and observing. Every group is different and she learns from every group. All of the other groups have had similar rates of progress.
D. Lindblad: encouraged but is freaking out about the timeline.
J. Whyte: good dialogue today. Discouraged about how slow it goes but good to be able to voice concerns without prejudice. Keep going!

7. Next meeting
Group would like to use the room at the Public Health building.
Next meeting November 25, 2010.
ACTION ITEM: D. Lindblad to look into availability and get back to everyone.

Adjourned:
3:52pm.

**Natural Heritage System for the Niagara Watershed
Scenario Development Team**

**Thursday November 25, 2010
9:00 am – 4:00pm
Ball's Falls Centre for Conservation**

Meeting Minutes

Attendees:
Donald Kirk – Ontario Ministry of Natural Resources
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
John Potter - Peninsula Field Naturalists
Travis Mac Beth – Region of Niagara
Mark Buma – Niagara Parks Commission
Moreen Miller – Stone, Sand and Gravel Association
Peter Minkiewicz – County of Haldimand
Joe Schonberger – Niagara South Federation of Agriculture
Francesca Berardi – City of Niagara Falls – Area Planners
Henry Swierenga– Ontario Federation of Agriculture
Jon Whyte – Niagara Homebuilders Association
Ian Thornton – Ontario Ministry of Natural Resources
Peter Graham – Walker Industries
Valerie Cromie: Remedial Action Plan
Tony VanOostrom – Ontario Power Generation
Susanna Reid – Huron County (observer)
Nadine Litwin – Land Care Niagara
Albert Garofalo – Niagara Land Trust

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Steve Voroz – Ontario Ministry of Natural Resources

Regrets: none

1. **Welcome and Introductions (D. Lindblad, P. Hubbard)**
P. Hubbard welcomed everyone on behalf of the Region of Niagara and the NPCA.

The group introduced themselves. They also gave an indication if there was any feedback from their organizations.

B. Wiens –D. Lindblad and G. Verkade to present the project to area planners on Nov. 26th.

J. Potter – botanical survey of Lake Erie shoreline is finding lots of interesting plants.

D. Kirk – MNR in a recent visioning highlighted Natural Heritage planning as a top priority.

H. Swierenga – OFA is concerned that the agriculture sector is not negatively impacted by this Natural Heritage System.

J. Whyte – D. Lindblad and G. Verkade to present the NHS to the Niagara Homebuilders Association on Dec. 1st.

2. Review of Rules of Engagement and Consensus Building
P. Hubbard went over what consensus means. She also went over the 5 finger indication of position.

3.   Review of the Minutes from November 4, 2010
The group approved the Minutes from the November 4th meeting with a few changes.

Approved with minor changes.

4.   Overview of Decisions from November 4, 2010 (P. Hubbard/ G. Verkade)

Nature Conservancy Lands (NCC) (Nature Reserves): owned properties = included

Land Trust Property: owned properties = included; agricultural lands = excluded; easements = not constraint worthy

Niagara Land Trust: owned properties = included; agricultural lands = excluded; easements = not constraint worthy

MNR Conservation Reserves: included

Carolinian Canada Coalition: owned properties = included

Ducks Unlimited: owned properties = included

Bruce Trail Conservancy/Association: owned properties = included; easements = not constraint worthy.

Ontario Heritage Trust: owned properties = included; easements = not constraint worthy

Community Forests = included, add to Conservation Areas

Brady Candidate ESA sites: no decision on nov. 4th

Important Bird Areas: not constraint worthy

Migratory Bird Areas: not constraint worthy

Niagara Parks Commission Lands: included

Biosphere Reserves: not constraint worthy

Municipal Parks and Open Spaces: no decision on nov. 4th

Carolinian Canada Big Picture Project; not constraint worthy

Land Care Niagara: not constraint worthy

Conservation Action Plans: not constraint worthy

Evaluated Wetlands
Provincially Significant Wetlands: no decision on nov. 4th
Non-provincially Significant Wetlands: no decision on nov. 4th

Discussion arising from Decisions made on November 4, 2010

J. Schonberger: concerns about mapping around PSW's. Agriculture happens within wetlands. Agriculture is permitted within wetlands.

ACTION ITEM: G. Verkade put Brady Candidate ESA's on the ftp site.

5.   Socio-political Constraints – Conservation, Urban, Cultural Lands

In considering socio-political constraints, the groups considered three questions:
1. Is this a constraint worthy category?
2. Is there adequate mapping?
3. What type of constraint should be assigned?

G. Verkade presented the example of the butterfly, fish, mouse again as a refresher.

S. Voroz helped to explain the concept of costs. He explained that other groups have used area as the best way to incorporate costs. Monetary/ economic means of assessing cost are available but may be too time consuming or complicated for inclusion. Other groups have used area and it has served them well.

 S. Voroz gave examples of the outputs and the computing power required (5-13 hours computing time per scenario).

Brady Candidate ESA sites: Nov. 25th

P. Minkiewicz: available
J. Schonberger: available
M. Buma: available
B. Wiens: available
L. Hamilton: available
P. Graham: available
M. Miller: available
Report is old and they haven't been picked up as ESA's so it makes sense to have them available.
J. Potter: available
I. Thornton: (arrived late), available
D. Kirk: available
H. Swierenga: defer to J. Schonberger, no comment
T. VanOostrom: available
J. Whyte: available

T. MacBeth: available
F. Berardi: available
V. Cromie: available

Decision on Nov. 25th: Available

<u>Municipal Parks and Open Space</u>

L. Hamilton: brought up the concept of cultural landscapes and it was deferred until the Cultural Lands constraints.

I. Thornton: municipal parks are valuable in the sense that to some families they are the only available area for experiencing nature.

S. Voroz: expressed that the fact that they are publicly-owned might make them constraint worthy.

B. Wiens: explained that the mapping is not consistent currently.
This is a data gap.

G. Verkade explained that there is a surrogate for this in MPAC data. Municipalities could review it and let Geoff know if there are discrepancies.

P. Minkiewicz: preferred
J. Schonberger: available
M. Buma: undecided
B. Wiens: available, these areas perform many functions and so should be available to the process.
L. Hamilton: undecided, depends on how we constrain natural areas in the rural areas
P. Graham: available
M. Miller: available, concerned about mapping
J. Potter: available, has a problem with the definition of available having "no predetermined purpose"
I. Thornton: waffling between available and preferred
D. Kirk: available
H. Swierenga: available
T. VanOostrom: available
J. Whyte: available
T. MacBeth: available
F. Berardi: available, worried about interconnectedness, does not want an isolated park picked up
V. Cromie: available

Decision: Group decided that Municipal Parks and Open Spaces are constraint worthy however the mapping is not consistent so we cannot include it. Group could not decide on a constraint type. This is a data gap.

Evaluated Wetlands
Provincially Significant Wetlands (PSW's)

P. Minkiewicz: included
J. Schonberger: included; existing agriculture is permitted within a wetland
M. Buma: included
B. Wiens: included
L. Hamilton: included
P. Graham: included
M. Miller: included, expressed concerns about mapping
J. Potter: included
I. Thornton: included
D. Kirk: included
H. Swierenga: included, expressed concerns about mapping
T. VanOostrom: included
J. Whyte: stand aside due to concerns around the mapping
T. MacBeth: included
F. Berardi: included
V. Cromie: included

Discussion about the types of agriculture that happens within wetlands ie: fiddlehead farming. I. Thornton explained that these issues are imbedded in the Ontario Wetland Evaluation System.

T. VanOostrom: expressed concerns around Lake Gibson as a PSW.

L. Hamilton explained that under PSW's the existing use continues.

Decision: Included (as baseline)
Learning Scenario suggested, run a what-if as Available (Best of the Best).

Non-Provinically Significant Wetlands

L. Hamilton: explained that as far as the Conservation Authority is concerned, they are treated the same as the PSW's.

M. Miller: expressed concern that in many areas there is not consistent application of the policies.

P. Minkiewicz: preferred
J. Schonberger: preferred, concerns about mapping
M. Buma: preferred
B. Wiens: preferred
L. Hamilton: preferred
P. Graham: preferred
M. Miller: preferred
J. Potter: preferred
I. Thornton: preferred
D. Kirk: preferred
H. Swierenga: preferred, concerns about mapping
T. VanOostrom: preferred
J. Whyte: standing aside, since he represents an interest that questions the mapping.

T. MacBeth: preferred
F. Berardi: preferred
V. Cromie: preferred

Decision: No decision

Areas of Natural and Scientific Interest
Life Science ANSI – Provincial
Decision: Included

Life Science ANSI – Regional
Decision: Preferred

Earth Science ANSI- Provincial

M. Miller: explained that quarries actually create Earth Science ANSI's. May be important as we move forward in this process and in other jurisdictions.

I. Thornton: Non-provincially significant ANSI's have no protection under the PPS. The Region's policies do permit some development.

Lots of discussion around this and the uses that go on above these features on the surface.

P. Minkiewicz: available
J. Schonberger: available
M. Buma: available
B. Wiens: available
L. Hamilton: available
P. Graham: available
M. Miller: available, challenge for her and the interest she represents
J. Potter: available
I. Thornton: available
D. Kirk: available
H. Swierenga: available
T. VanOostrom: available
J. Whyte: available, concerns about the mapping
V. Cromie: available
F. Berardi: available
T. MacBeth: available
N. Litwin: (arrived late), available

Decision: Available

Earth Science ANSI - Regional
Decision: Available

 Drinking Water Vulnerability Zones

L. Hamilton: The intake protection zones do not speak to the natural heritage system however, the groundwater vulnerable and recharge areas are more linked. Intake Protection Zones –

protect municipal drinking water. Groundwater protection is different. Conservation Authority uses the groundwater vulnerable and recharge areas when implementing policies.

T. MacBeth: In terms of policy there is nothing yet.

M. Miller: This may be premature since currently there is no policy.

J. Schonberger: Has concerns about the mapping for groundwater recharge areas since much of it was extrapolated.

Decision: Intake Protection Zones - not constraint worthy.
Decision: Groundwater Vulnerable and Recharge Areas – not constraint worthy. This can be addressed under Hydrologic Function.

Upper Tier Municipality Official Plan Protection
City of Hamilton Environmentally Significant Areas

D. Lindblad explained that not every natural area out on the landscape would be captured. The goal of Hamilton's Natural Areas Inventory projects was to look for Environmental Significant Areas (ESA's) for designation purposes.

S. Voroz: Explained that many of these municipally designated areas can be lumped in to one category. Using detailed data like this might bias the model.

B. Wiens: This is similar to what we have in the Region of Niagara policy called Environmental Protection under Amendment 187.

P. Minkiewicz: The policy in Haldimand County is comparable to the Region of Niagara.

Decision: deferred until more information.

Region of Niagara - Policies
Region of Niagara Environmental Protection
Region of Niagara Environmental Conservation

Decision: deferred until more information.

Haldimand County

A. Garofalo: suggested that the varying levels of protection need to separated out for the three upper tier municipalities within the study area.

Decision: deferred until more information.

ACTION ITEMS
P. Minkiewicz: Check that Haldimand County has mapping for environmental protected areas to go with their policy.

D. Lindblad will research the different levels of protection and bring it back to the group.

NPCA Generic Regulations
Floodplains

Decision: not constraint worthy.

Riverine Erosion/Valleyland

L. Hamilton explained that the policy says that there is no removal of vegetation permitted below the top of bank and that there is a 7.5 meter regulated setback from the top of bank.

The group suggested that the two zones be treated separately.

G. Verkade: The mapping for valleylands is incomplete in the sense that they are delineated using linear features. Conversion of the data to a polygon is a recognized data gap.

ACTION ITEM:
L. Hamilton: will confirm what the policy actually says about the link to ecology and natural heritage.

Between Stable Top of Slope and Stable Toe – below top of bank is protected against the removal of the natural heritage features.

P. Minkiewicz: included
J. Schonberger: included
M. Buma: included
B. Wiens: included
L. Hamilton: included
P. Graham: N/A left early
M. Miller: N/A left early
J. Potter: included
I. Thornton: included
D. Kirk: included
H. Swierenga: included
T. VanOostrom: included
J. Whyte: included
V. Cromie: included
F. Berardi: N/A left early
T. MacBeth: included
N. Litwin: included
A. Garofalo: (arrived late), included

Decision: Included

Above top of Bank, within Regulated Set Back

P. Minkiewicz: preferred
J. Schonberger: preferred
M. Buma: preferred
B. Wiens: preferred
L. Hamilton: preferred
P. Graham: N/A left early

M. Miller: N/A left early
J. Potter: preferred
I. Thornton: preferred, with some questions about what the ecological value of these areas will be.
D. Kirk: preferred
H. Swierenga: preferred
T. VanOostrom: preferred
J. Whyte: available
***changed to available from preferred during the review of minutes on January 6, 2011. J. Whyte has concerns with the mapping since the top of bank in itself does not serve an ecological function but more for the protection from the hazard.
V. Cromie: preferred
F. Berardi: N/A left early
T. MacBeth: preferred
N. Litwin: preferred
A. Garofalo: (arrived late), preferred

S. Voroz reminded the group during the review of the minutes on January 6, 2011 that the reason for the protection is not relevant but rather constraint status is to illustrate effectively what is currently protected.

Decision: preferred

Shoreline Hazards
Includes Flood, Wave Uprush, Erosion Limits, Dynamic Beaches
Like floodplains, these regulations are developed to protect life and property not ecological function.

Decision: not constraint worthy.

Wetlands
Conservation Authority regulates all wetlands the same way.
There are several stakeholders that are concerned with the mapping.

Decision: Defer until next meeting, L. Hamilton to bring an official CA position.

Watercourses
The CA regulation allows alteration of the watercourses.
Mapping is difficult at the scale of 5 hectare hexagons.
This will get picked up under ecological functions in the target setting exercise.

Decision: not constraint worthy.

6. Wrap Up
Reflections on the Day

P. Minkiewicz: listening to eachother and open to dialogue, tiring but good day, forging along
J. Schonberger: only one conversation, we are doing okay at this.
M. Buma: starting and ending on time, feeling good about it
B. Wiens: thinks the discussion is important, hopeful that targets are quicker.
L. Hamilton: different opinions are welcome, today went well

P. Graham: N/A left early
M. Miller: N/A left early
J. Potter: thinking about people he has to report back to, heard a lot of acronyms, (big sigh)
I. Thornton: N/A, left early
D. Kirk: concerned about progress being slow, have made some progress and everyone is working together.
H. Swierenga: "it's all good". We get caught up on technical stuff.
T. VanOostrom: acknowledged ideas from everyone and that slows us down, tiring.
J. Whyte: long, tiring, exhausting. Doing a good job to follow our rules. We are respecting one another.
V. Cromie: find it interesting, learned a few things from the discussion.
F. Berardi: N/A left early
T. MacBeth: good points, we are following the rules.
N. Litwin: respect one another, made her very comfortable with the discussions, optimistic.
A. Garofalo: like consensus but it is slow, suggested cards with the constraint types, or "I'm confused".
G. Verkade: value in the consensus approach, has some dread right now about the timelines.
S. Voroz: "thank you for allowing me to be part of it", ever group has its own flavor, the end result is extremely rewarding.

7. Next meeting
Thursday January 6, 2010.

Adjourned:
4:01 pm

<p style="text-align:center">**Approved**
Natural Heritage System for the Niagara Watershed
Scenario Development Team</p>

<p style="text-align:center">**Thursday January 6, 2011**
9:00 am – 4:00pm
Ball's Falls Centre for Conservation</p>

Meeting Minutes

Attendees:
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
John Potter - Peninsula Field Naturalists
Mark Buma – Niagara Parks Commission
Peter Graham – Walker Industries
Mike Scott– Stone, Sand and Gravel Association
Peter Minkiewicz – County of Haldimand
Joe Schonberger – Niagara South Federation of Agriculture
Ian Thornton – Ontario Ministry of Natural Resources
Francesca Berardi – City of Niagara Falls – Area Planners
Henry Swierenga– Ontario Federation of Agriculture
Austin Kirkby – Niagara North Federation of Agriculture
Jon Whyte – Niagara Homebuilders Association
Valerie Cromie- Niagara River Remedial Action Plan
Donald Kirk – Ontario Ministry of Natural Resources
Travis Mac Beth – Region of Niagara

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Steve Voros – Ontario Ministry of Natural Resources
Elizabeth Spang – Ontario Ministry of Natural Resources

Regrets:
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners
Tony VanOostrom – Ontario Power Generation
Anne-Marie Laurence – Niagara Escarpment Commission
Nadine Litwin- Land Care Niagara
James Wagar – Metis Nation
Jarmo Jalava – Carolinian Canada Coalition
Silvia Strobl – Ontario Ministry of Natural Resources

1. Welcome and Introductions (D. Lindblad, P. Hubbard)
D. Lindblad welcomed everyone on behalf of the Region of Niagara and the NPCA.

The group introduced themselves. They also gave an indication if there was any feedback from their organizations.

J. Schonberger: reminded the group that agriculture in Niagara is a 2.4 billion dollar industry.

A. Kirkby: stressed she still has concerns with the promotion of natural unmanaged vegetation adjacent to farming operations in prime agricultural areas, including specialty crop land areas, because of the damage to crops from birds, insects and diseases that harbor in these naturalized areas and from the blockage of airflow adjacent to vineyards and orchards.

P. Graham: explained that the aggregate industry is cautiously optimistic about this process and the kind of information that comes out of it.

F. Berardi: told the group about D. Lindblad and G.Verkade presenting to the area planners group on November 26th. She is hopeful that the information that comes out of this process will be used in value assessments by planners.

V. Cromie: reminded the group about the delisting goal of the Remedial Action Plan.

2. Review of the Minutes from November 25, 2010
The group approved the Minutes from the November 25th meeting with a few changes.

Approved with minor changes.

3. Review of Decisions from November 25, 2010. (G. Verkade)
The group revisited the decisions from the last meeting and finalized decisions based on new information.

Non-Provincially Significant Wetlands (Non-PSW's)

A. Kirkby: not present at the meeting: raised concerns during the review of the minutes on January 6, 2011 about the accuracy of the Ontario Wetland Evaluation System and the associated wetland mapping because two distinct ponds in Niagara-on-the-Lake that were dug for irrigation and flood control in the 1960's are now classified as wetlands.

Decision: Run two scenarios. Baseline: Included and What-if: Available.

Upper Tier Municipality Official Plan Protection
City of Hamilton Environmentally Significant Areas

Decision: deferred until more information.

Region of Niagara - Policies
Region of Niagara Environmental Protection
Region of Niagara Environmental Conservation

Decision: deferred until more information.

Haldimand County

Decision: deferred until more information.

NPCA Generic Regulations
Wetlands

Decision: Defer until next meeting, L. Hamilton to bring an official CA position.

4.   Updated Timeline and Workplan (D. Lindblad)
D. Lindblad explained that she has applied for an extension to the project to allow G. Verkade time to run the model. There is an internal approval for a three month extension until the end of September. It requires official approval from the Region. She will report back at the next meeting.

5.   **Socio-political Constraints**

An Introduction to Costs (G. Verkade)
- G. Verkade explained that the management team had clarification on the meaning of Preferred within the model. The odds of it being employed are slim to none since all things being equal is not going to happen very often. It is still important for us to identify when we think something should be preferred.

G. Verkade explained the different ways we can assess costs based on the body of research.

- Cost is what MARXAN minimizes when it selects areas to achieve its targets. It is necessary to develop efficient NHS solutions ***and is another way in which to address socio-economic / human use interests beyond 'constraints'.***

- Four basic approaches to cost have been used other exercises:
    - *Uniform cost/area* (baseline)
    - Single measure (learning scenario potential)
    - Multiple socio- economic costs using same units
    - *Measures of naturalness or ecological impact of human activities*

He gave the example of natural cover that may provide potential contributions to ecological objectives and conservation targets that might occur in urban or agricultural settings. Rather than excluding them, we could choose to make it 'expensive' for the model to select these areas. Use cost as a tool to help the model make decisions about what to include in the natural; heritage system.

S. Voros: drew an example to further explain cost.
He explained that existing land uses or conditions that may not be easily included or excluded from the final scenario may be more adequately represented using cost.

J. Whyte: referred to cost as consequences which is an excellent way of thinking about it. He is concerned with the he length of time it will take to assign costs.

M. Scott: suggested that this tool will provide us with more flexibility.

J. Schonberger: suggested that cost should have been employed from the beginning. D. Lindblad explained that it has but we have used area as the equalizer.

L. Hamilton: suggested that up until now we have been dealing with things that are legislated.

There are also the "What-if" Scenarios to look at these issues and compare them to the Baseline Scenario. The baseline is the "What-is".

<u>Socio-Political Constraints</u>
<u>Conservation Lands</u>

<u>Niagara Escarpment Plan</u> – nested within the Greenbelt Plan with 7 designations.

Escarpment Natural Area – no development zone

Decision: Included

Escarpment Protection Area- some permitted uses

Decision: Available

All other designations: Available

<u>Greenbelt Plan</u>

A. Kirkby: expressed concerns about the inclusion of the greenbelt NHS as mapped because the Greenbelt Plan NHS mapping is too coarse. Using Niagara-on-the-Lake as an example, the Greenbelt NHS included a great deal of active farming acres of tender fruit and grape crops and residential areas instead of just natural feature areas. Regional 2006 overhead mapping is available that shows this.
D. Lindblad explained that the Natural Areas Inventory mapping as the base will rectify that situation.

J. Whyte: stated that the mapping is an issue.

F. Berardi: has concerns about how this might skew the final solution. She would like to revisit this later on with the comparison mapping.

J. Schonberger: stated that Greenbelt is a political creation with politically drawn boundaries and wondered whether there might be more refined mapping that might rectify this.

<u>Greenbelt Plan</u>
Core Natural Heritage System

Decision: Included

Protected Countryside

Decision: Available

<u>Omissions</u>

G. Verkade: opened the discussion to allow for members of the group to suggest if there are other existing Conservation Land regulations or policies to consider. There were none at this time.

A. Kirkby: requested more mapping including the Greenbelt maps showing specialty crop land and the Grape Growers VITIS mapping.

The next section deals with existing land uses and how to treat them within the model.

Aggregate Lands

G. Verkade presented the datasets available for this type of land use. Some of the information has been provided by the aggregate representatives.

Aggregate Sand and Gravel Deposits
The designations are based on gravel content or hard rock deposits.

Aggregate Bedrock Deposits
The designations are based on the type of rock and they are laid out from the most to least valuable to the industry.

Authorized Aggregate Sites
Pits and quarries already licensed and permitted.

I. Thornton: explained that the unlicensed extraction areas are a provincial interest under the Provincial Policy Statement (PPS) and therefore are as valuable as the other natural heritage values such as Provincially Significant Wetlands (PSW's) or significant woodlands.

The older licenses did not take into account other natural heritage features.

S. Voros: explained that other NHS project teams have decided to make licensed areas available but assign a cost to them. It has also been assumed that they are temporary land uses and that the legislation around restoration is very strict.

P. Graham: stated that he thinks that cost will be a good way of dealing with that.

M. Scott: has concerns about legislation and policy down the road. He also stated that they recognize that with aggregates that we are talking about huge tracts of land and the cost analysis allows us the flexibility.

This process will inform the Aggregate Resources Act about the relative value of the resource to other resources.

P. Graham: explained that the approvals environment is in flux, with that uncertainty this multi-stakeholder group can allow us to work towards enhancement. This model will allow us to get creative outside of the site specific scenario. "We don't want to paint ourselves into a corner but we are willing to work together".

M. Scott: told the group about a study OSSGA (Ontario Stone, Sand and Gravel Association) did with previously licensed sites that have been restored. He will make the study available to the group when it is complete.

Two categories under Aggregate Lands

<u>**Licensed Sites**</u> (Active and Inactive (yet to be excavated))

Decision: Pits- excluded
Quarries- excluded

<u>**Unlicensed Sites**</u> (Untapped Resources, Classified and mapped deposits)

Aggregate representatives requested a **"What if"** - instead of a constraint of available, we will use cost to limit how much natural heritage within these areas is included in the final solution. This will require new mapping of unconstrained aggregate resources that is not currently available. **This is a data gap.**

Decision: available with the option to reconsider cost if the mapping is complete.

ACTION ITEM: P. Graham and M. Scott: will confirm that the Official Plan designations are consistent with Aggregate Resources Inventory Project mapping. P. Graham and M. Scott will also look into the possibility of the aggregate industry supplying the constraint mapping.

G. Verkade: will produce an overlay with the preferred solution to look at where the overlaps occur between the final solution and the aggregate resources.

I. Thornton: stated that given that the aggregate resources and other natural heritage features are both of provincial interest, there is an advantage to not assigning cost.

ACTION ITEM: G. Verkade: will provide a visual illustrating the Anabel and Bobcaygeon deposits. These will be revisited during the Learning Scenarios.

<u>**Agricultural Lands**</u>
G. Verkade presented the datasets available.

<u>**Canada Land Inventory Land Capability for Agriculture**</u> – soils mapping to assess the capability for agriculture.
Classes 1-3 are considered Prime Agricultural Land
Classes 4-7 are considered Marginal Agricultural Land

<u>**Specialty Crop Areas**</u> – only mapping in the Greenbelt Plan (Protected Countryside)

<u>**Regional Policy Plan Agricultural Land Base**</u>
Largely based on the Greenbelt mapping and the CLI capability mapping.
This dataset includes:
    Unique Agricultural Area based on the Greenbelt
    Good General Agricultural Areas based on the CLI mapping for Capability

<u>**Agriculture Resources Inventory**</u>
Based on 1978 air photos and some field verification.

S. Voros: stated that this is in the process of being updated.

DATA GAP: G. Verkade suggested that we need to bring this project to update the Agricultural Resources mapping to Niagara.

Grape Growers of Ontario VITIS Application Mapping

ACTION ITEM: G. Verkade to follow up with them about getting this data.

Omissions

G. Verkade: opened it up for suggestions about other data that might be available. There were none at this time.

H. Swierenga: suggested that the CLI mapping is the most useful for this process. The best surrogate for agricultural mapping is soils with climate information.

The Agricultural Representatives put forward:
Class 1,2,3,4 and O being excluded.
Class 5,6,7 Available with a cost analysis.

J. Schonberger: suggested that class 4 should be considered since it becomes Prime if there is no class 1, 2 or 3 in an area. There is a concern that the reclassification that is happening, will in his opinion downgrade the classifications.

The group discussed what happens in the pecking order within the model if an excluded and an included come into conflict.

S. Voros: explained that the Included would take precedence. He reminded the group that cost is another option to excluded. He drew some examples for the group. He suggested that in terms of the baseline, Class 1,2 and 3 soils as a surrogate for the Prime Agricultural Land could be assigned a cost higher than the Class 4, 5, 6 and 7.

P. Minkiewicz: suggested that cost is a more flexible alternative to excluding all of the agricultural land.

The Agricultural Representatives requested a Baseline scenario that Excludes the Prime Agricultural Lands.

P. Hubbard asked the group for their opinion:

J. Potter: expressed concern with an excluded status.
P. Graham: sees why there is the concern and the want to exclude however would like to see some scenarios to help clarify.
M. Scott: has concerns about things that are equal under legislation such as the PPS now being scaled differently ie: aggregates as available and agriculture excluded or with cost.
F. Berardi: has some reservations about total exclusion based on any land use since we have not dealt with all things that might fall within these areas that we might exclude.
J. Whyte: suggested that we are starting to respect each other's perspectives better. He is in favour of running multiple scenarios and it will be clearer when we can look at something concrete.
L. Spang: suggested that those hexagons that are 100% clear of natural heritage most likely in agriculture can be excluded. Then assign a cost to other classifications.

V. Cromie: looking for data coming out of this process for input into the delisting of the RAP. She would like to see some scenarios for clarification. She is concerned about an excluded status since it doesn't have the same flexibility.

D. Kirk: does not want to see exclusion but is in favour of excluding things that do not have natural heritage features.

ACTION ITEM: G. Verkade will provide some visuals to clarify the Agricultural issues.
Hexagon mesh for study area colour code it into black and white, black out prime agri. lands (1,2,3) and a (1,2,3,4). The land cover natural area, urban area, and the undifferentiated that by default will be agricultural areas. Block out the natural areas and then look at the conflict between the two. Block out infrastructure if possible**.**

6. Wrap Up
Reflections on the Day
J. Schonberger: following the rules has suddenly become awkward, feels like he got his points across

I. Thornton: positive dialogue, working well together, frank, open and honest and constructive. Reverting back to a tendency to a policy mindset and we need to focus on this process being about an information product. This will better inform future policy-making.

L. Hamilton: following the rules really well. We are addressing everyone's concerns.

J. Potter: making progress and comfortable with where we are.

P. Graham: learning process, reiterated the ability to confirm with respective organizations.

M. Scott: there are big ideas and big issues, dialogue is good.

T. MacBeth: agree with everyone

F. Berardi: following the rules and we are trudging along.

A. Kirkby: appreciates the opportunity to say what she feels about this plan because of what she has experienced as a farmer for many years. She related first-hand experiences of the damaging impact to fruit crops from birds, insects and diseases that harbor in adjacent natural areas. She stressed that unfortunately other members of the Committee would not appreciate the financial loss to farmers because they do not farm for an income.

H. Swierenga: good day, looking forward to Geoff's visuals.

J. Whyte: we did well, we are all gaining an understanding of each others' perspectives. There has not been a lot of this in other projects. He hopes we are as open in the next meeting to his ideas.

V. Cromie: appreciated the visuals about how the model will work.

P. Minkiewicz: always leaves tired but that is because we work hard.

D. Kirk: this process is very unique. It is interesting and does create far greater consensus. We made good progress today. Looking forward to Geoff's visuals.

