Restoration Planning and Development of a Restoration Bank
Monday, June 10, 2013
Black Creek Pioneer Village, South Theatre
8:30 a.m. to 3:30 p.m.

Goal: The goal of the workshop is to gain consensus on the formation, and utility of a Habitat Restoration Bank.

Objective: Is to provide insight, direction and guidance to conservation authorities, municipalities, provincial and federal agencies, and other stakeholders for the purpose of:

- Achieving watershed targets
- Prioritizing restoration opportunities
- Developing compensation projects
- Contributing to Species at Risk recovery strategies
- Achieving partner land management goals
- Assisting in the development review process
- Having a consistent approach to restoration banking

8:30 – 9:00 a.m. Registration/Coffee

9:00 – 9:30 a.m. Welcome and Restoration Planning Overview (Ralph Toninger, TRCA)

- The importance of restoring ecological goods and services should be the goal of all restoration projects.
- Reversing impairments negatively impacting natural processes is the best way to obtain a naturally healthy, sustainable system.
- Objectives like restoring hydrology, increasing natural cover, enhancing landforms and creating critical wildlife habitat is fundamentally at the core of every restoration project.
- The TRCA has a long history of strategies and protocols that are meant to guide restoration activities.
- Integrated Restoration Planning (IRP) and Habitat Banking are new tools that will help streamline the restoration planning process by establishing priorities.

9:30 – 9:45 a.m. Credit Valley Conservation Restoration Strategy (Kate Hayes, CVC)

- Credit Valley CA (CVC) has completed priority restoration activities mapping and are in the initial stages of determining how to prioritize restoration in its watershed
- CVC is looking at utilizing threats and stressors on the landscape to prioritize restoration
- CVC and TRCA have been working together to create a restoration prioritization process that looks at identifying addresses improving function, looking at threats ad stressors and reversing impairments.

9:45 – 10:30 a.m. Restoration Opportunities Assessment and Prioritization (John Stille, TRCA)

Restoration Opportunities Planning

- Goal of Restoration Opportunities Planning is to develop a complete catalogue of field verified restoration opportunities across our jurisdiction (wetland, forest, riparian, meadow, in-stream); and to develop a decision making tool to implement high priority restoration projects.
- Using desktop and field analysis data was collected across our jurisdiction regarding restoration opportunities (wetland, riparian, aquatic, forest, meadow).
Assessments are rooted in hydrology, landforms, and natural cover as the backbone of ecologic function. The data can be queried to select the best restoration project to allocate funding.

**Restoration Prioritization**

- In the past, we looked at natural cover data to prioritize restoration (wetland, riparian, forest). 30 hectare sub-catchments are delineated for a selected area and percent area natural cover within each catchment is calculated. Catchments of low cover that were adjacent to areas of good cover were prioritized for restoration.
- Other considerations were recommendations from regional strategies (e.g. Fish Management Plan)
- Want to formalize the process and make it more robust
- We collect other data on watershed health that may be helpful to prioritize (water temp, erosion, on-line ponds, water quality, etc.)
- Apply thresholds to these metrics to identify impairments that can help prioritize an area for restoration (e.g. high stream temp + low natural cover + sedimentation = priority)
- The strength of this process will come from defendable and repeatable prioritizations.
- The range of priority catchments will allow for multiplicity of benefits. When many considerations overlap, the priorities become very clear.
- We are currently going through a process of identifying the existing TRCA and applying that to the 30ha catchment assessment process. We will be looking at what data is usable and where data gaps exist
- The process does not replace, on site field verification. Ground truthing is an essential part of the restoration planning process.

10:30 – 10:45 a.m. Break

10:45 – 11:15 p.m. Restoration Opportunities Bank Framework and Utility (Ralph Toninger, TRCA)

- Restoration work is often plagued by trends.
- Goal specific restoration strategies like creating habitat for Bobolink or compensation projects derived from urban development now initiate many projects. Using the analogy of a triage during a battle, it may be necessary to cut an arm to save a life. Same is applied to this situation. A triage of priorities and opportunities will need to be made to maximize ecological goods and service.
- The data will inform project managers and planners on where the implementation of a restoration projects is the most beneficial to ecological function.
- The goal of the workshop is to gain a consensus on the approach.

11:15 – 11:30 p.m. MNR Species at Risk Overall Benefit Catalogue (Emma Followes, MNR)

- The Aurora District Office of the Ministry of Natural Resources received a high volume of 17(2)(c) permit applications (Endangered Species Act - Overall Benefit Permits). In response, a catalogue of compensation projects has been created to expedite the permitting processes. This is an initiative from the Aurora District Office only; it is not offered provincially. The catalogue includes potential projects that can be implemented on either private or public lands. It is not available online due to privacy issues.
• It was noted that a drawback of the catalogue is that it can unfairly pit competing species (grassland species vs. forest species) against another. Since the overall benefits to species can be measured on a short term or long term scale, it can be problematic to assess when an overall benefit is achieved. A clearer definition of terminology of restoration and rehabilitation is also needed. Although the catalogue should address long term land management needs, some details continue to be refined.

• The catalogue does not mean to replace the permitting process. The proponent engaging in an activity that would otherwise be prohibited by the Endangered Species Act (ESA) will still work with the Ministry of Natural Resources to assess the potential effects of the activity on the protected species at risk or habitat; and, if necessary, to apply and obtain an overall benefit permit under the ESA prior to proceeding with the proposed activity. The catalogue will only be made available once compensation restoration work is determined to be the best course of action.

• More than one permit application will not be needed if more than one species at risk (SAR) is threatened by the proposed work. Overall benefit to both SAR must be accounted for in the compensation project.

• Overall benefit involves undertaking actions that contribute to improving the circumstances for the species specified in the permit. It was criticized that the permit simply looks to boost population numbers of SAR. More research is