L. Spang: really informative, learning from each other and understanding each other is critical to what comes next.

S. Voros: nothing much to add.

G. Verkade: feeling better

D. Lindblad: proud of what we have accomplished and it speaks to the quality of the team we have built.

7. Next meeting:
Thursday January 20, 2011.
9:00am – 4:00pm Ball's Falls.

Adjourned: 3:51 pm

<p style="text-align:center">**Approved**
Natural Heritage System for the Niagara Watershed
Scenario Development Team

Thursday January 20, 2011
9:00 am – 4:00pm
Ball's Falls Centre for Conservation

Meeting Minutes</p>

Attendees:
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
John Potter - Peninsula Field Naturalists
Mark Buma – Niagara Parks Commission
Mike Scott– Stone, Sand and Gravel Association
Peter Minkiewicz – County of Haldimand
Francesca Berardi – City of Niagara Falls – Area Planners
Henry Swierenga– Ontario Federation of Agriculture
Austin Kirkby – Niagara North Federation of Agriculture
Jon Whyte – Niagara Homebuilders Association
Valerie Cromie- Niagara River Remedial Action Plan
Donald Kirk – Ontario Ministry of Natural Resources
Travis Mac Beth – Region of Niagara
James Wagar – Metis Nation of Ontario
Tony VanOostrom – Ontario Power Generation
Barbara Wiens – Town of Niagara-on-the-Lake – Areas Planners
Ian Thornton- Ontario Ministry of Natural Resources
Joe Schonberger – Niagara South Federation of Agriculture
Albert Garofalo – Niagara Land Trust

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Steve Voros – Ontario Ministry of Natural Resources
Mary Stack – Communications – Niagara Peninsula Conservation Authority

Regrets:
Peter Graham – Walker Industries

1. Welcome and Introductions (D. Lindblad, P. Hubbard)
D. Lindblad welcomed everyone on behalf of the Region of Niagara and the NPCA.

The group introduced themselves. They also gave an indication if there was any feedback from their organizations.

J. Potter: Nature clubs have questions about how much natural heritage from forests around Thundering Waters will be included. This is a bigger issue related to target setting.

M. Scott: aggregates will be producing a constraints map hopefully for February meeting.

H. Swierenga: Niagara North and South Federations of Agriculture will be offering their issues. Bottom line is that all prime agricultural lands will be excluded.

P. Hubbard: reminded group that we are not here with positions.

2. Review of the Minutes from January 6, 2010
A. Kirkby wanted to add a few things to her comments under the reflections on the day section.

ACTION ITEM: D. Lindblad to work with A. Kirkby to more accurately capture her comments.

The group could not approve the Minutes from the January 6th meeting until A. Kirkby's comments are complete. Deferred until the Feb. meeting.

3. Review of Decisions from January 6, 2011. (G. Verkade)
The group revisited the decisions from the last meeting and finalized decisions based on new information.

Non-Provincially Significant Wetlands (Non-PSW's)

A. Kirkby: not present at the meeting: raised concerns during the review of the minutes on January 6, 2011 about the accuracy of the Ontario Wetland Evaluation System and the associated wetland mapping particularly for Niagara-on-the-Lake.

Decision on January 6, 2011: Run two scenarios. Baseline: Included and What-if: Available.

L. Hamilton brought the following information from the Niagara Peninsula Conservation Authority: Regulations require that both Provincially Significant Wetlands (PSW) and non-Provincially Significant Wetlands (non-PSW) be run as included for the baseline model, as both are regulated equally.

D. Lindblad: had the group clarify that the Included was the baseline and Available is the What-if? She read NPCA's information provided by L. Hamilton.

4.   **Socio-political Constraints**
G. Verkade went over the goals and objectives of the SDT. He reminded everyone that this is about balancing the natural heritage with other interests.

A Refresher on Costs (G. Verkade)
G. Verkade presented the ways in which cost can be used as a tool to tell the model where to go in selecting hexagons for the final solution.

Cost is another way you can constrain the model.

Socio-Political Constraints
Conservation Lands

Agricultural Lands
V. Cromie: explained that we would benefit from a look at precisely where the prime agriculture lands are. And what that means if we exclude them.

H. Swierenga: said that it is a shame that Niagara has not gone through the agricultural lands mapping (Agricultural Resources Inventory), LEAR mapping (Land Evaluation Agricultural Resources) mapping (OMAFRA) that Hamilton has done since this lays out what is actively being farmed.

G. Verkade provided the overlay mapping in large scale and everyone had a chance to look at them. The maps illustrated where prime agriculture is found within hexagons. He also showed where natural heritage features are found within hexagons. He showed where the two intersect.

S. Voros: explained further what it will force the model to do.

H. Swierenga: Stated that nothing in the natural heritage policy of the province is to impact agricultural lands.

S. Voros: explained that the model would pull areas with both natural heritage features and prime agricultural lands, not areas that are 100% prime agricultural land or developed in agriculture.

A. Kirkby: stated that the farmers on the Committee are the ones that earn their living from the land and she felt that it is difficult for the other members of the Committee to understand what the impact is of trying to farm adjacent to unmanaged natural areas. She read for the group from a reference about the climatic information and diseases that are associated with unmanaged buffer zones around agriculture.

She stated that more fungicides, insecticides and herbicides will have to be used if we promote more unmanaged natural areas adjacent to farmed food crops.

Prime agricultural land, including specialty crop land, is a finite resource and has priority protection from the Province for the production of food crops. The specialty crops are there because of climatic zones and soils. She has a hard time with the idea that there is an impact with excluding agricultural land from the concept of the promotion of unmanaged vegetation. There are real impacts with including it from her standpoint and that is the financial loss to growers from the promotion of unmanaged natural areas that impact the growing of crops.

B. Wiens: stated that there are real challenges in the disconnect between the NHS and the needs of the agriculture community. Both need to be protected and finding balance is a challenge. From a land use policy basis it is true that Class 1,2 and 3 soils are to be protected for agriculture.

S. Voros: stated that there is a subset of the prime agricultural lands, specialty crop areas, it would make sense to exclude those.

H. Swierenga: stated that the problem they face as agricultural producers on a provincial scale, is that they have to look down the road and that they believe that this process is going to end up

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in policy. He cannot go back to the agricultural community and say he has been part of attaching another constraint to their production. He does not want to split specialty crop from other prime agricultural lands.

He has to stand by the excluded constraint status as does A. Kirkby and J. Schonberger. They understand that the group can decide to do something different.

A. Kirkby: read for the group issues that can adversely affect agriculture: habitat for wildlife such as coyotes, birds, rodents, insects.

ACTION ITEM: A. Kirkby: to make her references available and they will be put up on the ftp.

P. Hubbard asked the group for their thoughts.

J. Wagar: nothing specific to add to agriculture
M. Stack: concur with the agricultural representatives
T. VanOostrom: is there a "discourage" category? S. Voroz explained that that a cost analysis is designed to discourage.
M. Scott: geographic differences is a good point, Niagara is different.
J. Potter: Many animals will travel for miles so we cannot draw a hard line with agricultural production.
B. Wiens: agree with J. Potter.
M. Buma: knowing how this will affect the mapping exercise to exclude, he prefers not to make a comment.
L. Hamilton: has a hard time with excluded as the baseline. She suggested excluded as a what-if with a cost scenario as the baseline. Her job is to balance the ecology of the landscape and under excluded for all prime lands, all natural heritage will be skewed towards PSW. She needs more time to consider her decision.
J. Schonberger: we have to put an excluded constraint status based on the rules that exist and how important agriculture is to this area. Like NPCA's wetland, is a wetland, is a wetland. For agriculture, farmland, is farmland, is farmland. He believes that the other scenarios are being run that should give the information we are after as a group. Excluded is the appropriate decision.
F. Berardi: understands the reason for the exclusion presented. She is concerned that if we base it purely on soil type, it wipes out so much. There should be a better way through climatic overlay and assigning cost. Still hoping that there is better mapping. Would prefer we use cost.
J. Whyte: agrees with Henry that Niagara has extensive prime agriculture areas. If there was better mapping it would be easier. He is okay with excluded and then using cost as a What-if. He asked, how does the cost work in terms of how it is assigned? S. Voros explained that it can be done a number of ways. It is an incremental scale. It comes after we decide what we will assign cost to. J. Whyte then stated that there is another discussion to take place around the urban lands that would be left after agriculture is removed from the natural heritage system in response to an earlier implication that if agriculture is excluded that the SDT would have to automatically rely on Urban Lands to achieve their targets.
T. MacBeth: has reservation about an excluded status. There are only certain natural heritage features within the PPS and then the results would be skewed. For the sake of consensus, he would rather see cost as the baseline.
G. Verkade: the real value of the preferred scenario is what we have learned to get there. That is what really has value going forward. The underlying value in deriving it is what will inform decisions going forward.

V. Cromie: thinks that the what-ifs will help. Her vision of the NHS is more of a network of connections and at the moment she doesn't feel from a RAP AOC perspective, that there would be much of a natural heritage system in the area if we exclude all Class 1,2 and 3 soils.

P. Minkiewicz: he was feeling like this was a safe place to be today but now doesn't know. He enjoys a glass of wine, eating peaches and taking long nature walks. There has to be a way to do it all.

D. Kirk: echoes J. Potter and P. Minkiewicz comments. Appreciates the conundrum due to the unique natural features which are some of the best in the province and also the prime agricultural lands.   He would prefer a baseline that uses a cost analysis. Has concerns about excluded as the baseline.

I. Thornton: appreciates the idea of protecting agriculture. The provincial policy protects agriculture very strongly. We can take assurance in the PPS that specialty crop and prime agricultural lands will not be compromised. Has strong reservations about excluding as it does not reflect the balance that the PPS is trying to achieve. Different types of agriculture are addresses separately in the PPS for a reason. A cost analysis as the baseline makes sense.

If you look at the rural landscape in Niagara, it is comprised of agriculture and natural areas so the impact of exclusion would be huge.

We need to look at the value of natural heritage for agriculture that have not been addressed. Protection from wind erosion and pollination as two examples.

S. Voros: the baseline is very important. The purpose of the baseline is to best reflect the current policy and what exists now married with our objectives.

H. Swierenga: stated that in Halton the protection of agriculture under the PPS is being tested.

After the break:

T. VanOostrom: suggested that we leave the agricultural issues until the end and look at what it means.

G. Verkade: two baselines are fine. The model will do the balancing. Let's have faith in the process.

D. Lindblad: given the tight timeline for this project, doesn't want to set us up to fail at meeting our targets in the end.

I. Thornton: this exercise is not going to change the existing legislation. This is the first step in achieving the NHS. The next part is the to refine the mapping. This is not a land grabbing exercise for natural heritage.

J. Wagar: by the time we end up splitting the hairs, it will not lead to something we are trying to build on. With all due respect, many Metis are farmers in the area, let's look at what should be included and then look at what to exclude.

Decision: Baseline A: excluded; Baseline B: cost. All What-if scenarios to be compared to both baselines.

H. Swierenga: the official position that cannot be strayed from for agriculture is that all prime agricultural lands be excluded. They are comfortable with two scenarios.

I. Thornton: suggested that exclusion come at the end during the refinement exercise outside of this process. There is a difference between excluding from the model and excluding from the natural heritage system (which is the refinement exercise).

B. Wiens: there is still the possibility to revisit all of our decisions down the road.

G. Verkade: this needs to be an honest evaluation…different from the way these systems have been developed in the past.

Urban Lands
G. Verkade presented the datasets that are available to us to make decisions.

Built Boundary – Places to Grow (Greater Golden Horseshoe)
Shows what is already built within the urban boundary and any plans of subdivision where 60% of the houses have been built.
Any area between the urban boundary and the built boundary is known as greenfield.

Built-up Areas (2002)– Southern Ontario Land Resources Information System (SOLRIS) - MNR
Two kinds: pervious (soccer fields, parkettes), and impervious (paved within an urban zone.
The definition of urban is 4 permanent residences within an area (density) and other criteria. Still fairly accurate.

Region of Niagara Urban Areas
Approved urban boundaries.
Used in our base maps.

MPAC Assessment
Gives indication of land use. It is outdated.
-the group is not comfortable with use of this dataset. It would be great if it kept up with what happens in terms of changing use and sale of property.

Municipal Official Plans
This data varies in format and every municipality is at a different stage of development.
DATA GAP: consolidation of Official Plan information.

Omissions: G. Verkade left it open to the group to bring forward other data that might be available.

B. Wiens: stated that Built Boundary is based on the most current data within the current designated area.

Areas with an urban boundary that did not have a certain density do not have a built boundary. These are in the regional plan dataset. They are also in the impervious layer of SOLRIS. SOLRIS will also pick up impervious areas outside of the urban boundary.

J. Wagar: to clarify how does the NHS influence within the urban area? T. MacBeth; explained that there is an existing NHS for urban areas and this process has the potential to update that.

I. Thornton: why would we exclude everything within the urban boundary?

J. Whyte: stated that because within the built urban boundaries represents the greatest opportunity for infill and intensification, smart growth, and efficient use of land. Things such as PSW's, Valley lands, ANSI's will continue to be protected within the built boundary, but everything else should be fair game. Not only because small isolated pockets within built boundaries offer little in terms of linkages, corridors, and biodiversity, but also because these small isolated environmental features within built urban areas represent a real impediment to achieving density and growth targets within our built boundaries by limiting infill opportunities.

G. Verkade: the model will help us decide what has value and what really isn't contributing, if we consider everything. This is the concern with exclusion.

J. Whyte: asked for clarification around the pervious and impervious designations. He is unfamiliar with this mapping and would like to have a closer look at the SOLRIS data.

J. Wagar: his concern around no natural heritage feature in urban areas. Everyone wants a view to a wetland or ravine lot. This destroys the integrity of the natural areas so they eventually will only be about increasing property values. Is there a way to assess connectivity? Otherwise including them is a waste of resources.
L. Hamilton: explained that there could be areas for SAR for example. They can provide an ecological function even if they are cut off from the system.
J. Wagar: is concerned that we look at connectivity and the best natural heritage system regardless of where it is.

L. Hamilton: explained that the current regulation protects area within greenfields in that the development will need to prove no negative impact.

J. Whyte: greenfields have some inherent development rights. There are Regional and Provincial policies that need to be considered when we are assessing the availability of these sites for inclusion. Not to mention infrastructure investments which have been made to support the eventual development of our Greenfield lands. Although there are policies within the PPS that promote the preservation of the environment, there are also policies such as the long term supply of developable land, housing affordability, etc. that need to be taken into consideration. It's a matter of prioritizing the impact of environmental conservation and the consequences it has upon society. The objective of this NHS is that it be "implemenatable", and making greenfields available for inclusion will add significant costs of this NAI politically, economically, and socially.

J. Whyte suggested:
Built Boundaries: exclude
Urban Area Boundary: exclude
As a what-if scenario: assign a cost for greenfield sites maintaining excluded for built areas.

I. Thornton: a lot of similar discussions to the agricultural issues. There are concerns about exclusion. The policy at the provincial level (PPS) still applies. Available makes sense.

S. Voros: explained that in other jurisdictions they have excluded areas that are 100% built up, impervious. The decisions then need to be made are for areas where there is some natural cover.

D. Lindblad: Based on what we have already included, what will not be captured are significant woodlands, and significant wildlife habitat.

J. Whyte: That is the balance between economics and ecological systems. Whatever is within urban boundaries should be fair game for development. Notwithstanding our concerns about the mapping and scientific validity supporting PSW features in the Region, there are policies in place that protect existing provincially significant natural features, beyond these features we need to ensure an adequate supply of developable land if we hope to grow. Existing PSW's

within our UAB's already have huge implications to achieving our growth objectives, including other greenfield environmental features within the NHS will only exacerbate the already huge challenges faced by the development industry.

L. Hamilton: we are close to agreement.

T. MacBeth: intensification is good for everyone. As long as the others that we already included trump the exclusion, it makes sense to exclude built up areas and assign cost to other areas.

P. Minkiewicz: Haldimand is largely rural and so he is in agreement.

B. Wiens: in agreement. The policy framework in the built area has a goal of intensification and natural features are already protected.

J. Whyte: Regional Official Plan mapping that includes greenfields and hamlets is the most appropriate.

T. VanOostrom: Represents electric generators. Hydro-electricity is still one of the greenest and the cheapest forms of electricity. 1600 hectares of land owned in Niagara by OPG. Two thirds of that area is managed for biodiversity and the other third is active for generation of electricity. These are not all included in the urban boundary mapping.

ACTION ITEM: Mapping. OPG lands that are managed for biodiversity are not currently included in the base maps of the NPCA. G. Verkade to work with T. VanOostrom to include mapping.

Decision: OPG Lands: Suggested that the third that is active in generation: excluded
Two third that is managed for biodiversity: available or a cost analysis???

H. Swierenga: brought up that St. Lawrence Seaway Lands are similar.

Urban Areas Mapping: Overlay the Places to Grow mapping on the Urban Areas of the Regional Official Plan. This picks up the hamlets. This by surrogate will give us the greenfield areas.

L. Hamilton: highlighted that 'what-is" currently is that there are still significant woodlands, and significant wildlife habitat areas that are in built up areas.

J. Wagar: utilizing the system to ascertain the significance for future development. If these values are recorded within the greenfield areas, would that assist in mitigation under EIS?
J. Whyte: As I understand it, if a feature identified in an EIS is included in the NHS it would make it harder to justify its removal; conversely, if a feature identified in an EIS is not a part of the NHS, then it could be argued that it wasn't considered significant enough to be preserved. That being said, the NHS will account for little anyway because it won't alter the NPCA's base mapping, so whether a feature is included within the NHS or not, that doesn't mean the NPCA won't protect it with their existing policies.
J. Wagar: this could be a win-win?

I. Thornton: has a problem with excluding everything. He believes that we should let the model run first and then decide what to exclude from the system.

J. Wagar: this process may uncover something that no other project has before.

J. Whyte: stated that if we are to achieve the targets set out by the province for housing and intensification, we need to be careful about preserving features within the built urban areas.

F. Berardi: stated that the areas within the built boundary have already been assessed for their environmental value.
J. Whyte: explained that what is left will be assessed during the development process.

P. Hubbard asked the group for their thoughts.

J. Wagar: if this is not policy setting then there is no harm in collecting information.
T. VanOostrom: understands the issues and the need for balance, agrees with the exclude built areas and assign cost to the greenfields, the processes that exist will fill in the blanks.
M. Scott: agrees
J. Potter: need to run the what-ifs
B. Wiens: agrees
M. Buma: cost for both, has a problem with excluding the urban areas especially since some areas have not had value assigned to them. In the interest of consensus, will agree with baselines suggested.
L. Hamilton: agrees but reserves the right to change her mind.
J. Schonberger: agree
H. Swierenga: agree
A. Kirkby: agree, it would be nice if there was better mapping for natural heritage features within the urban areas.
F. Berardi: agree
J. Whyte: would prefer excluded across the board.   He is interested to see the what-if scenarios to see what contributions the natural features have to the overall percentages of the targets.
V. Cromie: agree
P. Minkiewicz: agree
D. Kirk: agree
I. Thornton: agree as a compromise. Reminded the group that the end result is information.
G. Verkade: concerned that we are coming to conclusions too early. We have never quantified the values of individual features in a systematic context. We will be better informed going forward.

J. Whyte: preference of the development community would be to exclude all urban areas.

Decision:
Baseline: Exclude built up areas; assign a Cost to greenfield sites.
What-if: Assign cost to all.
What-if: Exclude all.
J. Whyte: would still like to see the percentages of the value of the urban areas to the overall targets.

Built up areas that are outside of urban areas
S. Voros: This information is in SOLRIS and would be the best available information for identifying these areas. Based on hand digitizing (2000-2002).

T. VanOostrom: these areas will be infested with invasive species. Similar to what has been done with the Conservation Action Plans (CAP's), we should focus on areas with better diversity.

F. Berardi: assign a cost.

I. Thornton: challenge is that we cannot tell the contribution of these to the overall. Doesn't like to bias the process. Once we add all of the targets, the model will know where to look.
A. Kirkby: what are the negative ramifications of excluding an area or assigning a high cost?
I. Thornton: explained that by excluding, we are biasing the model and excluding information that might be useful.

A. Kirkby: is concerned that we all have different agendas about what we want to see come out of this. She wishes that there was better mapping available about what is on the ground. And it should be here.

ACTION ITEM: define natural heritage system better. The wording around the overall concept of the outcomes needs to be looked at. The term Natural Heritage System is problematic. This will be a task of the Outreach and Education Committee.

G. Verkade: we should take the emphasis off of the natural heritage system. It is the end but the means is more important.

P. Hubbard asked the group for their thoughts.

I. Thornton: cost
D. Kirk: cost
P. Minkiewicz: cost
V. Cromie: cost
J. Whyte: cost
F. Berardi: cost
A. Kirkby: cost
H. Swierenga: cost
J. Schonberger: cost
M. Buma: cost
B. Wiens: cost
L. Hamilton: cost
B. Wiens: cost
J. Potter: cost
M. Scott: cost
T. VanOostrom: cost
J. Wagar: cost

Decision: Assign a cost.
ACTION ITEM: G. Verkade to bring SOLRIS mapping to the next meeting.

<u>Cultural Lands</u>
J. Wagar: He explained that he is the consultation coordinator for the Metis Nation of Ontario. He facilitates communications between the broader community and the Metis. He is collecting information during this process. The Metis Nation represents the constitutionally protected Metis (1986). It is recognized as a unique and distinct culture. Metis are largely the

descendents of European men and Aboriginal women dating back to the time of the fur trade. Metis do not have designated lands. They live in all communities, pay taxes, etc.

There is no motive to hold up the NHS process, but rather to ensure that the Metis voice is heard. Metis population in Ontario is roughly 73,000 that have 'self-identified' through census information.

The federal and provincial government have both officially announced 2010 as the "Year of the Métis" acknowledging the 125th anniversary of renowned Métis, Louise Riel's execution.

Cultural Lands
G. Verkade presented the available datasets.

National Historic Sites - designated

Federal Lands Database- federally owned
(final may be a combination of these two datasets to capture them all)

D. Lindblad: Most federal sites have preserved natural heritage features for their historical and cultural significance. Some master plans have natural heritage features included but this is rare.

B. Wiens: due to the fact that they are not necessarily managed for natural heritage. Suggested: Available.

A. Garofalo: there are huge opportunities to use these sites to manage for natural heritage features for restoration, etc.

ACTION ITEM: D. Lindblad to contact Parks Canada to determine which sites are managed for their natural heritage.

Decision: Include properties that are managed for natural heritage
All other sites: Available.

Ontario Heritage Trust Properties
J. Wagar: Ron Williams of Archaeological Services has stated that due to widespread development in southern Ontario, the archaeological record will grow exponentially over the next ten years. It is important that there is room for the changes in the natural heritage system.

Purpose of the Ontario Heritage Trust:
B. Wiens: Will own properties for cultural heritage or natural heritage. Also have easements.

ACTION ITEM: D. Lindblad: determine which Ontario Heritage Trust sites are managed for natural heritage.

Decision: Include properties that are owned and that are managed for natural heritage.
All other sites that are owned: Available
Easements: constraint worthy but due to data gap, we can not incorporate.

Department of Defense Lands
NAVTEQ mapping from MNR

ACTION ITEM: D. Lindblad to determine which properties are managed for natural heritage

Decision: Include properties that are managed for natural heritage.
All other sites: Available.

Publicly Owned Properties
Database that was developed by NPCA for other business drivers.
Linked back to ownership fabric.

D. Lindblad: we have the opportunity to skew the model to look at the publicly-owned properties first.

J. Wagar: thinks this dataset will give you a good picture of what is really feasible.

L. Hamilton: we have worked through some publicly owned scenarios.

F. Berardi: cautions that publicly-owned does not necessarily mean that it will be managed for natural heritage.

T. VanOostrom: concerns about accuracy of this mapping given that he sould tell that only part of Lake Gibson was shown in the map..

P. Hubbard asked the group for their thoughts.
G. Verkade explained that we could use this dataset as a book-keeping exercise at the end to see how much of the NHS falls on publicly-owned lands.
J. Wagar: book keeping
T. VanOostrom: book keeping
B. Wiens: book keeping
J. Potter: book keeping
A. Garofalo: book keeping
L. Hamilton: book keeping
J. Schonberger: book keeping; he cautioned that many are federally-owned or federally regulated, these are not necessarily subject to municipal or provincial regulations.
H. Swierenga: book keeping
A. Kirkby: book keeping
F. Berardi: book keeping
J. Whyte: book keeping; likes preferred if it keeps it off of privately-owned lands
V. Cromie: book keeping
D. Kirk: book keeping

Decision: Use as book keeping to look at the amount of publicly-owned land in the final solution. Similar to available. Our final solution will not be constrained by public ownership but we will look at the final solution to see how much is in public ownership.

Omissions:
G. Verkade opened it to the group that if they are aware of other data to bring them forward.

5. An Introduction to Target Setting
D. Lindblad presented an introduction to target setting.

She made available to the group a manual that will be adapted as we move through the next phase of the project.

6. Wrap-up
ACTION ITEM: Review maps for Agricultural discussion: Climatic and SOLRIS maps

ACTION ITEM: D. Lindblad to produce a chart to show what decisions have been made and what-ifs.

Reflections on the Day
M. Buma: particularly interesting because we dealt with two areas that he doesn't get time to reflect on. It was enlightening.
I. Thornton: "good job everyone"
T. VanOostrom: will bring back OPG views at next meeting.
J. Wagar: happy to be part of this working group
J. Potter: congratulate Deanna and Geoff for the job they have done.
B. Wiens: good discussion on difficult issues, always learns something.
A. Garofalo: glad we are done constraints.
L. Hamilton: looking forward to targets
J. Schonberger: as in life, nothing is easy or simple, but we will get good results.
A. Kirkby: she is very visual and will need more maps, still has real concerns about including agricultural lands. When she brings something up it is not a complaint but rather something based on facts and something the non-farming members of the Committee might not know and should be made aware of.
F. Berardi: impressed how this group got to consensus on these tough issues
J. Whyte: still has concerns, waiting to see preferred scenario, there are concerns that affect every one of us that we need to be cognizant of, the decisions made here have real impacts
V.Cromie: learned a lot, was thankful to hear from James on the Metis perspective.
P. Minkiewicz: happy to be done with constraints
D. Kirk: happy to be done with constraints but we are not in the clear, doesn't like the projecting into what might be, he hopes this does not continue, complimented Deanna and Geoff.
M. Scott: we made good progress today, but there is clearly more work to be done and concerns regarding the outcomes of the project must be mitigated in order to achieve a workable solution.
S. Voros: of the scenario planning teams he has worked with, you are not the only ones that feel like you are in a fog. This happens every time. I'm confident that things will become much clearer after seeing the learning scenario outcomes and this will give everyone more confidence in the process. By sharing our knowledge and perspectives, we develop an understanding about each other and only by understanding each other can we begin to build a mutual trust amongst each other and only when there is trust can we ever hope to achieve consensus.
G. Verkade: head hurts, glad we are done, this has not been done this way before and probably why we have problems.
D. Lindblad: doesn't like the "you", we are a team.

9. Next meeting:
Thursday February 10, 2011.
9:00am – 4:00pm Ball's Falls.

Adjourned: 4:09 pm

<p style="text-align:center">**Approved**
Natural Heritage System for the Niagara Watershed
Scenario Development Team

Thursday February 24, 2011
9:00 am – 4:00pm
Ball's Falls Centre for Conservation

Meeting Minutes</p>

Attendees:
Sandra Kok – Niagara River Remedial Action Plan
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
Mark Buma – Niagara Parks Commission
Joe Schonberger – Niagara South Federation of Agriculture
Austin Kirkby – Niagara North Federation of Agriculture
Francesca Berardi – City of Niagara Falls – Area Planners
Jon Whyte – Niagara Homebuilders Association
Travis Mac Beth – Region of Niagara

Observers:
Doug Draper – Communications consultant
Lorraine Norminton- Coordinator, ReLeaf Hamilton NHS
Jayme Campbell- Engineer/ Hydrogeologist, NPCA – subject expert

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Steve Voros – Ontario Ministry of Natural Resources
Mary Stack – Niagara Peninsula Conservation Authority/ Outreach and Education

Regrets:
Henry Swierenga – Ontario Federation of Agriculture
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners
John Potter – Peninsula Field Naturalists
Valerie Cromie- Niagara River Remedial Action Plan
Mike Scott – Stone, Sand and Gravel Association
Moreen Miller - Stone, Sand and Gravel Association
Peter Graham – Walker Industries
James Wagar – Metis Nation of Ontario
Peter Minkiewicz – County of Haldimand
Donald Kirk – Ontario Ministry of Natural Resources
Ian Thornton - Ontario Ministry of Natural Resources

1. Welcome and Introductions (D. Lindblad, P. Hubbard)
D. Lindblad welcomed everyone on behalf of the Region of Niagara and the NPCA.

The group introduced themselves. They also gave an indication if there was any feedback from their organizations.

J. Schonberger: Wanted to know what the difference is between running two baselines as opposed to running one baseline and a what-if.

D. Lindblad and S. Voros: explained that baselines are used for comparison. Because we could not come to consensus on the issues around exclusion of areas based on Class 1,2,3 agricultural capability of soils, the group decided to run two baselines.

J. Schonberger: Baseline 2 will not be warmly received in the rural and agricultural community.

A. Kirkby: wants to provide climatic zone mapping. The Niagara North farmers understand that the process is going on. She supplied references that were made available to the committee members through the ftp site. She is supportive of excluding prime agricultural lands.

D. Draper: introduced himself as a consultant that is helping us with the communications of this project to the larger public.

L. Norminton: introduced herself as the Coordinator of the Hamilton ReLeaf committee that is going through this same process currently.

G. Verkade: Today we are shifting gears, we are evaluating what we have and asking the modeling tool to go look for a certain amount of each of the values.

2. Review of the Minutes from January 6, 2011 and January 20, 2011
Due to a low numbers of attendees, the group decided not to approve the minutes of the 6th and 20th of January until the next meeting on March 3rd.

G. Verkade: followed up in regards to the VITIS mapping which is an inventory by The Grape Growers of Ontario of all of the vineyards. We asked for the spatial mapping and they are not comfortable with supplying the information at this time.

A. Kirkby: wants us to use the climatic mapping. G. Verkade explained that the soil capability mapping already excludes these areas under the baseline for agriculture.

A. Kirkby believes this is not constraint worthy.

A. Kirkby: wanted clarification on Protected Countryside under Greenbelt being available.

D. Lindblad: read the discussion from the previous minutes and explained that the model will only pick up the underlying natural features.

January 20, 2011
ACTION ITEMS carried forward:
OPG and NPCA to work on mapping.

Term NHS to be changed by Outreach and Education Committee.
L. Norminton explained that they now use "planning for Natural Heritage".

G. Verkade: to bring SOLRIS mapping to the next meeting.

OTHER ACTION ITEMS from January 20:
D. Lindblad explained that she followed up with Parks Canada and Department of Defense and the three properties that were along the Niagara River are all managed for natural heritage and therefore, they will be included as decided on the 20th.

3. Review of Decisions from January 20, 2010. (G. Verkade)
The group revisited the decisions from the last meeting and finalized decisions based on new information.

4.   Target Setting (D. Lindblad/ G. Verkade)
D. Lindblad introduced target setting in relation to hydrologic function. She defined hydrologic function, introduced the scales we would be dealing with and the basic data sets used.

J. Campbell presented the information about how the groundwater data was derived.
He dealt with **Recharge** first.
He also explained how decisions were made about what is significant.

Significant groundwater recharge areas (SGRAs) were delineated according to the provincial rules for water budget studies; where the recharge rate is greater than 15% of the average rate. For NPCA the average recharge rate is 47 mm/year (very low representative of the clay soils) making the SGRA criterion 54 mm/year (about the change to clayey silt from clay).

S. Voros: asked if we could talk about what the ground cover effect is on the recharge.
J. Campbell: explained how the land cover was calculated.

Next he dealt with **Quality**.
He presented the Groundwater Vulnerability data.
S. Voros: asked what the ground cover contributes to the vulnerability of the water quality.
J. Campbell: explained that human uses increase vulnerability.
S. Voros: asked if abandoned wells are the main driver towards contamination or if there is a relation between the well and the natural cover.

Next he dealt with **Discharge**.
He presented mapping about temperature, and fisheries data as a surrogate for detailed discharge information. These types of data can help point to groundwater discharge areas.
He presented a correlation map between the existence of recharge areas and what were found to be cold water through a temperature study of municipal drains.
He explained that the data is not perfect. There are definite data gaps.

Target Setting – RECHARGE
23% of the watershed contributes to 40% of the recharge
DATA GAP: **specifics about relation of type of cover to recharge.**

However Jayme also informally shared a table from the SGRA study which indicated the expected variance of recharge as affected by land cover (as one of the three factors for distributing the modeled recharge data: topography, land cover and soils), shown below.

Table 2.4 SOLRIS Land cover infiltration values

Land Cover	Infiltration Value	Land Cover	Infiltration Value
Annual Crop	0.1	Mixed Agriculture	0.15
Bog	0.15	Mixed Crop	0.15
Built Up Impervious	0	Mixed Forest	0.2
Built Up Pervious	0.05	Monoculture	0.1
Coniferous Forest	0.2	Orchards	0.15
Deciduous Forest	0.2	Perennial Crop	0.15
Extraction- Rock (Sand and Gravel)	0 (0.2)	Plantations	0.2
Forest	0.2	Rural Land Use	0.15
Hedge Rows	0.2	Swamp	0.15
Idle Land	0.15	Transportation	0
Marsh	0.15	Vineyards	0.15

Ref: Significant Groundwater Recharge Area Delineation Niagara Peninsula Source Protection Area. 2009, Niagara Peninsula Conservation Authority and AquaResources Inc.

GROUNDWATER
High Importance for Recharge = 2% of the watershed (Fonthill Kame)
J. Whyte: the current development standard states that there are no net losses to infiltration so why does the type of cover matter?

S. Voros: We don't necessarily need to set a target for recharge in this area if the current standard of care deals with this.

P. Hubbard asked the group their thoughts on target setting for recharge:
S. Kok: we have a lot more to cover than recharge, we should park it for now.
M. Buma: he is understanding but there is a need to move forward. Important to set a target, thinks that a target of 100% for where there is existing natural cover makes sense.
L. Hamilton: when the CA looks at development proposals for the Kame does the NPCA require 100% recovery. She will find out and report back. If it is 100% then maybe natural cover might not be the deciding factor.

ACTION ITEM: L. Hamilton to find out NPCA's policy on this.

J. Schonberger: understanding most of this. Thinks that setting numbers is difficult. Targets should be applied to existing natural cover.
A. Kirkby: is understanding. In order to understand further, she will need to see the land uses in that area. Does not believe that there should be a target. For infiltration rates, there is no difference between agriculture and other natural cover. You will not claim back the impervious roads, etc… She is concerned that we might be controlling development in the urban area.
P. Hubbard: explained that we need to focus on the NHS.
F. Berardi: she is leery of suggesting a number since she doesn't have all of the information. Is thinking about how this relates to constraints. She doesn't know if we should set a target.
S. Voros: explained that if we knew at what point the system is impacted for example, if more than 30% is impervious then the system is impacted, that would imply that 70% should be in natural cover.
J. Campbell: stated that the data that S. Voros is referring to does not exist within the watershed without conducting additional surface water scenario modeling.

J. Whyte: doesn't know enough about hydrology to comment. Concerned about what restrictions we set within urban boundaries. If the development industry is required to meet high standards, does the cover matter? He believes that there are too many data gaps and therefore we should not set a target.

T. MacBeth: issue is how much work will it take to get us to the point that we would be comfortable in setting a target? If we don't know enough specifics, then it is difficult but he would like to see 100% retention of the recharge we have.

S. Voros: what about the precautionary principle? In the absence of having good information, do we preserve what we have within the NHS?

G. Verkade: how much do we want to rely on the NHS to protect the recharge within the system?

J. Campbell: offered that he could possibly prepare the stats on the types of cover (natural).

D. Draper: has questions? Natural cover that is there now on the Kame, would a target of 100% include approved development? Are subdivision developments and other types of development ie: something with larger parking lots, etc…) held to the same standard of care?

L. Hamilton: explained that all developments are held to the same standard. Without all of the required data, we should use a target that will help us capture what we are losing.

G. Verkade: many cover types with recharge value. How much can we rely on the NHS to protect recharge? By not setting a target we are saying that we are not relying on the NHS to help protect the recharge function. We could pick a number that is middle ground. The decision support tool will weigh this with everything else. Let it do the evaluation and hard work for us.

L. Norminton: you can get caught up in the numbers, sometimes it is just a scale. It is a gut feel.

Precautionary Principle: In the absence of data, what can we do to keep our options open into the future?

A. Kirkby: she doesn't know the area.

D. Lindblad: knows the watershed well and assures the group that if there is any place within the watershed where we should be setting a target around hydrology, this is it. If we don't set one here, we shouldn't bother with the rest.

J. Campbell: presented the mapping around land cover from the Source Water Protection Assessment Report.

P. Hubbard: reiterated that we are focused on only the natural cover as part of the natural heritage system.

J. Campbell: forest cover does have the highest infiltration rate. For recharge it is the preferred land cover.

G. Verkade: leaning towards 50%, will allow us "wiggle room".

J. Campbell: suggested 90%, provincial discharge targets state that you cannot lose more than 10% of base flow.

P. Hubbard asked the group what they thought of either 50% or 90% of existing natural cover as the target:

T. MacBeth: 90%, meets prov. threshold and still allows wiggle room. This area is already well protected.

J. Whyte: lack of scientific evidence, placing an inherent bias of more is better doesn't work for him. Underlying concern that this will lead to policy that will limit development. Stand aside.

F. Berardi: doesn't care 50% or 90% as a baseline.

A. Kirkby: 50%

J. Schonberger: 50% and 90%, as comparison

L. Hamilton: baseline 90%, what-if 50%
M. Buma: 50% and 90%, doesn't care which order, area should be represented.
S. Kok; 90% with rationale of prov. threshold.

Decision: Baseline Target of 90% of existing natural cover, what if scenario of 50% of existing natural cover.

GROUNDWATER
Moderate Importance for Recharge = 21% of the watershed

J. Campbell: these little bits distributed across the landscape are as important to the baseflow that exists. Suggested a target of 90%.
G. Verkade: we are talking about 90% of the natural features that are there not 90% of the land base.

P. Hubbard asked the group what they thought of 90% of existing natural cover as the Baseline target:
S. Kok: 90%
M. Buma: 90%
L. Hamilton: 90%, a lot of wells out there
J. Schonberger: 90% and 50%, either for baseline
A. Kirkby: what makes the protection of wooded area the saviour of the source of water?
L. Hamilton: the water hits the ground slower, the leaf litter acts like a sponge, doesn't reach the infiltration capacity as quickly.
J. Schonberger: trees also take up a lot of water.

A. Kirkby: 50%, still unsure how this will affect Niagara North
F. Berardi: 90%
J. Whyte: not sure what these percentages look like at the end of the day. Has difficulty with the arbitrary assignment of a percentage. Stand aside.
T. MacBeth: 90%

Decision: 90% of existing natural cover as the Baseline Target
If we exceed 50% of existing natural cover, run a what-if scenario of 50% of existing natural cover.

GROUNDWATER
Quality – highly vulnerable

J. Campbell: these areas are the most important to protect in natural cover in order to protect the quality of the groundwater. Protection of stream water quality and well water quality. Suggests: 100% as a baseline target

A. Kirkby: asked for clarification of what natural cover would be included. Concerned with the inclusion of old fields (meadows and thickets).
G. Verkade: offered to tease out the cover types.

S. Voros: is there a number of how much natural cover is required as a percentage of the land area to protect groundwater quality?

J. Campbell: these numbers would be available in areas where they are reliant on municipal groundwater wells. Not available for our study site, we are not reliant on municipal wells for our drinking water.

G. Verkade: your target would have to be qualified with the caveat that we are trying to maintain the status quo.

J. Schonberger: there are areas with highly vulnerable aquifers with shopping malls, subdivisions, and industrial dumps on top of them.

Suggested 95% of existing natural cover as Baseline target based on room for error, and wiggle room for the model.

95% of existing natural cover as a Baseline target, natural features excluding meadows and thickets

P. Hubbard asked the group what they thought of 95% of existing natural cover as the Baseline target with meadows and thickets removed:

S. Kok: 95%

T. MacBeth: 95%,

L. Hamilton: 95%, or 90%

A. Kirkby: 50%, will do her homework to see if she is okay with more.

F. Berardi: 95%

Decision: 95% of existing natural cover as Baseline target

DISCHARGE

J. Campbell: The water that we protected with recharge, this is where it is getting out into the environment for the biota.

The group is in agreement that the only determined cold water stream in our jurisdiction is Twelve Mile Creek.

ACTION ITEM: need to see discharge info with natural cover mapping.

P. Hubbard asked the group if we should set a target for 12 Mile Creek:

L. Hamilton: set a target on 12 Mile Creek. It is the most important fishery in the watershed.

S. Kok: in principle, the target should be to protect more than a minimum.

F. Berardi: most people are confident and she supports a target for this area

A. Kirkby: concerned about data

J. Schonberger: concerned about data

L. Hamilton: is confident in the data for 12 Mile Creek.

DATA GAP: groundwater discharge data across the watershed.

Decision: leaving this until March 3rd.

5. SURFACE WATER

G. Verkade: presented the concepts of surface water features to be covered at the March 3rd meeting.

-Forest Cover

-Wetland Cover

-Headwater Cover
-Largest Patch

6. Reflections on the Day
Left early:
J. Whyte: when it comes to targets, I am at a disadvantage since I am not a biologist, hydrologist, etc. It is informative.
M. Buma: really thought that Jayme's presentation was helpful.
T. MacBeth: feeling good about the process.

At the end of the meeting:
S. Kok: love the maps, lots of science and data and it supports the activities
L. Hamilton: I love this stuff.
J. Schonberger: it's a lot to take in, but good
A. Kirkby: certainly interesting, nothing has surprised me, gaps in some of the data. She is an advocate of water quality. Instead of looking at wooded areas for protection, we should be looking at septic systems as well.
F. Berardi: a lot of information, water quality is a huge issue for her as a planner.
D. Draper: appreciated being included, liked the give and take of ideas, impressed with the amount of data. Also, impressed with what we don't know. With all of the cuts to environment over the years, there is some data missing.
L. Norminton: awesome job for your first target setting. It will go quicker as you go along.
You go out with a huge headache but you will get through it.
S. Voros: Thanks for the opportunity to always learn from these sessions.
G. Verkade: totally likes targets better. We are analyzing the landscape, we can go to all of the contributing parts and assess how they contribute.
D. Lindblad: feels good about today.
P. Hubbard: thinks we are doing really well. We cannot be experts in everything. We have to rely on the experts and plough through it.

7. Next meeting:
Thursday March 3, 2011.

Adjourned: 4:04 pm

**Natural Heritage System for the Niagara Watershed
Scenario Development Team**

**Thursday March 3, 2011
9:00 am – 4:00pm
Ball's Falls Centre for Conservation**

Meeting Minutes

Attendees:
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
Mark Buma – Niagara Parks Commission
Joe Schonberger – Niagara South Federation of Agriculture
Austin Kirkby – Niagara North Federation of Agriculture
Francesca Berardi – City of Niagara Falls – Area Planners
Travis Mac Beth – Region of Niagara
John Potter – Peninsula Field Naturalists
Valerie Cromie- Niagara River Remedial Action Plan
Mike Scott – Ontario Stone, Sand and Gravel Association
Peter Minkiewicz – County of Haldimand
Henry Swierenga – Ontario Federation of Agriculture
JoAnne Young – Metis Nation of Ontario
Ian Thornton - Ontario Ministry of Natural Resources
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners
Dan McDonell – Niagara River Remedial Action Plan

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Steve Voros – Ontario Ministry of Natural Resources
Mary Stack – Niagara Peninsula Conservation Authority/ Outreach and Education
Doug Draper – Communications consultant

Regrets:
Moreen Miller - Ontario Stone, Sand and Gravel Association
Peter Graham – Walker Industries
James Wagar – Metis Nation of Ontario
Donald Kirk – Ontario Ministry of Natural Resources
Albert Garofalo – Niagara Land Trust

1. Welcome and Introductions (D. Lindblad, P. Hubbard)
D. Lindblad welcomed everyone on behalf of the Region of Niagara and the NPCA.

The group introduced themselves. They also gave an indication if there was any feedback from
their organizations.
M. Scott: still working on the map of the aggregate resources with the extraction constraints
delineated.

J. Potter: cautious optimism from the naturalist community.

H. Swierenga: issues have not changed.

A. Kirkby: She restated her concern about the promotion of woody natural vegetation adjacent to tender fruit and grape crops because of damage to fruit crops. To illustrate that point she brought four frozen peaches from a pile of 25 bushels of peaches that were damaged by plant bug last year and had to be discarded during one day of sorting on her neighbour's farm. She stated that the bugs are harboured in vegetation adjacent to fruit crops.

D. Draper: 31 years of communicating environmental issues. He is going to be helping prepare the public communications and larger communications strategy for the project.
He expressed that this is a lot of information to take in.

J. Young: Metis Nation representative that will be sharing the duties of attending these meetings with James Wagar.

D. McDonell: excited because this is where the Remedial Action Plan starts to overlap with targets.

S. Voros: last week the two eastern Ontario groups came to consensus on their preferred scenario. There is light at the end of the tunnel.

2. Review of the Minutes from January 6, 2011 and January 20, 2011
January 6, 2011
Approved.

Discussion around the constraints dealing with Greenbelt:
H. Swierenga: In the Hamilton NHS, the group chose to not deal with Greenbelt.
The agricultural representatives on the Niagara NHS committee do not believe that the Greenbelt is constraint worthy.

A. Kirkby: She is opposed to the inclusion of agricultural land in this modeling exercise because of the negative impact to fruit crops from the promotion of natural vegetation. Also, the Greenbelt Core Natural Heritage System has been extremely broadly identified and has included many areas in the agricultural area where there are no natural features present. The inclusion of property owners within this area has placed an unfair burden on these owners in the form of a required EIS if they want to construct a building. She wants it recorded that she was opposed to the inclusion of the Greenbelt Core Natural heritage System in the modeling exercise as well as the Protected Countryside because they are the agricultural lands.

G. Verkade and S. Voros: confirmed that the model will only pick up the natural heritage features.

January 20, 2011
Approved.

3. Review of Minutes from February 24, 2010. (P. Hubbard)
Approved with minor changes.

ACTION ITEMS arising from February 24, 2011 minutes:

L. Hamilton: NPCA's policy on how to deal with infiltration and recharge on development sites.

D. Lindblad: still to follow up with Ontario Heritage Trust to determine which sites are managed for natural heritage.
It is important that the targets lay out clearly what the percentage relates to, for example 90% of existing cover or 90% of the land area.

4. Review of Decisions from February 24, 2011
<u>**Hydrologic Function - Recharge:**</u>
G. Verkade went over the information presented by J. Campbell at the Feb. 24th meeting.
He added that 41% of the high priority recharge area of the Fonthill Kame is in natural cover. This is a new statistic based on the discussion at the February 24th meeting.

Suggested Target:
High Importance Area: 90% of existing natural cover as Baseline, 50% of existing natural cover as a what-if scenario

Moderate Importance Area: 90% of existing natural cover as Baseline, 50% of existing natural cover as a what-if scenario if the 50% target is reached.

A. Kirkby: information about Fonthill Kame did not include whether any farmed agricultural land was present in the recharge area. She wants to reiterate that she supported 50% as a baseline since the wooded areas that are zoned agriculture can be returned to agricultural use at any time, especially areas identified as meadows.

M. Scott: groundwater is a complex issue for aggregates and M. Scott would like to get more information from the groundwater experts in his group before making a decision on either High Importance area or Moderate Importance area.

Decision: deferred until April meeting.

<u>**Hydrologic Function - Quality:**</u>
H. Swierenga: pointed out that although this information is important it is important to note that this is not currently part of the provincial mandate around Source Water Protection.

M. Scott: groundwater is a complex issue for aggregates and M. Scott would like to get more information from the groundwater experts in his group before making a decision.

Suggested Target: 95% of existing natural cover as Baseline.

Decision: deferred until April meeting.

<u>**Hydrologic Function - Discharge:**</u>
DATA GAP: groundwater discharge data across the watershed.

A. Kirkby: there is no baseflow in the area identified as a cold water area in Niagara-on-the-Lake therefore there is no cold water area. She brought some photos of major drains and intermittent watercourses to illustrate the lack of surface water in NOTL therefore she is questioning data about other areas.

M. Scott: groundwater is a complex issue for aggregates and M. Scott would like to get more information from the groundwater experts in his group before making a decision.

M. Buma: supports a target for 12 Mile Creek only.

J. Potter: supports a target for 12 Mile Creek only.

Discussion around what the target should be for 12 Mile Creek:
G. Verkade: clarified that this refers to the Upper 12 Mile Creek watershed only.

M. Buma: suggested a target of 95% of existing natural cover.

M. Stack: asked what the existing cover is in this upper 12 Mile creek watershed.
G. Verkade: presented that the existing cover in upper 12 Mile Creek is roughly 28%.

P. Hubbard asked the group their opinion on a 95% of existing natural cover as the target for upper Twelve Mile Creek:
J. Potter: 95%
J. Schonberger: 90% or 95%
H. Swierenga: 95%
A. Kirkby: 95% with the understanding that this area is not agricultural land because there has not been information presented to indicate yes or no.
F. Berardi: 95%
T. MacBeth: 95%
J. Young: 95%
V. Cromie/D. McDonell: 95%

Decision: deferred until April meeting.

5. Hydrologic Function - SURFACE WATER
D. Lindblad presented some background information about targets related to surface water under hydrologic function.

Hydrologic Function - Forest Cover
Purpose: To ensure that the NHS includes a minimum amount of forest cover by Watershed Planning Area to mitigate peak flows and run-off, and maintain good water quality and quantity.

G. Verkade walked the group through the statistics as laid out by the scale of Watershed Planning Unit.

P. Hubbard asked the group:
Do we consider forest cover only or do we include the hedgerows and thickets (Wooded Area)?

J. Young: what are we trying to do? If we are looking at attenuation of water, then maybe we should include them since they function similar to forests.

D. McDonell: Doesn't believe that hedgerows and thickets function the same as forests.

S. Voros: SOLRIS mapping criteria says that a forest has to have 60% canopy cover and the trees have to be at least 2 meters in height.

S. Voros: The 30% target in How Much Habitat is Enough is heavily weighted towards hydrologic function as well as habitat.

A. Kirkby: not convinced that forest areas will do what we are suggesting for hydrologic function when there is no baseflow and the largest volume of water is the water from the spring freshet.

F. Berardi: there are not the same protections for hedgerows or thickets as for forests. Therefore, they may be removed more readily.

S. Voros: cautioned that we need to separate the function from the land use practices. We might think that hedgerows in this landscape may function the same as forests for hydrologic function.

D. McDonell: are the hexagons too big to deal with hedgerows.

S. Voros: the hexagons only act as containers to speed up analysis. The model maintains the spatial imprint of the hedgerow.

L. Hamilton: a mature forest will have a much different effect on hydrologic function than hedgerows and thickets. If we give them the same weight we could end up with a high percentage of hedgerows and thickets in our final solution. We should at least give them a different target.

J. Potter: what about hedgerows and thickets as a what-if?
D. McDonell: in the urban areas the target maybe should be different since there are manmade systems that are also attenuating water.

A. Kirkby: She is concerned that we are setting targets for what we want and how much should be retained without taking into consideration the land use in the area. There has not been a decision made to exclude agricultural land from the model yet and any agricultural land being discussed is a moving target because some of the forest cover may have to be removed to grow crops like grapes that need air flow. She stated that we should be looking at forest cover over the whole region rather than in individual subwatersheds.

T. MacBeth: since we already have less than half of what we had historically, doesn't "no net loss" stand to reason? Water issues are going to become more and more important in the next decade.

D. McDonell: asked why we are not using the 90% principle from last meeting?
S. Voros: He explained that in this case, there is good scientific data to support a target of 30% therefore we don't need to employ the 90% or 95% of existing natural cover principle.

F. Berardi: clarified that this is just one target and by choosing 100% of what is left, we might not necessarily meet that target when it is considered in relation to all of the other targets.

J. Schonberger: we cannot get to 30% in most watersheds. Forest cover is constantly in flux and it is a long term thing.

M. Scott: If we are locking in forest cover, the concern is what might happen down the road with policy.

G. Verkade: We cannot have an honest conversation about policy until we have an honest evaluation of what exists. The targets provide the scientific objectivity to that evaluation.

T. MacBeth: this exercise does not change current policy.

Suggested target: 30% of the land area in forest cover

P. Hubbard asked the group their opinion on the suggested target of 30% of the land area in forest cover:
V. Cromie: agree
T. MacBeth: agree
F. Berardi: agree
A. Kirkby: does not agree that every watershed planning area should have a target of 30% forest cover because of concerns about the impact for agricultural production and any future Regional policy that may result from this process. Stand aside.
Management team agreed to meet with A. Kirkby after the meeting.

J. Schonberger: understands the 30% as a scientific thing, understands we will not get there in most areas, P Hubbard: So you agree with what you already know? J. Schonberger: Yes.
L. Hamilton: agree
M. Buma: agree
J. Potter: agree
M. Scott; thinks the science is good, agrees with the target based on the science. Cannot agree at this time until the aggregate layer for constraints is completed.
P. Minkiewicz: agree

Suggested Decision: Forest Cover as Baseline, not including hedgerows and thickets. 30% of land area in forest cover as the baseline target, where we are below that, target is 100% of existing forest cover.

Decision: deferred until April meeting.

M. Buma: understands that this is hard to comprehend until we see the outputs. We need to trust the model. There could be negative impacts on the environment side as well. He doesn't think the problem is that we don't understand each other's' points of view.

S. Voros: in the past the experts would sit at a table with stakeholders and say, "I think this will happen" or, "I think this will happen". We now have a quantifiable tool.

D. McDonell: is it possible to run the model with just the constraints?
G. Verkade: we did some visuals to illustrate some constraints. It is possible.

M. Buma: at the end if people are not satisfied can we run additional scenarios?
S. Voros: the whole project hinges on a baseline scenario. Then we can ask what-ifs. And also learning scenarios such as "best half" or "best of the best".

The preferred scenario represents our best evaluation of what we value, or what we can live with.

M. Buma: there is lots of time to look at this at the end.

A. Kirkby: can't just sit here and make targets on what we want to keep on behalf of the agricultural sector. Unfortunately, she doesn't believe that the people around the table understand the economic impact of farming tender fruit and grapes or other crops adjacent to forested areas. She believes that the main objective is to have a policy created from this process, a policy that could negatively impact the agricultural industry.

P. Hubbard: explained that the terms of reference for this project lays out that we are trying to strike a balance. We are creating a Natural Heritage System.

<u>Hydrologic Function - Wetland Cover</u>
Purpose: To ensure that the NHS includes a minimum amount of wetland cover at varying scales and well distributed, (by NPCA jurisdiction, WSPA, and by subwatersheds) to mitigate peak flows and run-off, and maintain good water quality and quantity.

D. Lindblad presented the background information on wetlands. She explained the historic wetland identification projects and the current statistics from the Natural Areas Inventory project.

G. Verkade: explained that the wetland extent guidelines are the protocol for determining the presettlement condition. Assume that the landscape was in some form of natural cover prior to settlement. We then can look at the soils and slope to determine where the lowland areas and therefore wetland communities would have been.

He explained that we are looking at two potential targets from the research. 10% at the watershed scale (Watershed Planning Units) and 6% on the subwatershed scale.

D. McDonell: are storm water retention facilities included in the wetland layer?
L. Hamilton: no
S. Voros: does it make sense to include them in this target?
F. Berardi: if we are meeting our targets does it make sense to include manmade structures.

DATA GAP: an inventory of storm water management facilities and a better understanding of their contribution to overall hydrologic function.

J. Schonberger: how are manmade structures natural heritage?

A. Kirkby: she believes that in her area, the storm water facilities prevent the proper flow of water. She believes that they should be included.

L. Hamilton: it might be important to include storm water management facilities under a separate category and look at their contribution.

Suggested target: At least 10% in wetland cover by watershed planning area and where we are currently below that target, target is 100% of wetland cover that exists.

P. Hubbard asked the group if they agreed with the suggested target of at least 10% in wetland cover by watershed planning area and where we are currently below that target, target is 100% of existing wetland cover.

P. Minkiewicz: agree

I. Thornton: agree, we still may need to look at the definition of what is natural heritage? What do we include? We may not want to include storm water management ponds since it might minimize the importance of wetlands to the system.

M. Scott: thinks the science is good, agrees with the target based on the science. Cannot agree at this time until the aggregate layer for constraints is complete.

J. Potter: agree

M. Buma: agree

L. Hamilton: agree

J. Schonberger: agree

A. Kirkby: for clarification, does this include all wetlands including the man made ponds in NOTL that were dug for irrigation and that have now ben classified as wetlands?.

L. Hamilton: yes.

A. Kirkby: They may not be there in the future.

L. Hamilton: explained that just because it has been identified as a wetland does not preclude uses like irrigation.

A. Kirkby: cannot agree because these mman made ponds may not be there in the future because of the expense to dig them out when they become filled with sediment from spring freshet. Man made ponds should not be classified as wetlands.

F. Berardi: agree

T. MacBeth: agree

B. Wiens: agree

J. Young: agree

V. Cromie/ D. McDonell: agree

M. Stack: can this be run in 5 years to see what changes have taken place.

G. Verkade: yes as long as the data is updated. This tool is very powerful for that.

M. Scott: It is important to review in the future. The frequency of that review warrants discussion since it is time consuming.

Suggested Decision: At least 10% in wetland cover by watershed planning area and where we are currently below that target, target is 100% of existing wetland cover.

Decision: deferred until April meeting.

Suggested target:
At least 6% in wetland cover by subwatershed and where we are currently below that target, target is 100% of existing wetland cover.

P. Hubbard asked the group if they agree with this suggested target of at least 6% in wetland cover by subwatershed and where we are currently below that target, target is 100% of existing wetland cover.

P. Minkiewicz: agree

I. Thornton: agree

M. Scott: thinks the science is good, agrees with the target based on the science. Cannot agree at this time until the aggregate layer for constraints is complete.
J. Potter: agree
M. Buma: agree
L. Hamilton: agree
J. Schonberger: agree
A. Kirkby: cannot agree on the target of 100% retention of existing wetlands for all watershed areas that are below 10% wetland cover because the classification and inclusion of man made ponds as wetlands like those in NOTL.
F. Berardi: agree
T. MacBeth: agree
B. Wiens: agree
J. Young: agree
V. Cromie/D. McDonell: agree

Suggested Decision:
At least 6% in wetland cover by subwatershed and where we are currently below that target, target is 100% of existing wetland cover.

Decision: deferred until April meeting.

<u>Hydrologic Function - Largest Patch</u>
Purpose: To ensure that the NHS includes the largest contiguous areas of natural cover, well distributed (at the Watershed Planning Area scale) to mitigate peak flow and run-off, and maintain good water quality and quantity.

Suggested target: largest contiguous patch of natural cover within the watershed planning area regardless of whether it straddles the divide.

I. Thornton: not sure there is value in dealing with this in and of itself. May be better to deal with this at the headwater catchment scale.

Decision: defer until we can talk to Jayme Campbell.

<u>Hydrologic Function - Headwater Catchment Cover</u>
Purpose: To ensure that the NHS includes areas of natural cover by headwater areas by Watershed Planning Area to maintain good water quality and quantity.

D. Lindblad presented the background information about the headwater catchment areas.
She presented that in other jurisdictions a 50% target for cover within headwater catchment land area was used. It was stated based on lit review by the provincial hydrologist that 30% should be in upland and 20% should be in lowland.

Based on presettlement condition, Niagara would have had a 50:50 ratio upland to lowland so our percentage would be 25% upland to 25% lowland.

S. Voros: the eastern Ontario example, assessed on the scale of the individual catchments to get at the question of distribution throughout the system.

J. Schonberger: what percentage of these headwater areas are municipal drains? If he made a ditch in the field with a v-blade would that show up? He explained that municipal drains are

constructed for agricultural purposes, involve elaborate procedure, and are paid for by landowners. Since it was unlikely that there would be natural cover near them could they be separated from streams?

G. Verkade: this is based on the provincial dataset.

S. Voros: There are some finer features but not likely. This is looking for natural cover which would likely not be found in the middle of a farm field.

F. Berardi: if we can't achieve one of the percentages, ie: 25% forest cover, does wetland cover compensate for the difference.

S. Voros: no, they are independent evaluations.

Suggested target: A minimum of 50% of the headwater catchment land area within the watershed planning areas be in natural cover, where 25% is in upland and 25% is in lowland.
Where we are below the minimum targets, the target is 100% of existing natural cover.

ACTION ITEM: As a comparison, G. Verkade to remove the headwater features that run into municipal drains. Rerun the stats for headwaters.

P. Hubbard asked the group whether they agreed with the suggested target of a minimum of 50% of the headwater catchment land area within the watershed planning areas be in natural cover, where 25% is in upland and 25% is in lowland.
Where we are below the minimum targets, the target is 100% of existing natural cover.

P. Minkiewicz: agree

I. Thornton: agree

M. Scott: as before

J. Potter: agree

L. Hamilton: agree

J. Schonberger: we will not get anywhere near this target. Agree

A. Kirkby: currently not enough information about what areas are classified as headwater areas. She asked for mapping for watershed areas to show this information. She agreed with J. Schonberger that municipal drains should be removed and is waiting until next meeting to see the removal of municipal drains.

F. Berardi: agree

T. MacBeth: agree

B. Wiens: agree

J. Young: agree

Suggested Decision: A minimum of 50% of the headwater catchment land area within the watershed planning areas be in natural cover, where 25% is in upland and 25% is in lowland.
Where we are below the minimum targets, the target is 100% of existing natural cover.

Decision: deferred until April meeting.

6. Reflections on the Day
Left early:

V. Cromie: team did a good job of explaining. Looking forward to seeing the model.

D. McDonell: this is paralleling the work Geoff and Dan are doing for the RAP's habitat workshop at the end of March. Interesting.

D. Draper: interesting discussion.

At the end of the meeting:
P. Minkiewicz: when we get into these non-planning areas, it makes his head hurt
I. Thornton: kudos for everyone's patience. Wondering if we need this much detail. Might be more advantages for the management team to come with recommendation.
M. Scott: long discussions but it is good to talk through the issues.
J. Potter: instead of biology he should have taken chemistry.
M. Buma: no complaints, is following along.
L. Hamilton: it's going well, it makes sense
J. Schonberger: so much is outside his normal life experience, hopes that he brings something useful to the group
A. Kirkby: thanked the group for listening, still has her concerns. If she stays she will bring her concerns to the table because she does not support the inclusion of agricultural land and certainly believes that land use should be taken into account when creating a Natural Heritage System.
F. Berardi: the group is working well, every sector has its jargon and viewpoints, we are finding middle ground
T. MacBeth: going well
B. Wiens: thinks it is important to have the discussions and airing of ideas and views. We can all learn from one another. Learning a lot.
J. Young: she has a lot of experience with consensus building, takes much longer but the end result is often much better. In the process we accept each other's points of view. Her daughter is a policy analyst with drinking water and she will be having discussions with her.
S. Voros: it's a lot of technical information, it is an amazing opportunity to learn. The information is valuable but the perspectives on that information are as valuable.
G. Verkade: today we had a light bulb moment, not targets for implementation, but rather targets for evaluation.
D. Lindblad: was asked this week if she regretted doing this by consensus. The answer is no. This is different.

7. Next meeting:
Thursday April 7, 2011.

Adjourned: 4:06 pm

<p style="text-align:center">**Approved**
Natural Heritage System for the Niagara Watershed
Scenario Development Team

Thursday April 7, 2011
9:00 am – 4:00pm
Ball's Falls Centre for Conservation</p>

Meeting Minutes

Attendees:
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
Mark Buma – Niagara Parks Commission
Austin Kirkby – Ontario Federation of Agriculture
Francesa Berardi – City of Niagara Falls – Area Planners
Travis MacBeth – Region of Niagara
John Potter – Peninsula Field Naturalists
Valerie Cromie- Niagara River Remedial Action Plan
Mike Scott – Ontario Stone, Sand and Gravel Association
Cynthia Robinson - Ontario Stone, Sand and Gravel Association
Henry Swierenga – Ontario Federation of Agriculture
JoAnne Young – Metis Nation of Ontario
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Steve Voros – Ontario Ministry of Natural Resources
Mary Stack – Niagara Peninsula Conservation Authority/ Outreach and Education
Doug Draper – Communications consultant

Regrets:
Moreen Miller - Ontario Stone, Sand and Gravel Association
Peter Graham – Walker Industries
James Wagar – Metis Nation of Ontario
Donald Kirk – Ontario Ministry of Natural Resources
Albert Garofalo – Niagara Land Trust
Ian Thornton- Ministry of Natural Resources
Joe Schonberger – Niagara South Federation of Agriculture
Tony VanOostrom – Ontario Power Generation
Peter Minkiewicz – Haldimand County

1. Welcome and Introductions (D. Lindblad, P. Hubbard)
D. Lindblad welcomed everyone on behalf of the Region of Niagara and the Niagara Peninsula Conservation Authority.

The group introduced themselves. They also gave an indication if there was any feedback from their organizations.

M. Scott: we have a definitive answer on our constraints map would like it added to the agenda.

H. Swierenga: just spent two days at the Greenbelt conference in Toronto and it is interesting how Greenbelts are recognized around the world and the compensation put forward for ecological goods and services. Spoke specifically about the Iron Curtain Greenbelt. Encouraged everyone to have a look at the info. on-line.

A. Kirkby: keep on plugging.

V. Cromie: told the group about the RAP Habitat Workshop held on March 29th. It is a step forward in the RAP. G. Verkade and D. Lindblad both presented data to the group. Representatives from the US side were also in attendance. She brought data on disc for anyone that is interested.

T. MacBeth: also attended the Greenbelt conference. Encourages everyone to look at the website.

J. Young: feedback from Metis Nation was positive and they empathize with the process of consensus since they do everything by consensus.

D. Draper: He is going to be helping prepare the public communications and larger communications strategy for the project.

G. Verkade: outlined how the RAP process is aligning with the NHS project.

Added Item:
M. Scott: presented to the group that the Aggregates have gone through the process of looking at their base mapping (ARIP) and have come to the conclusion that they can not produce the constraints mapping discussed in previous meetings.

2. Review of the Minutes from March 3, 2011.
Actions out of the March 3, 2011 minutes.

L. Hamilton: what is required of a development in terms of protections for hydrologic function from the perspective of Niagara Peninsula Conservation Authority?
In any watershed, the NPCA requires that the proponent monitor flow, and quality. Post development must match pre-development condition.

Any application involving lands on the Fonthill Kame, monitoring of volume is considered in addition to flow and quality. Proponent is required to meet pre-development conditions.

D. Lindblad: still needs to follow up with the Ontario Heritage Trust to determine which of their properties actually have natural heritage values in their management plans.

A. Kirkby: pointed out that on page 10 of the minutes under Headwater Catchment, should not read as a decision.

Approved with minor changes.

3. Review of Decisions from March 3, 2011
G. Verkade: revisited the decisions made in the March 3rd meeting.

<u>Hydrologic Function - Recharge</u>

M. Scott: Not sure how this will be used in the future so he cannot agree with the 90%. Their groundwater person agreed with the science. He is concerned about the policy implications coming out of this process. For the aggregate industry, it is difficult to not look down the road at the issues of how this might be dealt with in policy.

H. Swierenga: D. Lindblad mentioned that this is not meant to change how people currently use the land. This could have made the road easier.

G. Verkade: reminded the group, we are not doing constraints now. This is the assessment phase of the project. We are deciding the relative importance of the values on the landscape.

B. Wiens: highlighted that this is about what is on the landscape today. If we run it again 5 years from now, we will be able to evaluate change. She also stated that the planning decisions that are made today are difficult because they are based on old data and no evaluation.

L. Hamilton: when she gets a development application, it is next to impossible in some cases to make a decision due to lack of accurate, current data.

G. Verkade: explained that down the road this evaluation will help make informed decisions.

M. Stack: we can effect what the policy outcome will be by presenting good data. Also remember that there is a difference between policy and legislation.

A. Kirkby: she is still worried about the process that comes after this. She is firmly of the belief that this cannot be done without understanding the land use. There is an ebb and flow to agricultural land that needs to be looked at.

P. Hubbard: the steering committee is meeting on the 20th of April and we will not solve this issue at this table. She asked the group if they are comfortable with having the steering committee deal with this issue.

M. Buma: there is a constraint already in place to exclude all agriculture. We have to remember that.

B. Wiens: The Steering Committee needs to understand the issues this Committee is having.

M. Buma: the Parks Commission has concerns as well about policy as a tourism agency but they see the value in the information.

J. Young: one of the real benefits of this type of thing is on a site specific basis. It is a baseline evaluation, an important tool. Our job is to ensure that this tool is as accurate as possible.

F. Berardi: there is the opportunity for us to lay out for those that come after us where we wanted this to go and where we didn't want it to go.

D. Lindblad: told the group that the idea for the final report is to have all of the values as "stand alone" fact sheets. The issues raised will be laid out. And the preferred scenario for each value will be presented.

J. Potter: also sits on the steering committee and will be pushing the issues through.

M. Scott: aggregates could use the final data outputs from this process in their efforts to rehabilitate sites.

V. Cromie: when the Stage One Report of the Remedial Action Plan (RAP) was released there were 14 criteria. Fish and wildlife habitat was one of them but there was not sufficient data to assess the status of the habitat and the team therefore, called it impaired. With the data that G. Verkade has presented, it is enlightening to see what we have. We will hopefully be moving towards delisting this criteria.

M. Buma: "this is like duct tape, there are a million uses for duct tape but some of them are not good. But at the end of the day, you don't want to be without it."

C. Robinson: for clarification, the committee has made decisions already about constraints and now we are setting targets? G. Verkade and P. Hubbard helped fill in what has happened to date in the process.

M. Scott: while the concerns are always there. We don't want to stand in the way of good science and a good process.

H. Swierenga: there are serious examples of how NHS projects have impacted agriculture and aggregates in the Province.

J. Young: An added note on Metis Nation Consensus
Everyone is allowed to discuss any option. It is in the process brought forward in the form of a motion, the discussion happens and then when a member of the group feels like there has been enough discussion, they call "Question". The discussion stops and the question or motion is reread and then it is asked if there is consensus, it is asked three times, and if there is not agreement, it is put to a vote.

P. Hubbard: asked the group if they would like to use this.
J. Young: after sitting in this group, she has read people's faces and sees that there are people that would like to call "question", but don't.

B. Wiens: is concerned that we might not have the complete discussion.

Group agrees to try it as a tool. P. Hubbard: asks the group three times if we have consensus. Consensus is reached.

<u>Hydrologic Function-Recharge</u>
Suggested Decision:
High Importance Area: 90% of existing natural cover as Baseline, 50% of existing natural cover as a what-if scenario.

Moderate Importance Area: 90% of existing natural cover as Baseline, 50% of existing natural cover as a what-if scenario if the 50% target is reached.

M. Scott: we don't necessarily agree with it until we know where this goes in the future, stand aside.
A. Kirkby: does not agree, stand aside
H. Swierenga: the agricultural community did not agree to two baselines under constraints, stand aside.
B. Wiens: we do need to get to a decision, we will have a chance to look at the learning scenarios.
T. MacBeth: calls Question.

Decision: High Importance Area: 90% of existing natural cover as Baseline, 50% of existing natural cover as a what-if scenario.

Moderate Importance Area: 90% of existing natural cover as Baseline, 50% of existing natural cover as a what-if scenario if the 50% target is reached.

Hydrologic Function-Quality:

M. Scott: moving forward he believes they will be able to support but with the uncertainty, cannot agree at this time. Stand aside.

H. Swierenga: stand aside.

Decision: 95% of existing natural cover as Baseline.

Hydrologic Function-Discharge:
DATA GAP: groundwater discharge data across the watershed.

M. Scott: stand aside.

Decision: 95% of existing natural cover in the Upper Twelve Mile Creek.

Hydrologic Function - SURFACE WATER
Hydrologic Function - Forest Cover
M. Scott: stand aside
A. Kirkby: stand aside

Decision:
Forest Cover as Baseline, not including hedgerows and thickets.
30% of land area in forest cover as the baseline target, where we are below that, target is 100% of existing forest cover.

Hydrologic Function - Wetland Cover
DATA GAP: an inventory of storm water management facilities and a better understanding of their contribution to overall hydrologic function.

M. Scott: stand aside
A. Kirkby: stand aside

Decision:
At least 10% in wetland cover by watershed planning area and where we are currently below that target, target is 100% of existing wetland cover.

At least 6% in wetland cover by subwatershed and where we are currently below that target, target is 100% of existing wetland cover.

Hydrologic Function - Largest Patch
D. Lindblad explained to the group that according to J. Campbell this can be dealt with under Headwater Catchments since the largest patches have greatest impacts in headwater areas.

Decision: no target for this.

Hydrologic Function - Headwater Catchment Cover
G. Verkade presented to the group the issues from the last meeting. He reworked the dataset with the municipal drains removed. He also removed the headwater areas that are urban.

He put it to the group that he could also remove areas that have an overlap with tile drains. There are other areas that could be further removed. For example, first orders that coincide with 4th order or higher.

A. Kirkby: questions the mapping in NOTL, overall she supports the removal of the municipal drains. Stand aside.

H. Swierenga: would be more comfortable if the focus for the target was on the existing natural cover instead of land area. Stand aside.

ACTION ITEM: G. Verkade will not remove tile drains, will remove where there is a coincidence of first orders with third orders or higher; and where there is a coincidence of first order streams and fourth order or higher.
This will be the surrogate for headwater catchments.

Decision: A minimum of 50% of the headwater catchment land area within the watershed planning areas be in natural cover, where 25% is in upland and 25% is in lowland. Where we are below the minimum targets, the target is 100% of existing natural cover.

4. Target Setting
Hydrologic Function – Riparian Areas

A. Kirkby: does riparian area include the municipal drains? G. Verkade: he removed ditches and other anthropogenic impacts. D. Lindblad: explained that natural vegetation refers to trees.

The high estimate presented by G. Verkade includes all watercourses. The low estimate has teased out the things that don't make sense. He would recommend that we use the low estimate since it is the most refined.

Suggested target: 75% of the riparian zone in natural cover.

A. Kirkby: doesn't agree with the 30 meter buffer. Wants to ensure that municipal/ agricultural drains have been removed from the dataset.

G. Verkade: explains that they have been removed to the best of his ability. The dataset is not perfect.

P. Hubbard asks the group if they agree with the suggested target of 75% of the riparian area in natural cover.

B. Wiens: has an issue with a 30 m riparian zone. She believes that this is a large area. She asked if there is flexibility with this. She stated that this doesn't line up with what some of the standards are where we regulate a 15m buffer as an example.
D. Lindblad: explained that the science supports 30m as a buffer for water quality.
L. Hamilton explained that the regulations that exist are largely based on fish habitat. While it will include some links to water quality, it is more directly related to things like overhanging vegetation and physical structure of habitat.

G. Verkade: explained that unless there is a local expert or science that is Niagara specific that says otherwise, it would be very difficult to go with less than 30 m as a minimum.

A. Kirkby: she doesn't support the 30 meter buffer. We are not considering where this is taking place. Many of these streams don't even have water in them.

L. Hamilton: can provide many reasons why we should be considering more than a 30m buffer. In this watershed, we have fine, silty sediments, this is a reason to actually look at more than 30 meters. She understands that we are not comfortable with this but that is what the science says. She doesn't support less than a 30 meter buffer.

V. Cromie: under the RAP, they have been doing a eutrophication study and this is an example of where buffers are really important since it is the buffers that filter out phosphorus and other contaminants.

J. Potter: before we spend a lot of time worrying about sizes of buffers, let's run the model with the targets as laid out in the literature and see what it looks like.

M. Scott: sounds logical to run the model and then see what it looks like.

C. Robinson: she sees the importance of running the model, has concerns about identifying the natural features on the landscape. Once identified, what is the information going to be used for down the road.

L. Hamilton: understands that this is not what we are used to considering, but she knows that buffers in relationship to water quality is a huge issue for the NPCA. Buffers as a means of mitigating water quality issues has been a target for the NPCA for decades. She can't support less than that target. We need to know where we are in relation to what the best available science states.

H. Swierenga: doesn't agree

A. Kirkby: doesn't agree since natural grass is an adequate buffer. L. Hamilton agreed that grass can be a good buffer.

F. Berardi: likes what J. Potter said and would like to see it on the map.

S. Voros: for clarification, the target relates to the land area within the buffer not the existing natural cover.

V. Cromie: represents the RAP and the basis for the RAP is the degraded water quality of the area. 100% would be great but is not realistic. Supports the suggested target.

T. MacBeth: defers to the science.

J. Young: we are trying to move forward and input the targets to the model so we can have a visual. We have had a discussion this morning about policy and the steering committee will deal with this.

T. MacBeth: if anyone has a concern about water quality, have a look at Lake Erie and nutrient loading. Estimates are that in the future, it will cost $17,000/day for the Region to make it potable.

H. Swierenga: Environmental Farm Plan handbook states anything more than three meters scores the highest. Therefore cannot support up to 30 meter as a buffer.
OMAFRA recommends 3 meter as the minimum buffer. Stand aside.
D. Lindblad: asked H. Swierenga to make the technical information behind that recommended target available to the group through the ftp site.

A. Kirkby: stand aside.

Decision: 75% of the riparian zone in natural cover by subwatershed scale.

G. Verkade: we will have an idea about the relative importance of the values to each other in our final solution. We know that we will not meet many of these targets. We are not expecting to use this to implement but to inform.

Revisiting Aggregate Community question on Authorized Aggregate Sites
From January 6, 2011, the decision was: available with the option to reconsider cost if the mapping is complete.
M. Scott: explained to the group that the mapping is not going to be available to this process. Wants the groups to understand that Niagara has very high level material. Having the material near the market is very valuable, if they cannot extract here in Niagara, the closest material for construction of this quality, is Tobermory. There are sufficient environmental impacts associated with the trucking of material from Tobermory as well. Aggregates would like to be treated the same as agriculture.
Aggregates would like to see aggregate resources excluded in the first baseline scenario as was agriculture. If agriculture is excluded, that puts a burden on aggregate lands.

Decision: Unlicensed Sites: Change to Decision on January 6, 2011: Baseline A: exclude; Baseline B: assign a cost.

ECOLOGICAL FUNCTION
Course Scale Habitat

D. Lindblad: introduced the concept of Ecological Function Course Scale Habitat. She introduced the values to be dealt with under course scale habitat.

G. Verkade: explained the scales to be used and how he arrived at the delineation of the scales.

Course Scale Habitat - Forest Cover
D. Lindblad: once again explains how the presettlement condition for Niagara is arrived at in the absence of specific mapping.
H. Swierenga: asks what is meant by presettlement and explains that pre-European settlement, the native communities were planting corn.
J. Young: the aboriginals did not plant the way we do today. The three sisters were corn, squash and beans and were planted together.

A. Kirkby: commented that she does not agree with the research since the tender fruit trees and vines were not included in the 30% forest cover target.

Suggested target: 30% of the overall land area by soil landscape in forest cover.

P. Hubbard asked the group their thoughts on the suggested target:
J. Young: We can move this forward while recognizing the orchards and vineyards contribute but cannot be called forest cover.

J. Potter: we maybe should look at what we might be losing in the next 25 years, ie: ash trees.
G. Verkade: species specific targets might be better dealt with under Biodiversity Representation.

H. Swierenga: has no problem with the 30%, given the right incentives, we might be able to reach that target.

Decision: 30% of the overall land area by soil landscape in forest cover.

Course Scale Habitat – Forest Age Classes
D. Lindblad: introduced to the group the potential importance of age classes to the system.

G. Verkade: showed the group the datasets that exist. The old growth forest survey of Niagara is not exhaustive and could skew the model.

L. Hamilton: might make sense to deal with old growth under fine scale habitat.

J. Potter: old growth is a category that might be too spotty to deal with.

G. Verkade: can be used as a book keeping exercise, ie: how much of the old growth is included in the final solution.

Decision: deal with the concept of age classes under fine scale habitat.

Course Scale Habitat - Forest Patch Size

D. Lindblad: presented the concept of patch size as it pertains to ecological function and the way in which it was dealt with in the literature and the other NHS projects in the province.

G. Verkade: presented the statistics related to the sizes of the patches of forest in each soil landscape.

P. Hubbard asked the group if they want to include a target related to patch size:
J. Potter: thinks this is important.

H. Swierenga: has no issue with this but wants to be clear that some woodlands are harvested using best forest practices.

Decision: 100% of the top three size classes by soil landscape.

G. Verkade asked the group what they want to do with the other size classes.
J. Young: would this tie in when we look at specific species?
S. Voros: The research says that bigger is better. The ecological value diminishes as you get smaller. But do we want to set targets for the smaller ones considering that they do still provide some ecological value.

H. Swierenga: believes that the agricultural community will accept the top three classes.

Suggested target: 50% of the next two size classes by soil landscape.
V. Cromie: what about linkages?
D. Lindblad: told the group that we will get at the question about linkages when we look at proximity of patches.

A. Kirkby: does not support a target around the lower two classes based on the idea that there could be policy down the road.

B. Wiens: understands what A. Kirkby is saying due to the issues around Greenbelt and the lack of flexibility.

J. Young: we will get a better scenario down the road if we give the model more to work with.

T. MacBeth: current policy calls for an Environmental Impact Statement for everything over 2 hectares under a development policy.

A. Kirkby: Stand aside.

H. Swierenga: wants to see the results before he agrees. Stand aside.

Decision: 50% of the next two size classes by soil landscape.

Course Scale Habitat - Forest - Proximity of Patches

S. Voros: explained to the group that this goes hand in hand with the forest patch size target. MARXAN can do this but it bogs down the computing. He has recommended in the past that this is done after rather than in the model.

Boundary Length Modifier: this is another way of getting at this idea rather than looking at it in the front end of the modeling exercise.

Decision: no target set on this value. Dealt with as a bookkeeping exercise under learning scenarios.

5. Reflections on the Day

L. Hamilton; mixed feelings. Tough but it went well. We went over a lot of stuff we had gone over before. Finds the target setting interesting.

M. Buma: frustrated with revisiting many of the same issues.

B. Wiens: we are exceptionally good at having the same conversation over and over again. It is important however to deal with the issues. The more dialogue you have, the better. The process and the time we take to understand the various perspectives is important.

J. Potter: good progress. Let's only ask for consensus once.

M. Scott: apologize for bringing up the same issues, but it is important. Good progress today.

C. Robinson: thanked the group for allowing her to participate. It is amazing to see such a diverse group working together on such complex issues. Impressed.

H. Swierenga: the process is moving forward.

A. Kirkby: moving forward but is sorry to say that she does not believe in all the research. She believes there is other research that we should be looking at. It is difficult to do this without knowing what is on the land and that is why she can't support many of the targets. She is living with what Greenbelt has done to the landowners.

F. Berardi: finds that the mornings are tough but we get there. Thanked the technical team for refocusing us when we wander.

V. Cromie: was happy to bring more information to the table about the RAP today. The main focus of the RAP now is degraded water quality in the Welland River. This morning's discussions were good to refocus us. She is thinking about the job D. Draper has in bringing this to the public.

T. MacBeth: going well. Might not be able to attend all going forward, but will try to send a colleague. Will ask for more information about how the Region might use the information coming out of this process and report back to the group.

J. Young: thought discussion this morning was good and the "policy boogie man" will need to be discussed at the Steering Committee. Glad we dealt with the Aggregate piece. It was productive and positive. Duct tape is very Canadian and very useful.

D. Draper: struck by the fact that M. Scott wanted to apologize for bringing up the policy issue. That discussion helped Doug in his understanding. This group is a microcosm of the larger Niagara community that will need to weigh in in the future.

S. Voros: the discussion this morning was great. When we all sit around the table and openly share our knowledge, we build trust and that is how we get to consensus.

G. Verkade: needs to unfocus sometimes and think about things differently.

D. Lindblad: also needs to unfocus sometimes. She spends a lot of time on this and forgets that others go away and don't necessarily think about this everyday in between meetings. Thank you.

6. Next meeting:
   May 5 and May 19
   June 2 and 16

Adjournment: 4:04pm

<p style="text-align:center">**APPROVED**</p>

Natural Heritage System for the Niagara Watershed
Scenario Development Team

Thursday May 5, 2011
9:00 am – 4:00pm
Ball's Falls Centre for Conservation

Meeting Minutes

Attendees:
Jon Whyte – Niagara Homebuilders Association
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
Austin Kirkby – Niagara North Federation of Agriculture
Francesca Berardi – City of Niagara Falls – Area Planners
John Potter – Peninsula Field Naturalists
Valerie Cromie- Niagara River Remedial Action Plan
Donald Kirk – Ontario Ministry of Natural Resources
JoAnne Young – Metis Nation of Ontario
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners
Joe Schonberger – Niagara South Federation of Agriculture
Peter Minkiewicz – Haldimand County

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Steve Voros – Ontario Ministry of Natural Resources
Mary Stack – Niagara Peninsula Conservation Authority/ Outreach and Education
Doug Draper – Communications consultant

Regrets:
Henry Swierenga – Ontario Federation of Agriculture
Moreen Miller - Ontario Stone, Sand and Gravel Association
Peter Graham – Walker Industries
James Wagar – Metis Nation of Ontario
Travis Mac Beth – Region of Niagara
Mike Scott – Ontario Stone, Sand and Gravel Association
Albert Garofalo – Niagara Land Trust
Ian Thornton- Ministry of Natural Resources
Tony VanOostrom – Ontario Power Generation
Mark Buma – Niagara Parks Commission

1. Welcome and Introductions (D. Lindblad, P. Hubbard)
D. Lindblad welcomed everyone on behalf of the Region of Niagara and the Niagara Peninsula Conservation Authority.

The group introduced themselves. They also gave an indication if there was any feedback from their organizations.

A. Kirkby: had a meeting with the Niagara-on-the-Lake Agricultural Committee and the committee members want to be sure that the specialty crop lands are excluded from the preferred scenario. She will be attending a Niagara North OFA meeting next month.

D. Kirk: has been involved with the Hamilton ReLeaf Natural Heritage Project. They are nearing the end of their project.

V. Cromie: held the RAP Habitat Workshop at the end of March and the proceedings are being prepared. She will make them available to anyone who is interested.

2. Review of the Minutes from April 7, 2011.
Actions out of the April 7, 2011 minutes.

D. Lindblad: still needs to follow up with the Ontario Heritage Trust to determine which of their properties actually have natural heritage values in their management plans.

D. Lindblad followed up with the Ontario Heritage Trust and the properties that do exist locally are not managed specifically for their natural heritage values. It is therefore recommended that a constraint not be set on Ontario Heritage Trust properties.

Minutes Approved with minor changes.

3. Review of the Steering Committee meeting on April 20, 2011.
M. Stack: updated the group with what was presented to the Steering Committee on the Communications Plan. She explained that through the NAI the broader public was not involved with that project directly unless they were a participating landowner. The info is available on the web.

The idea of the communications on this project is to let the broader public know that this is a project similar to other projects across the province. It is important to highlight the purpose and explain that it is not policy.

First steps include a "newsletter" explaining the process, the tool (MARXAN) and the fact that this is a consensus based process. Also stress the science. Also highlight the expertise at this SDT table. Tell the public that this is a community project and that their opinion matters. Long term goal is to increase resources going to environmental programming.

The Steering Committee looked at the name and came up with " Niagara Natural Areas Assessment" as a preferred option. M. Stack asked for the input of the SDT on this name. We can't go out to the public until we have a good title.

P. Hubbard: asked the group for feedback on the name.

A. Kirkby: is concerned about the communications. She is concerned with the word "natural" because some features identified on the mapping are not natural. They are man made. She is opposed to treed areas adjacent to all agricultural lands.
She wants the concerns that have been expressed at the meetings to be included in the communications. She wants explanation about consensus included. She wants an explanation about what happens after this process is completed, possible policy from the Region.

Presently, agricultural land is excluded but there is still the process to choose a preferred scenario. If farmland is then included farmers will not realize that their land will be included. **She stated that any communications released to the public should be reviewed by this group first.**

M. Stack: wants to put together basic communications so that the public has an idea of what is going on with the projects and include the highlights. The outcome is a resource to be used like any other resource. The process that comes out of this will involve a public input phase.

G. Verkade: Reminded the group that the communications plan is included in the terms of reference. It states that we are all here to strive for a balance.

J. Young: this is a base report based on the best case science. The policy is a different process. The base data can be used for many different purposes.

V. Cromie: are other groups that are doing this having the same issues about policy. How are they handling the communications plan?
S. Voros: the message has been the same as here. We are not generating policy at this table. We hope that this will be used. The other projects have developed communications and that is available to the SDT's in those areas.
D. Lindblad: our communications team is using those materials from other projects as reference.

P. Hubbard: reminded the group that under the current system all natural heritage features are treated the same. This process will look at all of the features and assess their value in relation to each other and decide what at a minimum we need to have a sustainable landscape.

M. Stack: we need to explain why sustainability is important.

P. Hubbard: it is also important to point out that this is not just science but has been sorted by this group.

A. Kirkby: hoping that any communications that goes out has to be looked at by this group. Wants the communications to acknowledge the issues this group has been struggling with.

P. Hubbard: explained that consensus is not that everyone agrees but everyone understanding and agrees to move on. Shared understanding and shared learning and agreeing to move forward. J. Young: agreed that in the Metis tradition this is true. She explained the difference between abstaining and objecting.

P. Hubbard: we can call these issues "difficult conversations" in the communications.

D. Draper: it is important that these issues we have been having get addressed in the communications since the larger public will have the same issue/questions and we have to be prepared to address them.

B. Wiens: asked about the newsletter, how will they be disseminated and the timing? M. Stack: the first one will be general and address the vision and that it is not about setting policy or regulation. The Communications team will draft it and circulate it to the group.
M. Stack: wants the community to be excited about what we have in terms of natural features on the landscape.

B. Wiens: what is the timeline?

M. Stack: the general info. will come out after the SDT is done their portion. Summer of 2011.

B. Wiens: where will they go out?

M. Stack: she will get pricing for every household? She is going to look into this for the general info. newsletter.   It will also go on the NPCA website. Presentations to interest groups. This is an FYI initially.

Then when the modeling is done we will do the follow up.

J. Schonberger: It is very easy to demonstrate that we are not making policy or regulation. It is much more difficult to demonstrate that this is not a land use planning exercise. Natural Heritage System is a commonly used Planning term which appears in most land use planning documents. "Planning" is not a dirty word. We might just have to embrace that use of the term.

G. Verkade: Now that we have the inventory, how well does this natural heritage system function? This is the story that has to be told.

P. Hubbard: asked the group for their thoughts on what was presented.

J. Potter: suggested "Niagara Nature Round-up" as a title.

J. Schonberger: suggested "Niagara Watershed Marxan Project"

G. Verkade: suggested "Understanding How Niagara's Natural Areas Work Together"

A. Kirkby: wants to preview any communications that go out to the public. Is under the assumption that agriculture is excluded and this should be part of the communications.

V. Cromie: sustainable and quality of life are the things she is thinking about.

J. Whyte: more concerned about the implications, it is our responsibility as a group to not only communicate the positives but also the impacts of what we are doing. Does not want to see a one sided message. Would like to look at what we are saying publicly before it is released.

P. Minkiewicz: with the level of effort that we have been putting into this, we should review the public communication.

J. Young: "word-smithing" is important because certain words bring up emotions, etc. so this is important.

D. Kirk: don't dumb it down too much. You can't always break it down.

D. Draper: good points and will work to incorporate all of them. He will work on the balance of information for the general public.

D. Lindblad: suggested "Finding the Balance" as a name.

4. Review of Decisions from April 7, 2011

G. Verkade: revisited the decisions made in the April 7th meeting.

5. Target Setting
Ecologic Function – Forest Interior

D. Lindblad presented the background information and science to support these targets.

G. Verkade presented the mapping.

S. Voros: thinks it doesn't make sense to look at these on the watershed scale but rather at the same scale as the forest patch size which was at the soil landscape scale.

Suggested target:

10% of the existing forests with interior forest greater than 100m from any edge by soil landscape.
5% of the existing forests with interior forest greater than 200m from any edge by soil landscape.

P. Hubbard asks the group if they agree with the suggested target.

A. Kirkby: knows that agricultural land has been excluded. She thinks this target should be run on the watershed scale.

G. Verkade: explained again that the model will consider this target with all of the others.

D. Kirk: agrees
J. Young: agrees
P. Minkiewicz: agrees
J. Whyte: stand aside
V. Cromie: agrees, thinking about previous discussions around cost.
A. Kirkby: agrees
J. Schonberger: agrees
F. Berardi: agrees
B. Wiens: agrees
J. Potter: agrees

Decision: 10% of the existing forests with interior forest greater than 100m from any forest edge by soil landscape. 5% of the existing forests with interior forest greater than 200m from any forest edge by soil landscape.

Ecological Function – Course Scale Habitat
Wetland Cover

D. Lindblad presented the background information and science to support these targets.

G. Verkade presented the mapping.

A. Kirkby: asked a question about the mapping for those watercourses that have no permanent flow. G. Verkade: explained that there will be some in the dataset since there doesn't need to be permanent flow for it to be considered a watercourse.

Suggested target: 10% of the overall watershed in wetland cover.
6% of each soil landscape in wetland cover.

P. Hubbard asked the group if they agree with the suggested target.

J. Potter: agrees
B. Wiens: agrees
F. Berardi: agrees
J. Schonberger: agrees
A. Kirkby: provided that we consider evaluated wetlands only, agree. Has concerns with the identification of certain unevaluated wetlands. Also has issues with the pre-settlement comparison.
V. Cromie: agrees

J. Whyte: challenge is that target setting is technical. Agrees with a disclaimer that he lacks the technical expertise to represent the Niagara Homebuilders on these targets.
P. Miniewski: understands the logic, agrees
J. Young: agrees
D. Kirk: agrees

Decision: 10% of the overall watershed in wetland cover.
6% of each soil landscape in wetland cover.

Ecological Function – Course Scale Habitat
Wetland Patch Size
D. Lindblad presented the science and information on this target.

G. Verkade: presented the mapping.

Suggested target: 100% of wetland patches greater than 50 hectares by soil landscape.
50% of swamps greater than 10 hectares and less than 50 hectares by soil landscape.
100% of marshes greater than 10 hectares and less than 50 hectares by soil landscape.

P. Hubbard asked the group if they agreed to the suggested target.

J. Potter: agrees
B. Wiens: agrees
F.Berardi: agrees
J. Schonberger: agrees
A. Kirkby: agrees
V. Cromie: agrees
J. Whyte: seems the percentages are arbitrary, doesn't see the value in setting targets for patch size given that all PSW's will be contributing. G. Verkade: this allows us to look at the value of PSW's in relation to each other.
J. Whyte: Agrees subject to the comments and conditions he raised in the constraints setting.
P. Minkiewicz: agrees
J. Young: agrees
D. Kirk: agrees

Decision: 100% of wetland patches greater than 50 hectares by soil landscape.
50% of swamps greater than 10 hectares and less than 50 hectares by soil landscape.
100% of marshes greater than 10 hectares and less than 50 hectares by soil landscape.

Ecological Function – Course Scale Habitat
Wetland- Proximity of Patches
D. Lindblad presented background information related to this target.

G. Verkade presented the mapping.

Suggestion: no target on this.

P. Hubbard asked the group if they were okay with not setting a target.

J. Potter: stated that if we were in a situation where these wetlands relied on only other wetland cover, it would make sense but that isn't the case.

B. Wiens: thinks we should deal with this as we did for forest proximity of patches.
J. Schonberger: agrees
V. Cromie: agrees
P. Minkiewicz: agrees
D. Kirk: agrees

Decision: no target set on this value. Dealt with as a bookkeeping exercise under learning scenarios.

"Bookkeeping": refers to running analysis after the fact.

Ecological Function – Course Scale Habitat
Wetland – Adjacent Upland Cover

D. Lindblad presented the background on this target.

G. Verkade presented the mapping.

Suggested target: 100% of existing natural cover that is immediately adjacent to wetlands within 30m by soil landscape. 50% of existing natural cover within 120m of wetlands by soil landscape.

Other sample target from other NHS projects: 100% of those wetlands that have 75% of existing natural cover within 120 meters by soil landscape. 50% of those wetlands that have between 50% and 75% existing natural cover within 120 meters by soil landscape.

J. Schonberger: asked to clarify the definitions of upland and wetland cover. G. Verkade explained that we are not just referring to trees but also meadow and thicket communities.

D. Kirk: how does the model decide which 50% to include. Is there a spatial component?
G. Verkade: explained that it will consider this target in relation to all of the other targets.

P. Hubbard asked the group if they agreed to the suggested target.

J. Potter: agrees
B. Wiens: agrees
F. Berardi: agrees
J. Schonberger: agrees
L. Hamilton: agrees
V. Cromie: agrees
P. Minkiewicz: agrees in principle but it is a lot of detail.
D. Kirk: agrees

Decision: 100% of existing natural cover that is immediately adjacent to wetlands within 30m by soil landscape. 50% of existing natural cover within 120m of wetlands by soil landscape.

Ecological Function – Course Scale Habitat
Riparian Cover

D. Lindblad presented the background on this target.

G. Verkade presented the mapping.

Suggested Target: 75% of the riparian zone in natural cover by soil landscape.

B. Wiens: does grass count as natural cover?
D. Lindblad: explained that in terms of the habitat value, the length of the grass counts for more under ecologic function than under hydrologic function.

J. Schonberger: are we including municipal drains, etc…? G. Verkade: explained that we have teased out what we could. There are some that still persist.

DATA GAP: we would like to have the typing on the surface water dataset that splits out the different types of features.

P. Hubbard asked the group if they agreed to the suggested target.

D. Kirk: agrees
P. Minkiewicz: agrees
V. Cromie: agrees
L. Hamilton: agrees
J. Schonberger: would support if it only involved real streams. If agricultural drains are involved his Community would prefer that he stand aside.
F. Berardi: agrees
J. Potter: agrees
B. Wiens: agrees

Decision: 75% of the riparian zone in natural cover by soil landscape.

ACTION ITEM: G. Verkade: will bring a visual to the next meeting that shows the dataset and the options for how we might work around some of the issues that persist with the dataset. (natural vs. manmade drainage)

Ecological Function – Course Scale Habitat
Other Habitat Types

D. Kirk: need to be specific about the fact that we are talking about vegetation communities here and not other habitat features. Should be considering these under Fine Scale Habitat.

G. Verkade: should we be considering shorelines as course scale?
The categories that are in the NAI layer as Unique features are, open cliffs, talus slopes, shorelines, bluffs, sand barrens, savannas, and rock barren.

S. Voros: coastal wetlands are mapped by the Great Lakes Commission. NHIC has a rare communities layer as well.

L. Hamilton: does the shoreline include only the natural areas of the shoreline?
G. Verkade: yes

J. Potter: does it also include Lake Ontario shoreline?
G. Verkade: yes.

Suggested target: 100% of the identified unique habitats within the watershed.

P. Hubbard asked the group if they agreed to the suggested target.

D. Kirk: agrees, would like to talk to Lorraine Norminton at Hamilton ReLeaf about how they dealt with this.
P. Miniewicz: agrees
V. Cromie: agrees
L. Hamilton: agrees
J. Schonberger: agrees
F. Berardi: agrees
B. Wiens: agrees
J. Potter: agrees

Decision: 100% of the identified unique habitats within the watershed.

Ecologic Function – Course Scale Habitat
Remoteness

D. Lindblad presented the background information on this target.

G. Verkade presented the mapping and statistics for how far away the natural features are from roads as an example.

D. Kirk: how are unopened road allowances dealt with?
S. Voros: likely not included
L. Hamilton: those unopened road allowances do not show up on our road network layer.

M. Stack: it is important to consider this given the potential influences of humans.

L. Hamilton: if there is anything in the literature that supports less than 2 kilometers than it might make sense to look at an actual distance.

J. Potter: it doesn't make sense to set a target since we are already so fragmented that what is here has adapted if it is going to. Not target worthy but would like it stated that we have a lack of remoteness.
 B. Wiens: not target worthy

Decision: not target worthy but would like it noted that there is a lack of remoteness across the watershed.

Ecological Function – Fine Scale Habitat

D. Lindblad presented the background information for these targets. She presented the data sets that might be available.

D. Kirk: explained that the Guelph district of MNR has merged the Natural Heritage Information Centre (NHIC) database and their own observation database. They have lots of information on specific species related to the kind of work they have been doing in recent years (ie:

herpetofauna). The observation database of MNR Guelph district is more specific than 1 kilometer grids in the element occurrence dataset of NHIC.

S. Voros: further explained the datasets and some of the analysis including hotspot mapping that has happened with that data. There is a lot of data lacking due to issues around access to private property. Should be careful in the way the Element Occurrence data is used.

S. Voros: Fine Scale Habitat is about "Breeding, feeding and movement needs of species".

D. Kirk: there is a heavy emphasis on public lands currently. Niagara is by far the best populated within the Guelph district observation database.

S. Voros: there is very detailed information about what some species need however, the other problem is that our vegetation mapping is not detailed enough.

D. Lindblad: asked S. Voros what other projects did?
S. Voros: other projects have dealt with this as a huge DATA GAP. The pilot projects in the province used the hotspot mapping by MNR.

L. Hamilton: she explained that NPCA finds rare species and Species at Risk (SAR) all the time on private land that have never been recorded before.

J. Potter: asked S. Voros if other projects used climate data to look at the idea of species movement to new areas based on changing climate?
S. Voros: no

M. Stack: related to agricultural lands, there has been a change in the kind of agriculture from fruit trees to grapes for example. Does that have an impact on the kinds of species that are there?
L. Hamilton: yes, but it is species specific.

Suggestions based on what has been done in the other projects (S. Voros):
-list the species of concern (endangered, threatened, species of special concern, S1 to S3 provincially ranked species) within our study area and;
-list the keystone species within the study area (other important species), (Carolinian species, birds of prey) and;
-then recognize that there are inherent biases and limitations to the available data;
-Identify a data gap for the species specific habitat;
-capture a large majority of the habitat within the course scale habitat targets;
-overlay the flora and fauna Element Occurrence data and Guelph District Observation data on the preferred scenario as a bookkeeping exercise.

M. Stack: asked what we are doing differently in Niagara that has led to the increase in raptors for example?
J. Schonberger: explained that the different farming practices used in modern agriculture ie: no till farming [more worms and other soil organisms contributing to food chain] seem to be having a positive impact on wildlife numbers.

L. Hamilton: each development application has to do its own assessment for SAR.

Decision: No target set on this value.

Will follow up on suggestions above.
DATA GAP

ACTION ITEM: D. Lindblad and L. Hamillton: put together the list of species of concern and a list of "keystone" species to be considered.

6. Next meeting:
May 19 – will review decisions from May 5th, introduce Biodiversity Representation with a "primer" presentation, will deal with some housekeeping items related to What-if Scenarios, etc…

June 2 – start Biodiversity Representation

June 29 (WEDNESDAY) – change of date from June 16th. Will be the final meeting of the Scenario Development Team to complete Biodiversity Representation and clear up any loose ends.

<u>7. Reflections on the Day</u>
J. Young: continuity of attendance makes a big difference and helps move us forward. Pleased with the day.
M. Stack: brilliant day
J. Potter: I think I am beginning to see the light at the end of the tunnel
B. Wiens: good discussions, always comes away with new information
F. Berardi: went well today
J. Schonberger: as usual a lot of information and it went well
V. Cromie: went well and great lunch
P. Minkiewicz: good
D. Kirk: challenging to get his head wrapped around a lot of it but good progress today
S. Voros: good progress
G. Verkade: we got through a lot today
D. Lindblad: feeling optimistic about the rest of the project.

Adjournment: 3:40pm

<p style="text-align:center; color:red">APPROVED</p>

Natural Heritage System for the Niagara Watershed
Scenario Development Team

Thursday June 2, 2011
9:00 am – 4:00pm
Ball's Falls Centre for Conservation

Meeting Minutes

Attendees:
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
Austin Kirkby – Niagara North Federation of Agriculture
Henry Swierenga – Ontario Federation of Agriculture
Francesca Berardi – City of Niagara Falls – Area Planners
John Potter – Peninsula Field Naturalists
Valerie Cromie- Niagara River Remedial Action Plan
Donald Kirk – Ontario Ministry of Natural Resources
JoAnne Young – Metis Nation of Ontario
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners
Joe Schonberger – Niagara South Federation of Agriculture
Peter Minkiewicz – Haldimand County
Peter Graham – Walker Industries
Travis Mac Beth – Region of Niagara
Ian Thornton- Ministry of Natural Resources
Mark Buma – Niagara Parks Commission
Silvia Strobl – Ontario Ministry of Natural Resources

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Steve Voros – Ontario Ministry of Natural Resources
Mary Stack – Niagara Peninsula Conservation Authority/ Outreach and Education
Doug Draper – Communications consultant
Tara Metzger – Niagara Peninsula Conservation Authority

Regrets:
Jon Whyte – Niagara Homebuilders Association
Moreen Miller - Ontario Stone, Sand and Gravel Association
Albert Garofalo – Niagara Land Trust
Tony VanOostrom – Ontario Power Generation
Mike Scott – Ontario Stone, Sand and Gravel Association

1. Welcome and Introductions (D. Lindblad, P. Hubbard)
D. Lindblad welcomed everyone on behalf of the Region of Niagara and the Niagara Peninsula Conservation Authority.

The group introduced themselves. They also gave an indication if there was any feedback from their organizations.

D. Draper: asked if it was okay with everyone if photos were taken at this meeting.

A. Kirkby: understands the process. It hasn't been easy for her to make decisions about other people's lands. She does believe that this will end in policy. She is happy that agricultural land is excluded.

D. Lindblad: Leading Edge, Niagara Falls Nature Club, CCC, and kudos for our work.

S. Strobl: today in Ancaster, there is a training going on to resample biodiversity plots that were established in the 1960's and 1970's.

G. Verkade: there is a recommendation in the NAI final report about keeping the data current and we are interested in resampling using the protocol that is being trained in Hamilton.

 2. Review of the Minutes from May 19, 2011.
Actions out of the May 19, 2011 minutes.

L. Hamilton and D. Lindblad to develop a list of Species at Risk and "keystone species" for the process. This will be ready for June 29th.
The list of Species of Conservation Concern is complete and we are working on the List of Keystone species. We will circulate that before the June 29th meeting.

G. Verkade: bring visuals to illustrate how to deal with natural vs. manmade drainage issues in the dataset.

G. Verkade: presented the issues with natural vs. manmade drainage. NAI was captured at a scale of 1:2000. The problem is that the features are not types at a level of detail that it is easy to tease out consistently. He presented several screen captures to illustrate the level of detail in the dataset. He showed that the new info is far better than the old base mapping.

He showed the hydrography data with the digital elevation model.

A. Kirkby: not everything that shows up on the mapping is a stream.
G. Verkade: there is some form of channel there that holds water during some portion of the year.

G. Verkade: laid out how the data is derived but then what we did with it internally at the NPCA to make it more accurate. There are several types laid out in the dataset, G. Verkade has done his best to take out what was anthropogenic.
He explained that if we remove all of the municipal drains we will remove the concerns A. Kirkby has in NOTL but it will remove legitimate surface water features in other parts of the watershed like West Lincoln, Port Colborne, Wainfleet, etc…

P. Hubbard: asked what additional time would be required to remove the ones that make sense to remove.
G. Verkade: it depends on who is willing to help?
L. Hamilton: agreed to help.

J. Schonberger: where he lives, there are no municipal drains but rather ditches constructed by landowners with V-blades, graders, etc. Some of these are picked up in the mapping, others are not. Different maps pick up different ditches.

G. Verkade: we know that the OBM doesn't work, we have remapped and this is some of the best mapping in the Province.

D. Lindblad: how much effort do we want Geoff to put in on this?
G. Verkade: this is a data gap for many of the NPCA's business drivers, we are working on the typing.
The best we can do is work with the agricultural drains and try to tease those out.

A. Kirkby: she believes that the manmade drains should be removed and the road ditches as well.

H. Swierenga: there is a provincial committee that is dealing with drainage issues to standardize municipal drain maintenance going forward. It will be posted on the Environmental Bill of Rights website for comment shortly.

G. Verkade: is willing to look at the municipal drains along with L, Hamilton and if a member of the Agriculture committee could be involved as well.

S. Strobl: how many drainage superintendents are there in Niagara?
L. Hamilton: 6 or 7
J. Schonberger: some municipalities are sharing.
S. Strobl: with such a small group, is it worth having the drainage superintendents have a look? Good knowledge transfer opportunity to the drainage superintendents.
H. Swierenga: what is happening with the provincial committee to deal with drainage will supersede what is decided here.

ACTION ITEM: G. Verkade and L. Hamilton to take on this removal of the manmade drainage where possible. They will contact the drainage superintendents for their input.

*** DATA GAP: typing of the drainage.

G. Verkade: Unique Habitats, bring visual to show where they are.
0.8% of the watershed.
They generally occur along the shorelines and the gorge.

D. Kirk: are we considering dunes?
G. Verkade: dunes are lumped in with shorelines under the approximation of ELC we are using.
D. Kirk: what about talus slopes?
D. Lindblad: they were not in the dominant role in the polygons that were mapped.

D. Kirk: to bring back information about how Hamilton ReLeaf dealt with unique habitats.
D. Kirk: has not been able to get a hold of the Coordinator. Carried forward as an Action Item.

ACTION ITEM: D. Kirk to bring back information about how Hamilton ReLeaf is dealing with Unique Habitats.

G. Verkade: Applying cost to Roadways. What datasets exist?

Two ways to deal with this, the road layer is edge of pavement and the second is the parcel fabric where the road allowances are easy to mine out.
We can use the setbacks that S. Voros has developed for other projects.

D. Kirk: what do we do with unopened road allowances through natural features?
G. Verkade: the unopened road allowances will be removed from the dataset.

H. Swierenga: he cautions farmers all the time to not do maintenance on these unopened road allowances since if the "do maintenance" and someone on an ATV hits a tree, the farmer becomes liable because of the maintenance.

G. Verkade: likes the parcel fabric for the base layer for the cost analysis.

J. Young: that makes sense. This is not a make work project.
B. Wiens: this will not pick up private roads.
G. Verkade: there is a typing in the data that might pick this up. He will do this analysis and let us know.

A. Kirkby: some of the interchanges can be planted, so maybe we should consider these.
D. Lindblad: these are still available to the model but it will be more costly to include them. This is for the cost analysis. It will be more costly for the model to consider these hexagons.

ACTION ITEM: G. Verkade to look at the other possible typing to see if he can glean other data from the data. If it adds value, he will use it. Unopened road allowances will be removed from the dataset.

Decision: assign cost to the road allowances in the MPAC assessment data.
G. Verkade: Applying cost to Rail Lines? What datasets exist?
There are two datasets, the provincial rail layer and the rail features in our large scale digital terrain model.

S. Strobl: many abandoned lines function as corridors.
G. Verkade: There is a provincial layer that also identifies the abandoned lines.

ACTION ITEM: will remove the abandoned lines from the datasets where possible.

Decision: the active lines will be assigned a cost, and the abandoned lines will be available.

Minutes Approved with minor changes.

3. Biodiversity Representation Target Setting
D. Lindblad presented the background on the Biodiversity Representation discussion from the last meeting.
She reminded the group about what we were using as the datasets for these values.

G. Verkade presented the datasets. Wetness Gradients and Texture for soils.
For wetness gradients, Elizabeth Snell's data from the Wetland Extend Guidelines has been modified slightly to get a lower number of combinations.

Soil texture used the Source Water Protection Water Budget Classification for texture.

He combined the two to arrive at the units based on the combination of soil drainage wetness gradient and the generalized texture classification.

He split the landscape into Upland Areas, Mesic Areas and Lowland Areas.

He presented the various combinations of soil types.
He presented the NAI Community Series mapping combinations to be used to develop the biodiversity units for analysis.

He explained that the combinations were created for the types of communities that required soils to infer more diversity like wooded areas and successional communities.

P. Hubbard asked the group if they had any concerns about what was done to arrive at the biodiversity surrogates.

There were no comments.

4. Review of Decisions from May 19, 2011
G. Verkade revisited the decision from the last meeting where the group decided 5% minimum representation for biodiversity representation.

Decision: 5% minimum representation for biodiversity by soil landscape. Where there is less than 5%, the target will be 100% of what exists by soil landscape.

P. Hubbard: asked the group again if there were comments on the way G. Verkade arrived at the dataset.
T. MacBeth: agree
V. Cromie: agree
B. Wiens: agree
F. Berardi: agree, appreciates the work Geoff has done.
A. Kirkby: agree, appreciates what Geoff has done, seems like too many combinations
H. Swierenga: agree, keep Geoff in good scotch whiskey
J. Schonberger: agree
L. Hamilton: agree
M. Buma: agree
I. Thornton: agree
J. Potter: agree, complex situation but this is as good a surrogate as we can ask for at the moment.
D. Kirk: agree, hard to wrap his head around the idea of surrogates.
S. Strobl: it is good, in the absence of better inventory data, this is the best you can do.
All past work like this, they haven't really looked at biodiversity in this way. This is an added thing that you are bringing to the approach.
G. Verkade: this is why we are using this tool for the question of biodiversity.

D. Lindblad: **We are done target setting**

5. Revisiting the What-if Scenarios?
The group looked at the What-if Scenarios on the board and determined how we would fit them into a What-if Scenario.

Baseline 1 – excludes agriculture and aggregates and urban areas.

Baseline 2 – applies cost to agriculture and aggregates and urban areas.

What-if #1: Provincial Significant Wetlands
Decision: Remove the Included status from the PSW's.

What-if #2: Best of the Best with Boundary Length Modifier removed
Decision: Best of the Best including the boundary length modifier and run with the targets only.

What-if #3: Best of the Best with Boundary Length Modifier Intact.
Decision: Best of the Best with the boundary length modifier intact.

"Boundary Length Modifier" refers to how clumped the features are.

What-if #4: Best Half of What is Left
Decision: Best Half of What We Have Left

P. Hubbard: asked the group for their thoughts on what else they want to consider as a what-if.

V. Cromie: is thinking about the roads where they are not assigned a cost. This helps answer the question about remoteness.
J. Young: it is theoretical right now, hard to envision now what might jump out once we see the learning scenarios.

What-if #5: No Cost for Roads.
Decision: No cost associated with roads.

D. Kirk: would like to see cost assigned of utility corridors.

What-if #6: Cost to utility Corridors.
Decision: Assign cost to utility corridors.

What-if #7: Targets to Whole Watershed
Decision: Assign targets for entire Study Area vs. the soil landscapes.

Overlays for Bookkeeping exercises
Big Picture Carolinian Canada
Land Care Niagara

Potential What-if for Future Iterations of this Process:
Run on 1 hectare hexagons instead of 5 hectare hexagons.
F. Berardi: could this be run with smaller units on a smaller area for example by a particular municipality?
G. Verkade: this could be done after the fact. The outputs would be different and would have to be used differently.

F. Berardi: does anything we have so far show us if everything is tied to the hydrologic system? Does everything overlap with hydrology?
S. Strobl: this is a good point. An interesting what-if to explore.

What-if #8: Course scale Ecological Function Targets only
What-if #9: Hydrological Function Targets only
What-if #10: Biodiversity Targets only

J. Potter: the issue of growth has come up over and over again. Is it possible to look at an increase in the urban areas as a what-if?
F. Berardi: it would not make sense to just add onto the current urban area. That is not consistent with the pattern of growth that will occur.
T. MacBeth: there will not be an expansion beyond the existing urban boundaries for the next 20 plus years.
D. Lindblad: we will be looking at this under the current baseline constraints we have set for Urban Areas and Greenfields.

6. Lingering Issues

The Next Phase of looking at Learning Scenarios
D. Kirk: when we look at the end results of the learning scenarios, what is the process for arriving at a preferred scenario?
G. Verkade: the model will run approximately 100 runs per scenario, we use statistical analysis to bring back to the group the statistically different runs for the baselines and some of the what-ifs.
D. Lindblad: the management team will develop a primer before we delve into the discussions around the learning scenarios.
P. Hubbard: we will revisit what consensus means and how we use it in the next phase.

S. Strobl: explained the need to have the maps and the province has the templates.
I. Thornton: a brief summary that leads the group through the process of the scenarios would be helpful.

A. Kirkby: the Greenbelt Natural Heritage System is excluded?
D. Lindblad: we did not set a constraint around the Greenbelt.
B. Wiens: the model will only consider the natural features.

V. Cromie: asked what the Steering Committee does?
D. Lindblad: they only meet at project milestones and will be looking at the Communications Plan.
D. Draper: we are close to taking the Communications Plan to the Steering Committee.

J. Young: can the scenario mapping, etc, be sent to us digitally?
G. Verkade: these can be put up on the ftp site.

A. Kirkby: is the Scenario Development Team going to be reviewing the Communications Plan and Products?
D. Lindblad: yes and it is finalized by the Steering Committee.

V. Cromie: what will the final report look like?
D. Lindblad: introduction and background with series of fact sheets on how we arrived at the targets we set and the final outcomes in the learning scenarios and the preferred scenario.

P. Hubbard: the issues and conflicts will be presented as well.

D. Lindblad: will have a draft report for the fall meetings.

Project Name Suggestions
-Naturally Niagara: connecting people and places
-Natural Heritage Niagara: the foundation of our Peninsula
-Nature for our Future or, Nature for Niagara's Future: understanding how Niagara's natural areas work together
-Niagara Natural Areas Assessment
-Naturally Niagara

7. Next meeting

June 29 (WEDNESDAY) – meeting cancelled.

September and October – learning scenarios.
Thursday September 8th and Thursday September 22nd.
Thursday October 13th and Thursday October 27th.
** a venue with live GIS required, TBA.

8. Reflections on the Day
M. Buma: excited that tis part is done and am looking forward to seeing maps.
L. Hamilton: Geoff rocks and he will be a busy man
D. Kirk: can't believe we are at this point, Geoff and Deanna have done a great job.
I. Thornton: looking forward to the fruit of our labour, congratulations!
J. Schonberger: One stage done, more to come. Looking forward to seeing the scenarios.
H. Swierenga: this is an interesting process, he has the luxury of being part of Hamilton as well.
A. Kirkby: is nervous and glad we are done this part. Looking forward to seeing what comes back.
V. Cromie: this has been an interesting process and have learned a lot about the concerns around the table. Good job. Looking forward to results. Hoping that there are allowances made to update this periodically.
B. Wiens: happy we are at this part, looking forward to the walk, it's a good treat. Looks forward to the next stage.
J. Young: looking forward to September when all of this is visual. The pros and cons will be easier to see and what is most appropriate.
D. Draper: as a person who has been a reporter for 32 years, I have watched a lot of agencies go through various processes and develop programs, and not all of them believe in public consultations. He has been impressed at what we have done and he thinks that other agencies should look at what we have done here and learn from it.
T. Metzger: getting revved up, looking forward to running the scenarios.
G. Verkade: glad people are understanding him now, we have to make sure that the chief product of this is information and we have to get it in a form that it can be used. The report is just as important as crunching the results.
D. Lindblad: I am proud that we did what they said we couldn't do in a year, good job.

S. Strobl: congratulations for getting to this point. You have done what other groups did, it is tough at the beginning and then the group gels and the next part is easier and maybe even fun!
F. Berardi: very visual and is looking forward to seeing the scenarios.
P. Hubbard: watching you come together has been great. You did exactly what was expected from you in the consensus model. Congratulations!

Adjournment: 1:07pm
***The Group took a celebratory walk!!!!!

<p style="text-align: center;">**APPROVED**</p>
<p style="text-align: center;">**Natural Heritage System for the Niagara Watershed**
Scenario Development Team</p>

<p style="text-align: center;">**Thursday September 8, 2011**
12:00 pm – 4:00pm
200 Division Street, Welland</p>

Meeting Minutes

Attendees:
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
Austin Kirkby – Niagara North Federation of Agriculture
Henry Swierenga – Ontario Federation of Agriculture
Francesca Berardi – City of Niagara Falls – Area Planners
John Potter – Peninsula Field Naturalists
Donald Kirk – Ontario Ministry of Natural Resources
JoAnne Young – Metis Nation of Ontario
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners
Joe Schonberger – Niagara South Federation of Agriculture
Peter Minkiewicz – Haldimand County
Peter Graham – Walker Industries
Travis Mac Beth – Region of Niagara
Mike Scott – Ontario Stone, Sand and Gravel Association
Ian Thornton- Ministry of Natural Resources
Mark Buma – Niagara Parks Commission
Jon Whyte – Niagara Homebuilders Association
Valerie Cromie- Niagara River Remedial Action Plan

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Mary Stack – Niagara Peninsula Conservation Authority/ Outreach and Education
Doug Draper – Communications consultant
Tara Metzger – Niagara Peninsula Conservation Authority

Regrets:
Albert Garofalo – Niagara Land Trust

1. Welcome and Introductions (P. Hubbard)
P. Hubbard welcomed everyone on behalf of the Region of Niagara and the Niagara Peninsula Conservation Authority.

The group introduced themselves. They also told the group what they did this summer.

J. Young: Metis Nation of Ontario is excited to see the results. Spent some time this summer in a remote area with little technology.

M. Scott: got engaged this summer. Looking forward to the results.

P. Graham: excited about the possible uses of the information from this project. Spent time at the cottage.

T. MacBeth: interested to see the results.
The Region understands that this is not policy and that will still need to be worked out.

J. Whyte: no vacation, worked all summer. Interested to get back into the process.

B. Wiens: presented an update to the area planners. She and F. Berardi did a power point presentation on constraints and targets. At the end, there was a discussion about what the deliverables are and how the info would be used. The area planners were concerned about this leading to policy. Greenfield areas need to accommodate the infilling the municipalities are responsible for.

The concern is the reliability of the data we used to set constraints.

As the scenarios get developed, area planners would like to review them. They want to see the finished product.

A. Kirkby: going to be a grandma again. Still dealing with the damage that the greenbelt has done to her community.

J. Schonberger: Late planting due to rain followed by drought, another normal year down on the farm, waiting to see results

H. Swierenga: waiting

V. Cromie: extending summer to go to the Mediterranean to celebrate her birthday. RAP is close to a draft report on the Beneficial Use Impairment - Habitat document.

J. Potter: 4th grandchild came this summer.

P. Minkiewicz: took a group of 14 year old girls to a soccer tournament in Virginia Beach. Preparing a report to council about outcomes of this project.

L. Hamilton: went to Maine this summer.

D. Kirk: spent time on the Bruce Peninsula.

I. Thornton: put up a tire swing for his kids and they love it.

T. Metzger: beach breaks and data crunching.

G. Verkade: bought a pool, working on data.

D. Lindblad: spent time with the kids and at the cottage. Cannot wait to see some scenarios.

D. Lindblad gave the group a quick update on the Steering Committee meeting this morning.

2. Review of the Minutes from June 2, 2011.
Minutes approved with minor changes.

Actions out of the June 2, 2011 minutes.

L. Hamilton and D. Lindblad to develop SAR list and list of keystone species.
This is done but still needs to be circulated.

G. Verkade and L. Hamilton to take on the removal of the manmade drainage where possible.
G. Verkade and L. Hamilton removed as many of the manmade drainage as possible from the dataset as suggested.

D. Kirk to bring back info about how Hamilton ReLeaf dealt with unique habitats in this NHS.
According to their GIS specialist, the polygons from GIS layers are not using the rare habitat occurrence data since they are point form from NHIC. Still a data gap.

G. Verkade to look at the other possible typing of roads.
He looked at this and decided to use a buffer instead of the parcels.

G. Verkade to remove abandoned rail lines.
Done

3. Learning Scenario Primer, D. Lindblad
D. Lindblad walked the group thorough a presentation on what we will be considering for each learning scenario, what mapping we will be looking at, what the mapping means and what decisions will need to be made on each scenario.

The group discussed that it is difficult still to comprehend what we will see but they are ready to give it a try.

4. Follow up on Decisions on data
G. Verkade took the group through the technical status update.

Data crunching for model inputs is complete.
Model calibration is commencing this coming week.

He also went through his action Item follow-ups.

-Refined the surface water inventories by removing the anthropogenic features.
-Refined headwater areas and removed the areas that overlap the built boundary and municipal drains. He also removed 1st order streams that drained into anything greater than a 2nd order stream. This removed many that are not truly headwaters.

Model Input Preparation Review
G. Verkade stated that the Scenario Development Team made decisions on somewhere around 20-30 targets. That translates into 750 individual target values and then multiply that by 10 scenarios. This equals 7500 individual values.

Biodiversity Representation alone is approximately 300 targets. This is without the bookkeeping exercises that will come after the scenarios.

Extended Context Area
G. Verkade: Explained to the group that we need to consider a bit of a buffer outside of the study area to ensure linkages to other NHS's. It will not have the same number of targets but more high level. Our NAI didn't go into this buffer area so we used the provincial SOLRIS data for these targets.

G. Verkade: also explained the concept of **Base Cost.** It represents the inverse of the amount of natural area within a hexagon.
Less natural area means that that hexagon should cost more to include in the scenario.
The Socio-political costs that were decided on are then added on top.
He showed the map representing this base cost.

P. Graham: brought up the deposits mapping through ARIP that was given to the management team early on in this process. The decision to exclude these deposits is not reflected in the mapping.
ACTION ITEM: D. Lindblad to double check the decision that was made on this April 7, 2011, page 8.

**** <u>Minutes taken by L. Hamilton</u>

Some confusion in the group over the hexagon mapping of cost because it looks so much like hexagon mapping of natural features.
-
Discussion regarding cost mapping – only cells with 50%+ will be counted – this was confused with 50%+ natural features mapped back.

ACTION ITEM: Group required clarification on this concept.

G. Verkade: showed demonstration maps of available, preferred, included, excluded areas for the 2 baselines to demonstrate significant differences.

<u>5. Review of What-if Scenarios</u>

G. Verkade: reviewed each What-if Scenario one by one.
We can reconsider some scenario configurations if we want to at this point.

T. Metzger: noted that we should disregard the "na" next to BruceTrail ownership on the matrix.

<u>6. Reflections on the Day</u>
P. Hubbard asked the group for their reflections on the day.

T. Metzger: Look over excluded areas to see what's available for Marxan to pick from, there will be big difference.
I. Thornton: Interested to see how sensitive the maps will be to our targets.
D. Kirk: It's hard to grasp hexagons and how they relate to the actual features. He wonders whether personal bias will affect how we each look at the maps quantitatively.

G. Verkade: A lot of our outcomes may look similar. In eastern Ontario they have twice as much natural area and they still needed 90% of it to meet their targets.

J. Potter: Same as Don – he is biased to consider the areas he is directly familiar with.

G. Verkade: Showed the group the "swipe tool" of available, excluded, preferred, etc relative to natural features.

V. Cromie: Excited to see the no constraints (best of the best) map and the Welland River area.

H. Swierenga: Likes Baseline 1 (referring to wall map).   Keep in mind, what if roles were reversed and this was the Niagara Agricultural Heritage System Project?

J. Schonberger: Dazed and confused. We don't do this every day and it's outside normal life experience, needs to see the results to wrap his head around it.

A. Kirkby: With each thing we see, things become clearer. She will get detailed maps (water features) from G. Verkade to check over and next time will have comments on them. She supports Baseline 1 (referring to wall map) and has real concerns if it is not picked.
She asked if the Scenario Development Team will review the communications flyer?

M. Stack: Yes, the steering committee is making changes, if the SDT group has changes, send them to M. Stack, she prefers to circulate the flyer now and have all comment now rather than produce a draft after the steering committee comments and then another draft after SDT comments, if this doesn't get finished soon it's not going to happen.

P. Hubbard: D. Lindblad will need to circulate the flyer (/brochure/pamphlet?) now to the group so we can comment.

ACTION ITEM: D. Lindblad to circulate to the group for comment

[A general offer was made by P. Hubbard for G. Verkade to go over maps in more detail with individuals if they want, just contact G. Verkade]

B. Wiens: It's starting to come together and she can see some of the results of our decisions, the baselines and what if's will show how these things come together. Concerned about the effect this has had on G. Verkade over the summer!

J. Whyte: Nothing to add. Nothing was made any clearer. Expected to see maps today, this is just rehashing the suff.

F. Berardi: Happy with what we did today.

T. MacBeth: Clarified BLM ????? with G. Verkade.

M. Buma: At the area planners meeting it was like the spring all over again. Nothing to add, looking forward to seeing the maps. Concerned that the Legends Golf Course is included so he will resolve this with G. Verkade and T. Metzger. This is difficult to explain in non-technical terms.

M. Stack: nothing to add.

D. Draper: This is very useful to help M. Stack with communications. Everything becomes clearer on the drive home.

P. Hubbard: asked D. Draper how easy will this be to translate into plain language?

D. Draper: A challenge, this is a complex and multidimensional project, that's why he needs to be here.

P. Graham: Thought his engineering degree would help!

M. Scott: Clear as mud. Maps will make a lot more sense. Scared because this is starting to make a lot more sense. Excited to see the best of the best map and then applying reality will be helpful.

7. Next meeting
October 13, 2011

Things needed:

- Guidelines for what to consider for each scenario – on the wall or a handout.
- Colour mapping.
- Access to live GIS.
- Matrix of "master inputs for Niagara NHS modeling scenarios" updated.
- Time to look at the wall maps up close before we have our discussion, G. Verkade will summarize each for us.
- Then we will have a discussion and go through the decision scenario.
- Maps in advance would be helpful if possible – G. Verkade can't guarantee this.
- 11" by 17" maps for everyone might be helpful too.

Natural Heritage System for the Niagara Watershed
Scenario Development Team

Thursday October 13, 2011
9:00 am – 4:00pm
200 Division Street, Welland

Meeting Minutes

Attendees:
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
Austin Kirkby – Niagara North Federation of Agriculture
Henry Swierenga – Ontario Federation of Agriculture
Francesca Berardi – City of Niagara Falls – Area Planners
John Potter – Peninsula Field Naturalists
Donald Kirk – Ontario Ministry of Natural Resources
JoAnne Young – Metis Nation of Ontario
Joe Schonberger – Niagara South Federation of Agriculture
Travis Mac Beth – Region of Niagara
Mike Scott – Ontario Stone, Sand and Gravel Association
Jon Whyte – Niagara Homebuilders Association
Danielle DeFields – Region of Niagara

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Steve Voros – Ontario Ministry of Natural Resources
Doug Draper – Communications consultant
Tara Metzger – Niagara Peninsula Conservation Authority

Regrets:
Albert Garofalo – Niagara Land Trust
Ian Thornton- Ministry of Natural Resources
Mark Buma – Niagara Parks Commission
Peter Minkiewicz – Haldimand County
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners
Valerie Cromie- Niagara River Remedial Action Plan
Peter Graham – Walker Industries
Mary Stack – Niagara Peninsula Conservation Authority/ Outreach and Education

1. Welcome and Introductions (P. Hubbard)
P. Hubbard welcomed everyone on behalf of the Region of Niagara and the Niagara Peninsula Conservation Authority. She walked the group through an exercise about putting their fears and positions in an imaginary backpack and closing it up. By packing these away, she explained that we can move forward in this decision making process with an open mind and a good spirit. She asked the group to keep on the table their hopes and interests.

The group introduced themselves and gave an update from their respective organizations.

D. Kirk: also involved in another upstarting NHS in Huron County.

S. Voros: nothing new

J. Whyte: nothing new will be updating his group as we move into the mapping phase

T. MacBeth: nothing new

D. DeFields: new to this group representing the Region of Niagara

J. Schonberger: told the group that Deanna and Geoff presented the project to the Niagara North Federation of Agriculture meeting last night. They would still like to see agricultural land excluded. Their interest is about farming on the land and not being replaced by natural systems. Natural Heritage System means something very specific to the folks in the agricultural community.

J. Potter: nothing new

D. Draper: nothing new

A. Kirkby: from meeting last night at Niagara North Federation of Agriculture, there is still fear. They don't have a problem with the identification of natural heritage features if that is all this project is but are opposed to any future policy that will recommend the restoration or enhancement of natural areas that will impact their ability to farm.

L. Hamilton: updated the NPCA planning and regs staff, they had a discussion about it, but there are no comments at this point.

J. Young: presented our progress to her group in September

M. Scott: keeping group updated and they are now involved in a similar project in Kawartha. Will present to their land use committee next week. Brought copies of their new publication including articles on rehabilitation and species at risk for our group.

H. Swierenga: given the results of the meeting last night he is still looking for a positive conclusion to this process for agriculture.

G. Verkade: looking forward to today. Let's not think about preferred scenarios now but this stage is about learning about the landscape from the scenarios.

T. Metzger: this is just the beginning of the scenarios. Lots of output to consider.

D. Lindblad: happy we are here and let's get going.

P. Hubbard reviewed the shared vision with the group and asked them to keep that front of mind as we move forward.

2. Review of the Minutes from June 2, 2011.
Minutes approved.

3.Presentation on Vision/Objectives of Project (P. Hubbard)

a. P. Hubbard walked the group through the agenda for the day.
b. D. Lindblad explained the evaluation form and how we will use it to assess the scenarios.

4. Baseline Scenarios (G. Verkade)
G. Verkade took the group through the technical status update.
He explained the calibration process and the generation of statistics.

He explained that the hexagon outputs were mapped back to the footprints of the natural areas to give a better spatial sense. We heard from our last meeting that this group would appreciate being able to see the footprint of the natural features.

Cluster analysis was performed but decided to run with the "best solution" in each case due to lack of differences in the spatial variation of the results.

He gave an example of the hexagon outputs and an example of the concept of selection frequency.

S. Voros: clarified for the group the selection frequency concept. He explained that if a hexagon is selected more than 80 times in 100 runs of the model, it contains features that are more important to meeting our targets than hexagons that are not selected that frequently. We have broken them down in high importance, medium importance, and low importance.

G. Verkade: walked the group through the NAI base map and the Cumulative Abundance of Target Values base map (Ancillary Map 1 and 2).

S. Voros: we have identified different target values and the second ancillary map helps to look at the potential for the richness or cumulative abundance within the hexagons. These are mapped on a colour scale. It gives an idea of the relative importance of the hexagons prior to running the model.

a. Baselines One and Two
G. Verkade walked the group through Baseline One – Constraint Approach to Agriculture, Aggregate and Urban Lands.

He explained conceptual targets vs. active targets.
Conceptual targets are the ones set by the group.
Active targets include the default targets of 100% where we were short of meeting the target the group set.

727 targets were set.
407 were deficient.
55% of the targets that were identified are by default set to 100% because we fall short of the targets set by the group.
That means that in the other 45% of the targets is the only place the model has the ability to evaluate further.

H. Swierenga: this only considers the environmental and not the economic and socio-political condition.

G. Verkade: Explained that that is not true since the baseline is an honest assessment of what is there so that we can compare back to it. It includes the constraints that were set by the group.

S. Voros: the baseline reflects *what is* on the landscape…the most current natural areas information, the best science, and the current legislative condition. The preferred scenario is different in that it may or may not turn out to be one of the baselines. The baseline is the reference.

A. Kirkby: we have to look at what we are deficient in and realize there is a trade-off with agricultural lands in that there are benefits provided by agricultural land and crops grown. The land is porous and provides unused water to municipal drains and watercourses to benefit the aquatic species. The land provides unhindered movement for species. The crops provide benefits to the environment in that they take carbon dioxide and give off oxygen. That needs to remain paramount in everyone's mind.

S. Voros: He clarified for the group that the best available science was used.

D. Lindblad: reminded the group that she did extensive literature reviews to present the group with the best available science.

b. c. Evaluation of Baseline One and Baseline Two

The group had the chance to look at the large wall maps for Baseline One and Baseline Two. They split up into groups of 3 or 4 and discussed their thoughts on the two baselines. The groups were switched up part way through to allow them to have discussions with different stakeholders in an effort to hear and understand varying perspectives. They worked through the evaluation forms as individuals and recorded their thoughts on each.

They came back together as a large group to discuss the highlights of their discussions.

G. Verkade presented statistics to the group about the performance of the two baselines in relation to each other. Baseline two performs twice as well as baseline one in relation to the targets set by the group.

ACTION ITEM: graph the statistics as part of the summary for next meeting.

Group was asked to present their concerns and difficulties with the information presented.
- information is unclear;
- information was unbelievably complex;
- need a degree to interpret; difficult to understand;
- need more detail on maps (urban boundaries, roads);
- dark green and black are hard to see the difference.

T. MacBeth: talking with L. Hamilton, Baseline One seemed to not have enough data for evaluation in areas. It has excluded too much and we cannot properly assess it.

S. Voros: asked, are you suggesting that it might be an over exaggeration of what is exiting on the landscape?

H. Swierenga: what is lacking is an accurate depiction of what is actually going on in agriculture. Even in his own woodland, it is not accurate. It is not a true picture since it used soils mapping only as the surrogate for agricultural mapping.

D. Lindblad: maybe Baseline One is not a Baseline but rather a What-if?

L. Hamilton: how do we know truly how much woodland we have if we have taken most out through exclusions under Baseline One? It doesn't give us good statistics. This is not a full enough dataset.

A. Kirkby: not surprised at what it looked like because she knows where the woodlots are in NOTL. She could see that there are areas of woodland that are excluded. What is the percentage of agricultural land in these baselines?
G. Verkade: showed a map that illustrated the agricultural lands in the watershed. He will prep a statistic for the next meeting.

ACTION ITEM: G. Verkade: to run statistics on percentage of agricultural land in each baseline and what is excluded.

D. Lindblad: explained that there are statistics that we cannot run under Baseline One. An example would be we cannot look at what contribution agricultural lands (agricultural capable soils with natural features on them) are making to the overall system. We can't run those stats because we have excluded them under Baseline One.
A. Kirkby: we are under our targets in both Baselines. Baseline 2 includes the agricultural land so the calculation of the percentage of agricultural land should be no problem to calculate.

T. MacBeth: along the canal, there is a large amount of natural area. I would guess that some of that is brownfield. These areas might need significant remediation. It seems to be a significant contribution.
D. Lindblad: it had to show up as a natural area in the air photo to be mapped as such in the inventory.
J. Schonberger: that makes sense as there are large tracts of woodland there.
G. Verkade: showed a map of what we canal lands look like in the NAI.

G. Verkade: there is no real wiggle room when looking at the science objectives in either scenario. Unless we drop the targets knowing we are moving away from what science tells us is needed for a healthy system.

P. Hubbard asked the group what they thought of Baseline Two
L. Hamilton: was amazed how it had to pick up even little areas of green to meet the targets. It looks like the hedgerows are picked up.
G. Verkade: explained that the hedgerows show up as a result of an intersect in the mapping, we did not run with hedgerows in the dataset. They are not counted towards the targets.

A. Kirkby: has trouble with the successional areas being picked up since they could be planted in agricultural crops next year. She does not believe that all of the successional areas have been field verified.
H. Swierenga: using soil types to determine agricultural lands is an issue.

P. Hubbard asked the group if Baseline One meets our collective vision
D. Kirk: it does not meet the vision. We are removing too much without giving it a chance.

J. Whyte: depends on your point of view. Socio-political is part of the shared vision.

J. Young: in Baseline One, it is placing more emphasis on the economic constraints. This is not necessarily not meeting the vision. Baseline Two seemed to be focusing more on the natural environment. It doesn't matter which one we use, we are not meeting the targets.

J. Schonberger: the baselines were developed by consensus of this group so they both meet the vision. We shouldn't be surprised that we didn't meet the targets. We thought we wouldn't.

L. Hamilton; we are looking at the green and asking ourselves if this balances. Using only the green areas it is hard to see what the others look like on the landscape, maybe it does balance.

P. Hubbard asked the group if Baseline One is truly a Baseline or a What-if?
L. Hamilton: it makes more sense to compare back to a full dataset. Baseline One is not a full dataset.
M. Scott: wants to understand how if we go to Baseline Two, how does that affect the comparisons?
G. Verkade: it is a baseline for comparison not the preferred scenario.
S. Voros: going forward, any what-if will show less that the baseline in the final solution if we use Baseline Two, if we use Baseline One, the scenarios will show more than the baseline in the scenarios.
D. Lindblad: remember the outputs are more than the mapping. The database gives us tonnes more information about each hexagon and the contribution of those features.

H. Swierenga: leaning towards a made in Niagara solution. The peer review of the science on How Much Habitat is Enough, "you can drive a truck through that science". What-if scenario for agricultural lands might make sense.

D. Kirk: wants one baseline, Baseline Two

J. Whyte: not sure how he feels at this point. He would like to see the urban area boundary lines on the map so he can assess the true implications. Until he sees that not sure which one he can agree to.

ACTION ITEM: G. Verkade to put urban boundaries on the mapping for next meeting.

F. Berardi: thinks we should go with Baseline One since it includes our constraints rather than trying to come at it the other way.

T. MacBeth: cannot assess a lot of area with Baseline One but that is the constraints. Maybe we should run with Baseline Two.

D. DeFields: here to listen and not ready to comment.

J. Schonberger: really liking Francesca's suggestion of going with Baseline One. Both were developed by consensus so maybe run both.
S. Voros: which scenario is the group most comfortable with using as the comparison?

J. Potter: doesn't make sense to run with two baselines. Leaning towards Baseline One right now.

A. Kirkby: Depends on what the collective vision is. If it includes a vision to restore or enhance natural features despite the fact that this would negatively impact farming operations then this is not the vision that she supported. She supported only the identification of the natural features. She supports Baseline One.

L. Hamilton: to clarify, adding to Baseline One or subtracting from Baseline Two. She doesn't see where we would be adding to Baseline One. Likes a fuller dataset to choose from. Prefers Baseline Two.

J. Young: not enough info right now to choose one or the other. Likes to see the boundaries of aggregates, agriculture, etc…. that helps to see the balance. Maybe at the end of the day she will be in a better position to choose one. Doesn't think she likes the thought of two baselines because it will hard to keep it all straight in her head.

5. Learning Scenarios
G. Verkade: reviewed each Learning Scenario with the group.
The group compared What-if Two and What-if Three to each other and some variations related to costs associated with the Baseline Scenarios.

What If Two: Best of the Best Half; No BLM (Clumping factor), No Costs, No Constraints
What If Three: Best of the Best Half: with Clumping Influence
These two scenarios are used to inform the group about how the modeling parameters work.
S. Voros: clarified for the group what the model is doing in each case.
These are for reference.

What If Three: Variation 1: Best of the Best Half with Baseline One Costs
What If Three: Variation 2: Best of the Best Half with Baseline Two Costs
These represent the Best of the Best Half of what exists without constraints but costs layer is still in.

What If Four: Best Half of Baseline One
What If Four: Best Half of Baseline Two
These represent the Best Half of what exists with constraints in.

Suggestions for changes to the mapping:
Urban boundaries, roads need to be added.
Aggregate lands, urban lands, agricultural lands should be shown on map.
Three shades of greens are hard to distinguish.
Dark Green and black are hard to distinguish.

G. Verkade, S. Voros, T. Metzger, and D. Lindblad tried to help clarify for the group what the scenarios we are looking at are actually telling us.

There are 3 kinds of scenarios we are considering in this process:
Baseline Scenarios: what is compared back to;
Learning Scenarios: the what-ifs that we use to learn about the landscape;
Preferred Scenario: what we can agree to.

There was much discussion about how confusing this is and how much information this is.
D. Kirk: referred to the "boggle factor".

P. Hubbard asked the group if we could agree to a baseline to help reduce the complexity of what we need to compare.

J. Young: before lunch she was leaning towards Baseline One due to the constraints already being in place.
She is now thinking that Baseline Two makes more sense since the constraints will be layers that will be laid on. It is a fuller picture.

G. Verkade: we look at the extremes and then we dial back targets, and look at ways to have the model assess the targets. Maybe what we end up with is the backbone of a natural heritage system.

We could look at 50% like we did today and then we can look at 60%, 70%, 80% of the targets with the constraints to see how they look visually in terms of their spatial distribution. We can look at the statistics of the amount of natural areas, the land base and the percent of the targets that are met for each scenario. This might help us decide where we need to be for a preferred scenario.

J. Young: when agricultural land is excluded based on soil type, it is not reflective of what is truly there and it limits the comparison.

G. Verkade: by using Baseline One we are essentially doing what has been done in the past, using a feature based approach and in fact we have dumbed it down by using the hexagons for simplicity. We have limited the ability of the model to do its job.

Thoughts on which baseline to run with going forward.
J. Young: Baseline Two is the best tool for comparison.

L. Hamilton: Baseline Two more available for statistical analysis and for choosing better areas and good clumping analysis.

A. Kirkby: Baseline One, being a farmer representing Niagara North she knows the number one priority of the agricultural land is to grow crops not to restore or enhance natural features that will negatively affect the crops grown.

J. Potter: it has become clear that what Marxan is doing is trying to improve efficiency.
Baseline Two is a more efficient way to go as a baseline.

J. Schonberger: Baseline One on the general principal of it with the understanding that nothing is off the table and so it really doesn't matter which one we use. "If it goes with the other way I promise not to jump off a bridge".

D. Defield: needs more time with both of the maps. Keep going with both.

T. MacBeth: needs more time as well. Won't hold up the process.

F. Berardi: not sure of the advantage of both.

S. Voros: explained that it is about which one makes the most sense in terms of comparison. If we go with Baseline One, it is about what we want to add to it. If we go to Baseline Two, it is about what we can take away.

F. Berardi: she is thinking that Baseline One seems more simple. She is also concerned with the inclusion status of PSW's (Provincially Significant Wetlands).

S. Voros: we are trying to represent what-is with the Baseline.

G. Verkade: we will get to the same result either way but as an assessment of the NAI, Baseline Two is a better way to do that.

H. Swierenga: in the natural heritage policy provincially allows for the exemption of agriculture.

J. Schonberger: There is provision under the Region's Tree and Forest Conservation Bylaw to clear woodland for agricultural use provide the land is zoned agricultural and crops are planted within 3 years and the land is not a" sensitive natural area" as defined   Most of the woodlands are now PSW's or under Greenbelt or escarpment regulation so the exemption is lost as is the own use provision. Agrees with L Hamilton that there has also been rezoning

F. Berardi: either way is okay with her.

J. Whyte: Baseline One instinctively since it excluded built urban areas, that's why he is here. It is the only assurance he has at this point that urban areas will be excluded.

D. Kirk: Baseline Two makes more sense as a starting point even if it means reductions in certain areas. Baseline One is not the what is. The footprint mapping will be such that agricultural areas will still be protected.

M. Scott: Baseline One, 6 of one and half dozen of the other.

H. Swierenga: Baseline One based on the previous conversations.

G. Verkade: if we run with Baseline One, only 9% of the study area is available for comparison. Only 9% is not locked down as either included or excluded. We would have to remove the exclusions in order to run any further analysis. There is no point in pushing the button on the model.

P. Hubbard: to add to Baseline One, we have to remove constraints, in order to add to Baseline Two, we can adjust targets.

Decision: We are leaning towards running with both Baselines.
Decisions is deferred until the next meeting.

6. Review of What If Scenarios
G. Verkade suggested that we not run the "No Cost to Roads" and "Cost to Utility Corridors" Scenarios. They won't make a difference to the end results.

Other What-Ifs to Consider:
-PSW Available
-No Distribution
-Ecological Functions Only
-Hydrological Functions Only
-Biodiversity Only
-play with percentages of what is left
-proportions relative from our targets

ACTION ITEM: D. Lindblad: will send a list of the what-ifs remaining for the group to make any further suggestions.

Parting advice to Geoff, get some sleep!

8. Next meeting
October 27, 2011

<p style="text-align:center">**APPROVED**</p>

Natural Heritage System for the Niagara Watershed
Scenario Development Team

Thursday October 27, 2011
9:00 am – 4:00pm
200 Division Street, Welland

Meeting Minutes

Attendees:
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
Austin Kirkby – Niagara North Federation of Agriculture
Henry Swierenga – Ontario Federation of Agriculture
Francesca Berardi – City of Niagara Falls – Area Planners
John Potter – Peninsula Field Naturalists
Donald Kirk – Ontario Ministry of Natural Resources
Joe Schonberger – Niagara South Federation of Agriculture
Mike Scott – Ontario Stone, Sand and Gravel Association
Jon Whyte – Niagara Homebuilders Association
Ian Thornton- Ministry of Natural Resources
Mark Buma – Niagara Parks Commission
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners
Valerie Cromie- Niagara River Remedial Action Plan
Jarmo Jalava – Carolinian Canada Coalition

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Steve Voros – Ontario Ministry of Natural Resources
Tara Metzger – Niagara Peninsula Conservation Authority
Mary Stack – Niagara Peninsula Conservation Authority/ Outreach and Education
Doug Draper – Communications Consultant

Regrets:
Albert Garofalo – Niagara Land Trust
Danielle DeFields – Region of Niagara
Travis Mac Beth – Region of Niagara
JoAnne Young: Metis Nation of Ontario
Peter Minkiewicz – Haldimand County

1. Welcome and Introductions (P. Hubbard)
P. Hubbard welcomed everyone on behalf of the Region of Niagara and the Niagara Peninsula Conservation Authority.

The group introduced themselves and gave an update from their respective organizations. They updated the group with any feedback from their respective organizations.
D. Kirk: nothing really new except Hamilton's NHS is at the same phase that we are. They are having the same issues. No scenario seems perfect. We are breaking things down to a more

<p style="text-align:right">1</p>

fine tuned matter in Niagara. It will be interesting to see the differences at the end of the projects.

S. Voros: the two projects in eastern Ontario have finalized their preferred scenario. They are working on how to package the information. New project starting in Kawartha.

F. Berardi: nothing new but she will be reporting back to the Area Planners at the end of November.

J. Schonberger: his group has not met again. He believes that they are roughly of the same opinion as Niagara North Federation of Agriculture. He won't meet with his group again until after our Nov. 10th meeting. He will update them then.

A. Kirkby: she was at the meeting where Deanna and Geoff presented. Niagara-on-the-Lake Agricultural Advisory Committee is having a meeting next week. She believes that they will want to exclude agricultural land.

B. Wiens: no reporting back this past month to Area Planners. They meet again after Nov. 10th they will report back then.

J. Whyte: His group will meet to review this after the Nov. 10th meeting. He was hoping to see the urban boundaries on the maps. Their concerns continue to be the sterilization of urban lands.
G. Verkade: explained that the urban boundaries are on the wall maps. The small handout maps were too busy with the boundaries on them.

V. Cromie: RAP report on Beneficial Use Impairments related to fish and wildlife will be available shortly. They now have the stage 2 update report printed.

J. Potter: three naturalist clubs in the area that he represents, he is hoping to send an email to the contacts in the clubs to summarize where we are in the process.

D. Draper: nothing new.

M. Buma: nothing new to report. Interested in how things unfold today.

L. Hamilton: keeping the planning and regulations staff at NPCA updated. Hoping to present the info to them next week. She would like to show them the mapping on the scenarios.

T. Metzger: looking forward to today's discussions.

D. Lindblad: don't be afraid to ask for Geoff to show you something more detailed on the live GIS. That is why we are in this room with the GIS capability.

G. Verkade: the info we are presenting is a simplification of the larger body of information. We are struggling to boil it down for you. We are confident that we can answer 95% of your questions on this landscape now, we couldn't have said that a year ago.

M. Stack: what Geoff said.

2. Review of the Minutes from October 13, 2011 (P. Hubbard)
Minutes approved.

3. Review of Discussions from October 13, 2011 (G. Verkade/ D. Lindblad)
P. Hubbard asked the group to share what their big questions are and where they need clarification after last meeting.

D. Kirk: we are getting bogged down with discussions around the tug-of-war between Baseline One and Baseline Two. If the end result is a footprint map, does it matter?
G. Verkade: the issue is that half the footprint gets tossed out of the evaluation if we go with Baseline One.

F. Berardi: nothing now, wants to start fresh today.

J. Schonberger: the purpose of this group is to decide where we can and can't go. If we wanted to do this purely on science, all of us non-science and techy people are in the way and we should be gotten rid of.

A. Kirkby: need a lot clarified after the last meeting because there was too much information provided. One of the problems that she has is that this process has been based on scientific data from How Much Habitat is Enough, without recognizing that the booklet states that nor every area has to follow the guidelines. Also there was a brochure produced about this process that showed no concerns expressed and talked about restoration, enhancement, and linkages without the word "voluntary". Otherwise if it was just the identification of what is on the land she could probably agree it.
Next week she has to make comments on a draft policy that she didn't think would ever happen. She is convinced that this process will lead to policy down the road.
When she looks at the map on the wall that shows agriculture, she sees uninhibited area for movement of species. Those advantages of agricultural lands are not considered by this group. The other things we have talked about like stewardship and restoration have muddied the water for her.
D. Lindblad: to clarify, the brochure is still in draft form and all comments and suggestions are being taken into consideration.
P. Hubbard: what about the mapping do you need clarified?
A. Kirkby: more interpretation on each map.
G. Verkade: he will gladly do that.
A. Kirkby: so many things have happened in the last 6 years that make her skeptical. She has checked the mapping Geoff is using and she thinks the mapping at least in Niagara-on-the-Lake is mostly accurate except perhaps for the identification of meadows which could be soybeans.

B. Wiens: she is looking forward to today. From the minutes, she could see some confusion at the last meeting. She is hoping that today will clarify.

J. Whyte: wanted to see the urban boundaries and that helps. There are so many maps that are similar and yet different. A map can't just feel right since we are talking about hundreds of properties and he is thinking that he cannot support any map whole-heartedly since it might have implications for private landowners or his community.
This is a consensus based approach. Although scientific targets have been set, you invited us and our voices are here.

V. Cromie: read minutes and obviously there was a lot of discussion.

J. Potter: rather boggled but it clicked about what the model was doing. It is picking out in the least space what is preferred. Most effective maps are the ones that show the least area being used by other land uses. That is the area where the rest of nature goes. This peninsula has about 15% forested area. One pest is going to take out half of that, the Emerald Ash Borer. When I look at what that means, I wonder if we will have enough left. I hope we come up with all that agriculture, urban, aggregate needs but are still left with enough greenspace that the other critters besides people have a place to live.
J. Whyte: how do we know it will take out half?
J. Potter: it is here already and there is 100% mortality from Minnesota to Quebec.

M. Buma: on the emerald ash borer, he has been doing GIS forecasting of potential ash borer devastation and it does not look good. J. Potter made a good point. Hadn't thought about the fact that half of the natural areas are going to be wiped out.
Maps like the agriculture, aggregate and urban areas tells him nothing about a system.   I think there is a huge hole in the backpack. He keeps hearing fears. He is tired of hearing the word policy. Things are going to constantly change. We need to look at what is on the landscape today. This is a tool. He is frustrated with us talking about unknowns. We need to be working towards balance. This is not just a science tool. It is for everyone to use.

P. Hubbard: that is something to be thinking about. How would your organization use this tool?

F. Berardi: what areas when working together in the smallest area create a natural system. This is basically a more scaled down version of the current green map. It is the minimum amount needed.

L. Hamilton: how is this going to be useful for what I do? Is this going to give me what I need in order to perform my job? Is it useful information? These are the questions she asks herself when she looks at each map. The concern she has is the hang up over the agricultural mapping. Wishes we had Land Evaluation and Area Review (LEAR) mapping. Soils mapping is not good enough. If the environmental sector had come to this process with mapping that was not detailed enough, it would have been tossed out. We should be thinking about how we can use new information/mapping in the future and how this process can evolve. If we exclude vast areas of the mapping, it will not be useful to us now.
G. Verkade: has some samples of the improved mapping on agricultural land. Our process already avoids agricultural lands under Baseline Two as well through the fact that we are targeting only natural features and also the costs being assigned to agricultural soils.

D. Lindblad: had discussions about how to improve agricultural mapping this week. We could drop targets around successional areas if that is the hang up to further avoid agricultural areas.

J. Jalava: hasn't been here in a while. Has been following along peripherally. He lead the Conservation Action Plan in 2009 for this area with multiple partners. He would like to see the results of this process aligning with the goals and objectives of the CAP.

4. Today's Learning Scenarios
a. Overview Presentation
G. Verkade: walked the group through where we have been and where we are now. Reminded the group that the project vision states…"sustainable natural environment…in balance with socio-political, economic and cultural interests".

4

He reminded the group that with what we currently have on the landscape, we cannot achieve the goals we set out but maybe we can all agree on a backbone of a natural heritage system.

D. Lindblad: Explained the comparison of the two baselines to the science based targets.

G. Verkade gave the example of Urban Areas: addressed as a cost in Baseline 2. We have made it more costly to the model to select these areas in the scenario.
A. Kirkby: we are trying to pick the natural features on the landscape. She thinks we are ignoring all of the white on the map, areas that are not natural. We are in effect ignoring the benefit these areas provide.
M. Buma: Baseline One ignores everything in agricultural soils. Don't you want these areas excluded?
A. Kirkby: we are ignoring the trade-off that these areas provide.

B. Wiens: because these areas have been excluded the contribution of the agricultural lands to the system is not being measured.

L. Hamilton: you will get far more ecological value out of an area that has not been altered. An agricultural area might provide movement of species but, this is not providing the needs for the entire lifecycle. We could in the future assess the habitat value of certain crops, etc… but if we exclude it, we never can assess its value.

S. Voros: in How Much Habitat is Enough when the threshold is set, for example 30% forest cover, 70% is in another land use. This is taken into account.
A. Kirkby: there are 2,000,000 fruit trees representing 10,000 acres, and 17,000,000 grapevines representing 15,000 acres in the Niagara Region and we need to consider their habitat value.

V. Cromie: we are looking at what the situation is at the moment. These areas are white on the mapping because we excluded them. There is a disconnect between the decisions we made and the mapping that is being shown now. If new information becomes available we can rerun the model in the future.

P. Hubbard asked the group to decide on a Baseline to move forward with.

L. Hamilton: Baseline Two, better for analysis. Baseline One excludes too much, we cannot assess wiggle room and trade-offs. We can still work with Baseline Two to evolve it to alleviate more concerns.

M. Buma: Baseline Two, less narrow focus.

I. Thornton: Baseline Two, features should be evaluated for what they are. If they have contributions, that should account for something. He doesn't believe that the model is going to capture areas of agricultural value anyway. We should let our targets and the model show the value. Thought it was very clear at the outset that the intent of this process is not policy. If there is a concern around policy implications, that should be considered during a next phase.

J. Potter: Baseline Two, it is more efficient, gives us more possibilities.

V. Cromie: Baseline Two, we have told Geoff what to put in the model. Things are happening that are not in our control such as climate change and Baseline Two gives us more flexibility to look at options.

J. Whyte: Baseline One, built urban boundaries are excluded.

B. Wiens: Baseline Two, provides greater flexibility.

A. Kirkby: Baseline One, she believes that we can use Baseline One with What-ifs attached. She can't sit here and support the idea of restored or enhanced natural areas adjacent to tender fruit and grape crops because she knows firsthand the impact these areas have on adjacent crops. The group is better now than in the beginning of the process, but the language around the room is still about linkages.
Perhaps the process we have used leading to this point has coloured her opinion. She cannot support anything that impacts agricultural land.

J. Schonberger: Baseline One, when we started this process, we were asked to follow the manual. The manual suggests the exclusion of agriculture and it does so for a very good reason. You can make the model go anywhere you want, if we constrained the natural features so that the model had to pick them up, we would not have two baselines. It is difficult to move off of One because we are supposed to achieve balance with those concerns.
He knows that for comparison Baseline One doesn't work but if this was a purely scientific exercise, then we should not be here.

H. Swierenga: Baseline One, we are dealing with a negative situation in terms of agricultural mapping and this is a living document. Based on provincial policy, agricultural land has to be excluded.

F. Berardi: can we make changes to Baseline Two to get to what we want in the end?
D. Lindblad: yes
F. Berardi: We could arrive at Baseline One?
D. Lindblad: yes nothing is off the table for consideration as a preferred scenario.
F. Berardi: Baseline Two

D. Lindblad: you are confusing Baselines with Preferred Scenarios. I would like to get to a Preferred Scenario but if we end up with two Preferred Scenarios, I will go away happy. Baseline One does not make sense as a comparison.

J. Jalava: he drinks Niagara wine and supports local economies. But he is also an ecologist that understands what is needed for a healthy ecosystem.
Baseline Two makes more sense based on the discussion.

D. Kirk: Baseline Two, for the very reason that Baseline One limits our comparisons. Baseline One is driven by possible policy implications and that is not the right vantage point. We will run into problems with the final product and its credibility.

G. Verkade: like Deanna doesn't care what Preferred Scenario we come to as long as we come to it from a technically sound, analytical place.
We have built in reassurances in the tool (model) we chose to avoid agricultural land, we have assigned a cost to steer the model away from them as well.

I. Thornton: do the SOLRIS layers have agricultural classifications?
G. Verkade: no, the classification does not exist in our area.

S. Voros: there is more work being done on classifications but in the interest of time for the provincial product, they released the courser mapping.

S. Voros: this decision about a Baseline Scenario is not about choosing a Preferred Scenario.

A. Kirkby: doesn't like the words what can we live with? If she thought that walking into this was about identification, she could have done it. If we can park Baseline One, she could probably support Baseline Two as long as she could come back to Baseline One if she is not satisfied. She would like to see what people are planning on using the information for.

I. Thornton; if we run the various scenarios, we can look at the orthos underlying to see what has been picked up. This will be a ground-truthing of sorts.

H. Swierenga: the provincial stance is that agricultural land be excluded, stand aside

A. Kirkby: Aggregates asked to look at scenarios that were lower than 50%, she doesn't see them on the list.
D. Lindblad: we ran a 30% and Baseline One is also lower than 50%.

P. Hubbard asked if the group could move forward with Baseline 2 for the purposes of comparison of scenarios only since at this point a preferred scenario is not being decided. There was agreement to do so with the understanding that the issues raised re: agriculture could be addressed in one or more learning scenarios. Likewise, the issue re: land within urban boundaries could also be addressed in learning scenarios.

a. G. Verkade walked the group through the What-ifs that we are considering today.

He explained the statistics on the hand out.

He covered the concept of Distribution vs. no Distribution and what that means throughout the watershed.

I. Thornton: asked what the compromise is ecologically when you don't distribute?
D. Lindblad: the landscape is already deficient and how much we contribute ecologically is more about how far we get from the targets rather than how it is distributed.

P. Hubbard asked the group how their organizations might use this tool/ information.

D. Kirk: maybe, when we upgrade our provincial ANSI's etc, or wetlands we could use this data. MNR is not big into restoration but it might be important in the stewardship activities of the stewardship councils.
S. Voros: in other areas the info has helped prioritize areas for stewardship/ tree planting, etc.

J. Jalava: similar uses as MNR in relation to Carolinian Canada Coalition (CCC's) stewardship activities like the 50,000,000 tree program that works with landowners on a voluntary basis. Might allow us to highlight areas that would be higher priority for stewardship. They are also involved in working with corporate partners engaging them in stewardship and land conservation, ecological restoration. With Land Trust partners it will help set priorities around conservation easements. On an intellectual level, it is interesting to look at how this compares to the Big Picture Project of CCC.

F. Berardi: doesn't know how at a local planning level we could use this. What we have now in policy already includes more than the preferred scenario of this process will probably include.

M. Scott: as a reference we could inform rehabilitation plans for sites. Could be used to create a net benefit policy locally.
S. Voros: could it be useful for land assembly?
M. Scott: it could theoretically inform land assembly.

H. Swierenga: potentially identify agricultural land that could be threatened by a NHS. Could also help landowners identify areas of their land that could be eligible for voluntary stewardship activities.
S. Voros: are farmers locally involved in Environmental Farm Plans (EFP)?
H. Swierenga: Niagara is among the highest in the Province per capita for participation in EFP. This data will not be that helpful in the development of EFP but could be for voluntary stewardship.

J. Schonberger: From an organizational perspective our participation in this Project demonstrates how hard our Federation is working to build a positive productive working relationship with the NPCA and the Region. It is possible our members might use it in land acquisition. What Henry said.

A. Kirkby: if it was used at all it could be used to look at where not to buy land. Could help them see where there is better land in terms of air flow for growing grapes. She supported H. Swierenga's comments about voluntary stewardship.

B. Wiens: it will be a tool for information that we can use to identify what we consider the best of the best using the least amount of land. It might help make decisions about stewardship and where projects should go. Might be useful in the development of a compensation policy when natural areas are removed, etc…
H. Swierenga: could be same for agriculture in compensation for Ecological Goods and Services.

J. Whyte: not sure exactly. Could influence development patterns or developers interests in where they buy land. Going forward, could influence decisions about what areas to avoid however that doesn't solve the problem of sterilization of land we have now. Current policies already protect all of the natural features. This highlights the best of the best, could help development community to show a compromise or compensation process with the Conservation Authority.
If this changes the philosophies of how decisions are made by regulatory agencies, it could be useful.

V. Cromie: already used some of this data earlier this year in the Remedial Action Plan (RAP) for assessing the state of the beneficial use impairments around Fish and Wildlife Habitat. The RAP is in Stage Three, this info or mapping could be included to show hard evidence of what we have in Niagara. Would be a great tool for making decisions around priority areas for stewardship.

J. Potter: same as CCC for Woodlot Association, Niagara Restoration Council and nature clubs.

I. Thornton: can help with land use planning comments that are made. One example is: we could comment that not only is it a woodland but we will know how much it contributes to the targets. This is valuable new information. On a broader basis, it could help decide where to allocate project dollars for stewardship provincially.

M. Buma: NPC has mixed land use but sadly, the natural areas have no core funding and little staff time. This reinforces what some of staff already know. We will know what our lands contribute and will help strengthen our arguments about how we need to fund our environmental programs.

L. Hamilton: the areas the NPCA owns could be prioritized for restoration. In her work under land use planning, she could scope the terms of references for environmental studies more efficiently if she already has good information. Under the current policy framework the more info she has, the less the landowner has to do. This has the potential to lower costs of environmental studies since she will already know the value of certain features.

A. Kirkby: Could help to assess the value of natural areas on farmland. Could develop a program for core funding for benefits of areas that are already natural, there are a lot of woodlands on farm land.
H. Swierenga: Could be used for compensation for retention of the features.

G. Verkade: he is glad that people are seeing the value of an objective evaluation. This is filling data gaps and we have identified other gaps in the information that can help inform studies going forward.

b. Group Discussion
P. Hubbard asked the group what they learned from the mapping

M. Buma: the mapping confirms that the model is only picking up the natural areas. Showed the example of Legends Golf Course.

H. Swierenga: there are some mapping discrepancies in areas that are successional.
G. Verkade: we are working on refinement.
I. Thornton: the output needs to be ground-truthed. We need to compare back to the orthos.

I. Thornton: there are other overlays that could be done with Species at Risk mapping for example as a truthing exercise.

J. Schonberger: many of the scenario maps look so much alike.
G. Verkade: we are dialing back by 10% so there are little bits of progression added. We need to be thinking about at what point are we getting away from the cores we are worried about.

L. Hamilton: liked the No Distribution mapping. She thought those were telling across the watershed. She liked the No Distribution Scenario because in the Distributed Scenarios, the model is forced to pick up things in areas where they might not have as much value.
B. Wiens: that makes sense, when you look at the inset maps there are lots of similarities. There is a correlation between those high value areas on most of the maps.

G. Verkade: showed an example of Distribution vs. No Distribution in Lincoln on the live GIS.

L. Hamilton: noticed that the 50, 60, 70, 80, 90 map, the statistics look linear but the mapping is more diverse. There are greater jumps on the mapping across the landscape compared to the statistics.

G. Verkade: was surprised that we didn't reach a point where we were all of a sudden becoming more efficient.

S. Voros: explained that all of the scenarios are basically scaled down from the already fragmented landscape. The model has very limited ability to change spatially.

M. Buma: he liked the Cumulative Abundance map. He thought it really tells the story of how the model arrived at the various scenarios.

S. Voros: Land Trusts in other areas really liked the Accumulative Abundance mapping for what it tells them for their acquisition strategies.

I. Thornton: conceivably, there could be different products for different end uses. They have had this discussion at the Hamilton NHS. The Hamilton group spent a lot of time thinking about how to communicate the end product. It could be one end product with communications about how it can be used. Or several end products for various user groups.

B. Wiens: asked for clarification about what the map says.

G. Verkade: that is the truest evaluation of the richness. Includes ecologic, hydrologic and biodiversity targets. Showed the example of the natural area along the canal.

J. Schonberger: explained the area adjacent to the canal is a reforestation project involving bio solids and is slated for removal for production of paper, etc

J. Schonberger: asked G. Verkade to overlay the Accumulative Abundance map over Baseline 1.

ACTION ITEM: G. Verkade to produce a map of Accumulative Abundance map over Baseline One.

V. Cromie: finds that the series of maps in percentages seem to show a trend that there is larger contribution in the east part of the study area.

G. Verkade: explained that this is due to the fact that the Distribution is still on in these maps and there is a massive soil landscape in the middle of the study area on the clay plain.

V. Cromie: she is keeping in mind the deficit that we are starting with in Baseline Two and if we move farther away from the targets, we are losing more.

T. Metzger: Purpose is to identify the best natural heritage system based on what is currently here.

S. Voros: from here on in, we are collectively making a choice and that choice is based on keeping that vision in the back of our minds. The model is not making decisions for us, it is providing information for us to make better decisions.

5. Review of remaining Learning Scenarios

List from October 13, 2011
Other What-Ifs to Consider:
-PSW Available
-No Distribution
-Ecological Functions Only
-Hydrological Functions Only
-Biodiversity Only

-play with percentages of what is left
-proportions relative from our targets

Ideas for more What-if's from October 27, 2011
Urban Areas
G. Verkade explained that he and J. Whyte worked on some ideas for What-ifs that could get us past the issues within urban boundaries.
They will exclude what doesn't make sense within the urban area. Only a portion gets included in the scenario. Within the urban areas, lock things in and out based on some of the datasets we didn't use under constraints.
J. Whyte: will work with Geoff on some what-ifs for the next meeting.

Successional Areas
L. Hamilton: she would like to see successional areas removed as a What-if.
G. Verkade: agreed to turn off targets associated with successional areas.

Further Percentages
M. Scott: would like to see the percentage maps associated with 10%, 20%
G. Verkade: once you get below Baseline One we are at a lowest performance rate. There is only 9% natural cover below Baseline One to play with.
M. Scott: agreed that it was not necessary to run those then.

Additional No Distribution
I. Thornton: No Distribution for the remaining percentages. We already have 50% and 80%.

Increase Costs to Agricultural Lands
A. Kirkby: could Geoff explain the cost approach to agricultural lands?
G. Verkade: explained that cost is calculated by area and the incidence of more than one cost in a hexagon. He also showed the cost layer on the live GIS. He explained that area is the commodity that is being traded in all of this.
A. Kirkby: what would it look like if we increased the cost of prime agricultural lands?
S. Voros: if we magnified the cost of agricultural, it would make no difference in Baseline Two but it might make some difference in the Best Half Scenario for example. It would be traded off between that and natural areas.
A. Kirkby: she would like to see a What-if related to changes in cost.
G. Verkade: you will likely see a steering away from other cost factors but no difference in the natural cover.

S. Voros: drew a diagram to explain costs and how they are derived.

A. Kirkby will think about whether she wants a What-if associated with cost. She will let Geoff know.

Ground-truthing
D. Kirk: would like to see a couple of examples with orthos underlain to ground truth.

ACTION ITEM: D. kirk to provide a couple of sites.

P. Hubbard asked what the group needs to see for the next meeting
S. Voros: asked if the table of statistics was helpful
Group thought the format was very helpful.

Final Thoughts

J. Whyte: we will see more maps next meeting and we will go from there.

M. Buma: he was frustrated when he woke up this morning and the part where we talked about how we might use this information was helpful. He liked the bar graph from this morning.

G. Verkade: was hoping we were moving in a more focused direction, he is not feeling that. He feels like we are still throwing maps up on the wall for the sake of putting maps on the wall.

L. Hamilton: the maps and stats are very helpful. She knows it was a lot of work and she appreciates it. Taking it all in.

D. Draper: he felt overwhelmed and confused after the last meeting. Mary and Doug are in the process of revising the brochure based on the feedback they received. He must say that this meeting was helpful in putting things together for him. He liked the potential uses section. Liked the graphs and he now understands costs.

I. Thornton: this has been helpful to understand the outputs and to visualize them. Believes that Geoff hasn't gotten much sleep.

J. Potter: wondering how he is going to put together an email to explain what we did here today.

V. Cromie: doesn't think she missed anything by not being at the last meeting. The maps are great. She won't be at the next meeting but will keep in touch with Deanna.

B. Wiens: today was good. There are clearly still some anxieties. When she presented this to the area planners at the august meeting, the planners were very vocal about not wanting to use this for policy. They have no intention at this time of using it for policy. We are focused on the subject of natural heritage and that is only one set of policies planners deal with. No one is looking at changing the policies that exist in other areas. Can't say that no one will lobby for change tomorrow.

A. Kirkby: certainly she appreciates what Barb is saying and it does reassure her somewhat. The future will tell her if that will happen or not. She hopes that the people around the table appreciate that she comes at this purely from the perspective of impact. What she says is from a personal impact. She cannot support the concept of linkages. If she has brought anything to the table about the impacts to agriculture from natural heritage, she has done her job. She can't imagine how much work Geoff has put into this.

J. Schonberger: when we left the last meeting, you could cut the air with a knife. Glad today was not like that. He hopes he bring something useful to the table.

D. Lindblad: he definitely does.

H. Swierenga: being provincially wide, 87% of the province is crown land, he wants us to remember that.

F. Berardi: big difference between last meeting and this one. Less hesitancy to look at maps this time. It is a shame that we don't have scenarios that are more different and obvious, that might make it easier.

M. Scott: support aggregate recycling in your areas. We are getting there slowly but surely. Today we scoped it down and he is confident we will get to an end eventually.

S. Voros: it is vital for the success that everyone is confident in the information. If there is anything lingering, uncertainties, please speak up. We are here to help provide the necessary answers to give you the confidence.

J. Jalava: having been away from this, he felt daunted by the information. He came to an understanding today. He is impressed with the group as a whole and the ability of the team to help explain. There is obviously a lot of hard work that has gone into it and the accuracy is impressive. He liked the point at which we discussed how we might use the information. Looking at the results as they stand, we are talking about a natural heritage system, but we are capturing a snapshot of natural heritage. He wonders "where is the system?"

D. Kirk: when he first saw the maps it was bewildering, but it has become clearer. Lee-Ann had some great insights that helped him. This is an incredibly complex process.

M. Stack: it was a good day. She was enlightened. The info is overwhelming sometimes because she is not technical but the team did a good job of dumbing it down. Great example of teamwork. You don't have to agree to come to a conclusion. Everyone has given a lot of their time. If anyone asks me if this was money well spent…I will say "for sure".

G. Verkade: doesn't give a rip if we get to a preferred scenario. It is the learning going on that is the most valuable. We have the info and now we want to synthesize it into something we can all agree we value. It is better information than what we had before this process.

T. Metzger: echo that if there are questions or reservations, you need to ask. This process has produced an extraordinary amount of data. We know so much more about our landscape and it has verified other things we knew.

D. Lindblad: not as frustrated after last meeting as some. Each time we have shifted gears in this process, the first meeting has been a disaster. What os encouraging is that everyone came back this week and got down to work.

P. Hubbard: forming, storming and norming. You have done what you are expected to do. You have really listened to each other.

7. Next meeting
November 10, 2011
NPCA Boardroom

Adjournment
4:08pm

DRAFT
Natural Heritage System for the Niagara Watershed
Scenario Development Team

Thursday November 10, 2011
9:00 am – 4:00pm
NPCA Boardroom, Welland

Meeting Minutes

Attendees:
Lee-Ann Hamilton – Niagara Peninsula Conservation Authority
Austin Kirkby – Niagara North Federation of Agriculture
Henry Swierenga – Ontario Federation of Agriculture
Francesca Berardi – City of Niagara Falls – Area Planners
John Potter – Peninsula Field Naturalists
Donald Kirk – Ontario Ministry of Natural Resources
Joe Schonberger – Niagara South Federation of Agriculture
Mike Scott – Ontario Stone, Sand and Gravel Association
Jon Whyte – Niagara Homebuilders Association
Ian Thornton- Ministry of Natural Resources
Mark Buma – Niagara Parks Commission
Barbara Wiens – Town of Niagara-on-the-Lake, Area Planners
Danielle DeFields – Region of Niagara
Travis Mac Beth – Region of Niagara
JoAnne Young: Metis Nation of Ontario
Peter Minkiewicz – Haldimand County

Project Team:
Geoffrey Verkade – Niagara Peninsula Conservation Authority
Deanna Lindblad - Niagara Peninsula Conservation Authority
Pam Hubbard – Facilitator – Drawing on Ideas
Tara Metzger – Niagara Peninsula Conservation Authority
Mary Stack – Niagara Peninsula Conservation Authority/ Outreach and Education
Doug Draper – Communications Consultant

Regrets:
Albert Garofalo – Niagara Land Trust
Valerie Cromie- Niagara River Remedial Action Plan
Jarmo Jalava – Carolinian Canada Coalition
Steve Voros – Ontario Ministry of Natural Resources

1. Welcome and Introductions (P. Hubbard)
P. Hubbard welcomed everyone on behalf of the Region of Niagara and the Niagara Peninsula Conservation Authority.

The group introduced themselves and gave an update from their respective organizations. They updated the group with any feedback from their respective organizations.

J. Young: Metis Nation of Ontario is waiting to look at the preferred scenario, excited about process.

D. Kirk: Ministry of Natural Resources is working on several NHS projects at this time. Nothing new to report.

L. Hamilton: presented a progress report to planning team at NPCA yesterday and got some direction on where the group would like to go. They asked lots of questions about what has been going on in the process.

B. Wiens: nothing new to report. Area planners meet next week.

F. Berardi: nothing new.

A. Kirkby: she gave an update recently at a meeting of the Niagara-on-the-Lake Agricultural Subcommittee and they believe that agricultural lands should be excluded from the final scenario.

J. Schonberger: bad soybean harvest this year is making him cranky.

J. Whyte: he is just seeing the mapping today for the first time, he will meet with his group later this month.

T. Metzger: interesting week

M. Scott: meeting with his group later this month.

H. Swierenga; nothing new

M. Buma: just described the process to new bosses at the Parks Commission. Was interesting to try to explain what we have been doing to someone new.

J. Potter: summarized the process and our progress for the Peninsula Field Naturalists' newsletter.
ACTION ITEM: John to send briefing to Deanna and she will send it out with the minutes.

T. MacBeth: will leave comments to D. DeFields.

D. DeFields: they have been keeping the Planning Division at the Region of Niagara updated. After reviewing the minutes from the last meeting that they couldn't attend, she is glad to see that Baseline One can at least be considered as a what-if scenario.

D. Draper: would like to photograph the session today if that is okay with everyone. Everyone agreed.

2. Review of the Minutes from October 13, 2011 (P. Hubbard)
Minutes approved with the minor changes and changes being forwarded by J. Whyte.

ACTION ITEM: J. Whyte to forward additional comments to D. Lindblad.

3. Review of Discussions from October 27, 2011 (G. Verkade/ D. Lindblad)

G. Verkade: went over what was discussed at the October 27th meeting. He ran through the statistics sheet on the major concepts that were presented and how they played out in the mapping.

The three concepts presented on October 27th were:
-Distribution vs. No Distribution by Subwatersheds and Soil Landscapes,
-Percentages of the Best (50,60,70,80,90%) of what remains,
-targets related to Hydrologic Function, Ecologic Function, and Biodiversity Representation.

4. Today's Learning Scenarios
a. Overview Presentation
G. Verkade walked around the room and went over the mapping with the statistics sheet.

The group decided that they wanted to see more information on the following for today's meeting:
-No Distribution by Subwatershed and Soil Landscapes for the Best 50% - 90% of what is remaining,
-Sensitivity analysis for agricultural lands related to the removal of successional communities from the NAI dataset,
-Look at different scenarios within the Urban Areas (3 scenarios: exclude built areas and greenfields, exclude built, and prescribed what is locked in and out within the Urban Areas).

G. Verkade also presented a scenario that combined the above themes: no distribution, best 80% of what remains, prescribed approach in the urban areas, and meadows removed from the NAI data layer.

A. Kirkby: followed up with questions about successional areas. She sees only meadows removed. She thought that all successional communities were being removed from the data layer including meadows and thickets as per discussion at the last meeting.
L. Hamilton: in terms of policy, successional communities like thickets turn from successional to woodlands in a short time.
D. Lindblad: we ran both if we need to look at.
G. Verkade: there are a lot less thickets than meadows. Meadows and thickets are quite different communities.
A. Kirkby: Successional areas, as they mature, do prevent air flow to vineyards but they also contain plants/trees that harbor pests, including birds, that forage on fruit crops as well as many other crops.

G. Verkade: reminded the group that this is not a locking in or out exercise. Remember this is looking at contribution to targets.

G. Verkade: also highlighted the interesting things he discovered from going over the data. Urban Scenarios: we have not changed target values or costs for these scenarios. Instead, we told the model exactly where it could and could not find contributions within the urban areas. The footprint of the scenario in the urban lands is now down to 2.96%.

Where we have allowed it to look in the greenfields, the amount of urban area in the solution is 11.3% and it is half of what was contributing under Baseline 2. This tells us that a significant amount of the value from Urban Areas is found in greenfields. The difference is 4% achievement relative to Baseline Two but it is half in terms of footprint.

D. Lindblad: pointed out the difference between the excluded built and greenfield scenarios, and the fully prescribed scenario. They all take the model out of the equation with the exception of the greenfields under the excluded built scenario where the model only looks in the greenfields for contributions to the targets. The fully prescribed scenario is our best attempt at a compromise. Hazard lands including Provincially Significant Wetlands (PSW's) are the only contributions within this scenario.

M. Buma: we are trying to look at the contributions now. The greenfields are still contributing. It makes sense to have those greenfields available to the model.

P. Hubbard: asked J. Whyte what his understanding is at this point.
J. Whyte: he is still learning so doesn't want to say too much.

G. Verkade: We have dropped the footprint within the urban area by a third by prescribing within the urban areas.

P. Hubbard asked the group for any questions with these scenarios.
J. Whyte: needs more time with the scenarios. He is concerned that there are implications for personal property that he has not had time to fully consider.

D. DeFields: maybe that is a question for this group. Out of respect for the time contribution for all involved, do we all need more time with the maps and stats? Do we need another meeting?
J. Young: she is looking at the percent achievement numbers and under the urban scenarios she is noticing that we are talking about a difference from Baseline One of 0.7%, that is not significant.

G. Verkade: went over the scenarios related to the No Meadows (removal of successional communities).
Note what is not on the map. There are no longer contributions from the canal lands, and there is much less picked up by the model in areas like NOTL. There is a lot more fragmentation on the maps as well since those successional meadows were linking woodlands in other scenarios. If we look at the statistics, the scenario is now 22.07% of the land base. This is down about 5% but it represents about 20% of total natural cover.

A. Kirkby: what is the percentage of successional areas taken out? What is the percentage of meadows and thickets separately?

ACTION ITEM: G. Verkade: will get those numbers over the break.
Under no meadows the land base percentage is 22.07%, with no meadows and thickets it drops to 20.51%.
Meadows are 5.5% of entire landscape. The meadows and thickets are 7% of the total landscape. Thickets make up 1.5% of the landscape.
G. Verkade: showed the visual using live GIS.

b. Group Discussion
P. Hubbard asked the group what they learned from the mapping.

G. Verkade: MARXAN doesn't spit you out a solution to run with. It is a decision support tool.

D. DeFields: it is interesting to see what greenfields contribute within the urban lands.

T. MacBeth: there are inherent limitations to classifying greenfields because they are intended to be developed.

D. Lindblad: are the greenfields locked out in the Prescribed Scenario?

G. Verkade: for the most part they are unless we locked them in under hazard lands.

L. Hamilton: the Prescribed Scenario is the ultimate in terms of what can actually be developed within the urban area under current legislation.

J. Potter: the meadows are something we would want to retain as much as possible. He thinks we will need as much green space as possible due to losses to things such as emerald ash borer. He keeps going back to the Accumulative Abundance mapping, it reminds him of the better maps (retaining features we would like to keep in terms of their biological contribution) that are on the wall.

M. Buma: he doesn't have specific comments. Each of the maps is useful in its own way, each tells a story. They tell you more when you compare them. He won't say he prefers one to the other at this point.

H. Swierenga: he finds everyone's interpretation of the maps interesting. It is obvious that we all look at these very differently. Just listening to the others talk about what the maps mean to them, he believes we have a ways to go to reach consensus.

M. Scott: we are getting to the level of detail we need. People are starting to understand the maps and how the targets are related. These maps are a much improved level of refinement.

T. Metzger: nothing at this point. Reminder this is not policy.

D. Drapers: will let the stakeholders have their say.

I. Thornton: picking a preferred scenario is less important than the information that is being brought out through this process. If we do arrive at a preferred scenario, it will be a compromise between the stakeholders. That will speak volumes about the effectiveness of this group. Everyone will use the product for their own purposes and will interpret it for their own needs. He likes the ancillary map related to Accumulative Abundance as it is very telling about hotspots for richness.

J. Whyte: he will still need time to review this. One thing that strikes him is that we can run a million maps with a million variations and the people that could be impacted are not in this room. We look at numbers and maps but who are we to say what they mean for others.

D. Lindblad: she is frustrated. Even Map #20, our best attempt at meeting the needs of everyone in the room could not be implemented. It is still on the hexagon level.

J. Young: this is a decision support tool. It is like the fork that gets the food from the plate to your mouth. The folk gets no say. We have beat it to death. She goes back to the percentages. Even if we look at the best attempt Map #20, it is only 75% of Baseline Two. She would like it to be 90% but she sees that this might be the point of agreement. The data is the tool not the decision itself.

H. Swierenga: he has to look at it in a broad spectrum so that all of his clients were treated equally. Any future policy in a general sense not related to NHS has to be equal.

J. Whyte: it has been a long week, he needs more time.

G. Verkade: is wondering if clipping the hexagons back to the features might have caused this confusion.
He is wondering if the hexagon mapping would be easier for this group to make decisions from now that there is some understanding of what underlies it.

D. Lindblad: What more can we as a project team do to offer you some level of comfort?

I. Thornton: what maybe needs to be discussed is a disclaimer statement:

"The Scenario Development Team wishes to emphasize that the products developed through our collaborative effort are meant to serve as information and decision-support tools. The NHS scenarios should not be directly applied to any policy or land use planning purpose without subsequent refinement, consultation and interpretation."

M. Buma: in GIS that is done all the time.
When he maps high voltage lines for example, you cannot take his map go out and start digging without a locate. It is a reference. Helps you do your job more effectively.

J. Schonberger: all the info we are using already exists. It is already used in policy. This info we generated is not going away either. He has concerns about how this will be communicated to the public and politicians. There are very subtle differences in the mapping.
G. Verkade: those subtle differences give us important information about the reference condition of the landscape.

A. Kirkby: understood this process was a process to only identify what natural features were existing so she agrees with what Ian has said about the impact of policy and supports his words "what maybe needs to be discussed is a disclaimer statement: the product that is derived from this process needs to be interpreted for its use, and extensive consultation needs to take place when the information will be applied. This cannot be directly used." There will be pressure to protect, improve or restore more successional areas and to connect existing features.
A lot of this will depend on the report that is produced and what goes to the public. She doesn't believe that this group will get a say on how this is communicated. She is concerned about wording, she supports use of the phrase "information tool". She knows the problems that some landowners are having with greenbelt.
She could support Map #20 if thickets were excluded because of the impact that thickets could have on the ability to farm that has been detailed in the information submitted from OMAFRA and KCMS. She is concerned that with the mapping of meadows, it could actually be agricultural land. She knows that there are meadows in the dataset that were picked up as successional when, in fact they are currently soybean fields.

D. Lindblad: wants to clarify that no communications have gone out on this project to the public. She also wanted to clarify that the meadows that were included as meadows in the dataset were meadows when the air photos were flown in 2006.

G. Verkade: the natural areas dataset is based on 2006 orthoimagery. There could be areas that were meadows in 2006 that are now being actively farmed, likewise, there could be areas that have been left fallow since then. Areas are going to go on and off. We now have information that can monitor that change.
We could lock in the canal lands meadows if that is important to the group.

J. Schonberger: the canal lands are federally regulated. A lot of this area is leased to the paper company in Thorold for disposing of bio solids and planting trees that will be later used replanting and then later use for paper making.

ACTION ITEM: G. Verkade to lock in canal lands that are in meadow within the urban boundary.

D. Kirk; the complete removal of meadows does not make him comfortable. We are losing a lot of biodiversity, removing the connectivity, and reducing the biodiversity. This is a data gap.

DATA GAP: further classify the meadows into cultural meadows, etc…

L. Hamilton: from a biological perspective it doesn't make any sense to remove meadows. But in the interest of consensus, it is an area we are willing to compromise.

I. Thornton: the data is only a representation of what is on the ground. We can only use datasets that span the entire study area within the MARXAN model so there is data that we are not using in this assessment. This is just a tool. It is not all the info that can be brought to decision-making. It is not exhaustive.
This abstraction must be removed at the site specific stage.

F. Berardi: one of the things she noticed is that urban areas prescribed looked a lot more like Baseline One. It included things that Baseline One did that made sense. She thought that was a good thing to look at. If we knew what was going to go into the report that would be helpful. She has reservations about including things like meadows that can change within a week. When we went through the first half of the process, we made decisions to not include things that were highly changeable.

G. Verkade: when looking at a backbone or a core of an NHS, the meadows and thickets have been quantified for their contribution but they do not need to be included in the preferred scenario.
We are looking for core areas that will be valuable to a more connected system down the road.

B. Wiens: she echoes JoAnne's comments, when you compare the maps and info, it is good in trying to think about what the tool can be used for. The various scenarios we have are not right or wrong answers but info that can help inform a decision. She sees that as interesting in terms of what gets displayed on the map. She can echo Francesca as well, there is no regulatory framework around protection of meadows. They will transition.
This is a good tool for us to evaluate 5 or 10 years from now on a landscape level.
The Accumulative Abundance map has other information in it that she finds helpful.

L. Hamilton: likes the different urban areas choices or schemes. She found them helpful to get an idea since we hadn't tackled that one head on yet in this process. As far as meadows go, one of the things she would find helpful, is the ability to look at the thicket areas for voluntary restoration opportunities. Finds the Accumulative Abundance mapping helpful. Good as comparison back to the other mapping. Gives relative value.
G. Verkade: Another interesting point about the Accumulative Abundance mapping is that you can use it by removing the ecological and biodiversity targets to look specifically at hydrologic function for example.
L. Hamilton: in the future, whatever map we like the best, we could do an Accumulative Abundance map on that scenario to give us the scale of importance.

G. Verkade: sure we could.

D. Kirk: can detach himself on one hand and look at the learning scenarios and find them helpful. At the same time it helps him better formulate where we should be going. There are lots of compromises being dealt with that he doesn't see in the other two similar projects he is involved in in other areas of the Province. That is a reflection of this particular team. He is concerned that the compromises could be more than he is comfortable with. Natural meadows do contribute to biodiversity and might be significant wildlife habitat and he is concerned they are being excluded.
G. Verkade: this is certainly a robust analysis

J. Young: this is a decision support tool. This is an inventory from 2006 and my question is, how are we planning on updating that main data set on an on-going basis? Keeping that data current, makes for a more accurate and better assessment. It is more useful going forward.
D. Lindblad: updating the data is a recommendation that could be made by this group.
G. Verkade: the importance and relevance of the assessment diminishes as we go forward.
He has 2010 orthoimagery. He has budgeted for a maintenance pass of the NAI layers in 2012.

M. Buma: the orthos are generally updated every 3-5 years. The last set for the Region was in 2010.

G. Verkade: It would be great is we had the ability to capture the data that we receive through development applications for example to live update the data layers.
DATA GAP: updating the data layers through the planning process and a broad sweep every few years to capture things that would not go through the planning process.

P. Minkiewicz: it is good to see all our hard work in colour. It will take time to understand what the colour means.

Key Messages:
-the model is a Decision Support Tool
-there are still concerns around the mapping and what it might mean for meadows and at the site specific level
-there are concerns about the Communications, about how this will be communicated to the public and politicians.
-Urban lands scenarios were useful
-Good discussion about the question of no meadows and the compromise of leaving meadows out and thickets in.
-Map 20 – the compromise map might be getting there.
-Disclaimer about how the info is used is important in the report.

A. Kirkby:Does not support use of the words decision Support Tool but supports the words, Information tool because that is what this process is supposed to be about.
Would still like to see thickets removed.
D. Lindblad: pointed out that Decision Support Tool refers to the ability of this group to make informed decisions and is not about policy decisions that may or may not happen in the future.

L. Hamilton: from a biological perspective, thickets are much more mature and she is concerned with their removal.
H. Swierenga: are fence rows included as thickets?
G. Verkade: yes but we can further refine this in the future.

L. Hamilton: explained that in order for an area to be called thicket it would have to have a high percentage of mature shrub cover.
G. Verkade: demonstrated the difference between meadows and thickets by showing the mapping with the underlying ortho imagery on the live GIS.

H. Swierenga: with no disrespect, the deer don't obey the signs he puts up telling them to follow the trails.
D. Lindblad: we aren't worried about habitat for deer.

P. Hubbard: Asked the group if there are any one or two scenarios that we are leaning towards.
She reminded the group that what we are deciding is what will go to the Steering Committee? What are the messages we want to carry forward?

G. Verkade: we want to know what you are for not what you are against.
At a minimum, what are we for in terms of common values?

J. Young: asked if that support can be qualified?
P. Hubbard: absolutely, we can attach recommendations and qualifiers.

J. Whyte: to clarify, the visual tools he discussed with Geoff where to get a better understanding of what was happening within the Urban Areas. He can't support any one at this time. He cannot endorse any of the scenarios at this point.

Our Message to the Steering Committee
We can support:
J. Young: doesn't have issues with No Distribution at 80%, is okay with No Meadows, thinks it makes sense within the urban areas in the Niagara Area to prescribe what happens there. She would like to add to the recommendations list.

D. Kirk: can support prescribed within the urban areas, would prefer Baseline 2 as the Preferred Scenario.
Has no preference for distributed and not distributed. Would like meadows and thickets in. Would like to see the Inclusion of the Accumulative Abundance mapping in the final report.

L. Hamilton: no distribution, urban areas prescribed, meadows in or out. Wants thickets in, would support 80%, 90% or Baseline 2 as the Preferred Scenario.

B. Wiens: no distribution at 80%, prescribed urban areas, excluding meadows, would like to include the Accumulative Abundance mapping in the report for information.

F. Berardi: no distribution, at 80%, prescribed urban areas, Baseline 2 or Baseline 1.

A. Kirkby: Baseline 1because thickets have not been removed from Map #20.

J. Schonberger: J. Schonberger: Baseline 1. The constraints are correct, does perhaps reflect the limitations of the software and possibly the hardware. Understands why some don't like it but his community needs that Baseline at least for now. Would not be opposed to any other scenario selected in addition to this one.

J. Whyte: would like to talk to people in his association before he supports anything.

He will not make a decision on behalf of those he represents.

I. Thornton: no distribution, at 80%, prescription within urban areas.

P. Minkiewicz: needs more time

M. Stack: no comment

D. Draper: leaves it to the stakeholders

M. Scott: Baseline 1, multi-pronged solution of good information (retain all maps and scenarios for information), supportive of communicating the existing conflicts to the public.

H. Swierenga: Baseline 1, the value of the other maps is very good, good information as a basis for whatever end use. Inclusion of the Accumulative Abundance mapping as information.

M. Buma: no distribution, at 80%, excluding meadows or including meadows, Baseline 2, thickets in, prescribed urban lands.

J. Potter: no distribution, at 80%, excluding meadows or including meadows, prescribed urban lands, Baseline 2

T. MacBeth: there are so many different applications of the infroamtion and we can be supportive of many things

D. DeFields: we are Regional staff and don't speak on behalf of the Region, needs more time. Might change once she has some time before the Steering Committee meeting.
Can support: Voluntary restoration and stewardship (Baseline 2 is a good reference for this), Accumulative Abundance map is a useful tool
Baseline one and Map #20 show the concerns of those at the table with full disclosure about what was considered.

M. Buma: the ancillary mapping is very different, not learning scenarios and should be included as information.

G. Verkade: We created 50 gigabytes of information in this process.

I. Thornton: a question for those in the group that preferred Baseline 1. Is it a hard line? Or is there a possibility to include some of what is excluded later on.
J. Schonberger: if we could look at the landscape broken down by smaller hexagons (1 hectare) for example, we could be more detailed in our analysis and he would have more comfort with presenting the data to his group and more of the "natural" features would be picked up and Baseline One would look a lot different.

G. Verkade: smaller units wouldn't look that much different because of the constraints we set.
J. Schonberger: if we used a finer scale we could more confidently say that we are excluding agricultural lands from the scenarios

D. Lindblad: we are kind of beating a dead horse, we know we are going to the Steering Committee with Baseline One and something else. What is the something else?
Baseline 2 and the Ancillary Mapping will have full explanations in the report.

T. MacBeth: is there anyone that is not on the Steering Committee that cannot make a decision today about what they can support?
(There is a show of hands of those on the Steering Committee, it is about half the room.)

J. Schonberger: those that are not here are generally in the "what the hell zone".
D. Lindblad: does this group need another meeting or can the work that needs to be done for individual groups be done before the Steering Committee meeting?
(There is agreement that the work can be done between now and the Steering Committee meeting).

What are the Qualifiers being put forward to the Steering Committee:
G. Verkade: socio-political constraints confuse the honest evaluation. Our data might be 6 years old but it is still among the best in the Province.
J. Young: there is this thing called reality.
G. Verkade: systematic conservation planning is what this whole process is based on, but this is becoming a more socio-political constraint process.

J. Young: for any planning tool, decision-support tool, the data needs to be current.
G. Verkade: could update the mapping with new imagery every 3-5 years.
L. Hamilton: on a landscape level, every 10 years would be enough but if you wanted to use it on a daily basis it needs to be updated at least every 5 years.
I. Thornton: need to make the distinction between rerunning the model and reviewing the targets. The targets could be reviewed, not sure how often, maybe 5 years (similar interval to Official Plan updates). Rerunning the model can be done as often as you want.
L. Hamilton: update the ELC mapping every time we get new ortho imagery.

G. Verkade: we should try to refine the successional communities data.

 I. Thornton: recommended disclaimer statement
"The SDT strongly emphasizes that the chosen scenarios should not be directly applied to any policy or broad scale planning without subsequent refinement, consultation and interpretation."
ACTION ITEM: I. Thornton to send the wording to D. Lindblad
F. Berardi: consultation and interpretation by whom?
I. Thornton: that is up to the person or organization interpreting it. If it is a municipality then it is broad scale public consultation. If it is a group like a land trust for their own purposes than maybe it is consultation with their members.

M. Scott: ensure that the same stakeholders be involved in any future discussions for changes to this project data.
I. Thornton: we have no control over how the stakeholders may use the data.
D. DeFields: if Regional staff were to ever go forward with a recommendation to Council on how to use this data, they would want to see a consensus based position coming out of this process

J. Young: fill the identified data gaps.

A. Kirkby: how could the targets be looked at by a different group?
D. Lindblad: it would be difficult to recreate what we did in this room.

A. Kirkby: Agrees with M. Scott about the idea of the same stakeholders being involved in any future discussions for change to this project because the original stakeholders have spent a

long time going over the data and it would be almost impossible for new stakeholders to understand what has evolved and the information involved.

J. Young: consensus does not mean unanimous. Consensus is general agreement and it does not mean that everyone agrees with every single thing. It is that enough of us agree to move the process forward.
D. Lindblad: there will be an explanation of what consensus means in the final report.

A. Kirkby: Supports this information being referred to as an information tool only.
Not all areas of the watershed in the NAI mapping have been field verified.
Recognition that if there is an end use related to stewardship, that it is voluntary with the understanding about negative impacts to crop production. Information submitted by OMAFRA and KCMS needs to be identified in the report. And benefits that agricultural lands offer to ecological and hydrological values need to be included as well.

J. Schonberger: It's a computer model, and it's not perfect, our good buddy Steve Voros said: "models don't make decisions, people do".

G. Verkade: the targets the model was set on are not implementation targets. They are what we compare back to.

D. Lindblad: was hoping to meet with the Steering Committee the last week of November or the first week of December.

M. Stack: if the aggregates are not on the Steering Committee list, send it to M. Scott.
ACTION ITEM: D. Lindblad add M. Scott to the Steering Committee list.
ACTION ITEM: D. Lindblad a draft of the final report to go to both committees.

Additional Needs of this group before Steering Committee meeting:
-Maps on the ftp site
-minutes from today as quickly as possible

ACTION ITEM: G. Verkade and D. Lindblad to attend meeting of Area Planners next Friday, Nov. 18th.

M. Stack: Communications pieces or reports will not go out until after the final report.
ACTION ITEM: M. Stack to circulate both committees on any communication.
Full project breakdown will be laid out on the NPCA website as the NAI was.
A. Kirkby: in any communication, she would like it known that the agricultural community had very serious concerns.

M. Stack: we need to identify what we mean by consensus.
D. Lindblad: there will be a full discussion of the process including an explanation of consensus in the final report.

J. Young: generally when it comes to calling "question" in the consensus model, the group is asked, "do we have consensus?" then they are asked, "is anyone objecting, is anyone abstaining?"
Abstaining means that you are not in agreement but you won't hold up the group.
Objecting means that you are blocking the process from moving forward and the group goes back to discussions.

D. Lindblad: She is hearing that we go forward to the Steering Committee with more than one scenario, Baseline One with a full discussion of the provincial context and Map #20.

P. Hubbard asked the group "can we agree to put Map #20 forward"?
D. Kirk: too huge a compromise (Abstain)
L. Hamilton: won't be our first choice (Abstain)

M. Buma: seems that those that are hung up on Baseline One are not compromising, and everyone else is compromising with Map #20?

D. Lindblad: we know that Baseline One is going forward regardless and the sticking points are not really about this process or project anyway, they are provincial issues.
Now, what can we all agree on? That is what we have to come to agreement on.

J. Young: Map #20 is the Scenario that best reflects all of the discussion that has happened over the past several months.

H. Swierenga: it is about the information. We shouldn't get hung up on choosing one scenario.
J. Young: we need a picture to go with the information.

T. MacBeth: why not present the three, baseline one, baseline two and the compromise?
D. Lindblad: yes, which one best reflects our discussions?

I. Thornton: the value of this process is in bringing the people together. Let's not get hung up on the final map. The maps resemble a planning product, like land use schedules in an official plan and there may be a tendency by some people to view them as "you're either in or out" rather that for what it really is – an information tool to assist with evaluating the relative value of one piece of geography with another.
Maybe there is too much of a risk in visually representing what we have done here.
Perhaps present just the two baselines and the data with supporting commentary.

M. Scott: happy with conveying the information alone without a preferred scenario.

M. Buma: believes we should show where the discussions led us. We should show something that is in the middle.

G. Verkade: it is a quantified assessment of our landscape that has never existed before.

J. Young: without something else other than Baseline 1 and 2, there is nothing to show what happened, or how the info can be used.

M. Stack: this is going forward to the powers that be as information.

J. Young: Mark called Map 20, "the Scenario Development Team Discussion Scenario", that reflects what went on here.

A. Kirkby: unfortunately she cannot support Map #20 because it still has thickets and she knows the negative impact that they can have on the ability to farm.

Decision: group agreed to put forward Baseline 2 as comparator, Baseline One with its full discussion and Map #20 as the example that best reflects the discussions of the Scenario Development Team.

Final Thoughts

D. DeFields: she thinks it is good that both Baselines are going with full disclosure and an emphasis on the information. She appreciates being engaged even though she started late in the process.

T. MacBeth: Yay! Glad we came to the conclusion we did to take all three scenarios forward.

J. Potter: feels like he gained 20 more members to his family. He feels like we came to a good conclusion. Don't invite him to the table next time ☺

M. Buma: has learned a lot about different perspectives, thank you. Happy it's over!

H. Swierenga: has enjoyed the process, what he appreciated most was the sharing of opinions and rational discussions.

M. Scott: thought he would be saying his goodbyes but now has been drafted on the steering committee. Kudos to all. Starting this process in Kawartha, feels like he should change his title to Natural Heritage Planner.

D. Draper: in 30 years, he can't think of a single process that has been as full and as detailed as this. He respects and admires this group putting yourselves through this. Looking forward to writing communications on the report and doing a good job to translate it into layman's terms.

P. Minkiewicz: as a planner, he has always known that stakeholder engagement is critical to the process, this more than anything else has been beneficial. It is remarkable. Applaud for all of us.

I. Thornton: echo that and thanks to Geoff and Deanna for the food and treats and for the hard work. We all underestimated how much work it would be. It has been great to come together and work through the tough issues, this is the way of the future.

J. Whyte: Been a long year and a half, thanks for the patience. It has been nice to get to know everyone. Mirror comments to Deanna and Geoff for all the hard work. Not through the woods yet, but close.

J. Schonberger: most interesting group dynamic, thank you for including him. Hopefully the networking will carry on, feel free to contact him. To Geoff and Deanna, to quote from a letter he sent to the NPCA, "They should get a raise".

A. Kirkby: This has been an emotional experience for her because she thought that this process was to identify what natural features were existing on the land. However, it became evident to her, in discussions and through the proposed media brochure that many people thought this process was about protection and restoration of natural features and future policy. She realizes that many people still do not understand the impact of natural areas on the ability to farm because they do not farm for a living. She appreciated the ability to be included as a stakeholder and thanked the Region and the NPCA for including her. There has been much suffering due to greenbelt Policies and if not for that, this process might have been different for

her. She echoed comments about the contribution of Geoff and Deanna. For Geoff there was so much data to input and provide explanation to us. She found it difficult to understand how deanna was able to keep up with the group by inputting on her keyboard as we were speaking. She appreciated the explanations from Steve and the advice provided by Ian. Thanks to everyone for listening to her concerns throughout the process.

F. Berardi: the information coming out of this is tonnes. Paralleling that personally, she feels she has learned so much and has important information to take away. Great experience.

B. Wiens: if she reflects back to the first day and the list of fears and anxieties, we have worked through them all. If we have, we have been successful. The dialogue and discussions is so important and beneficial to all of us, the process and the outcomes. Echo the words to Deanna and Geoff and Pam as a facilitator, an exceptional job. Last comment, Six Nations described this area in an early presentation to the group as "a dish with one spoon", that still resonates for her.

L. Hamilton: overwhelmed with all of the info, great experience. The maps will be in the back of our minds going forward for everyday use. Fabulous the way we have been able to work together.

D. Kirk: this has been the most intense of all of the Scenario Development Teams he is working with, amazing we have reached this point. We have turned over a lot of logs and stones and that is great due to how complex the issues are here in Niagara. Because of that, the credibility will be very high since we have thought about almost everything. To Pam and Geoff and Deanna, high marks.

J. Young: this is large and diverse group. We became very accepting of our similarities and differences. Her son studies interdisciplinary teams and it truly is the way of the future. We are learning the way of the future. It has been a positive experience, thanks to all of you and the behind the scenes staff.

G. Verkade: thanks to Tara, she saved my neck. At a tech transfer session a few years ago, he learned about the MARXAN model, he thought it was so cool, a real world application of something very technical. Has thoroughly enjoyed it in that respect. Niagara as a whole, we have something in our hands that other areas of the province would be very appreciative of.

P. Hubbard: thank you, she will miss us all. Glad that NPCA had the foresight to put together such a diverse group and use consensus. Glad you stuck with it. It was nice to see you go through the learning curve and come to the end.

D. Lindblad: emotional as she thanked the group. Most inspiring to her throughout the process was that no matter how frustrated we got or how hard the meetings were, we kept coming back and working through it. She presented the group with thank you cards and pins. She invited them all to attend the Conservation Achievement Awards on Nov. 23rd, they will be receiving invitations in the mail. Thank you!

Adjournment
3:52pm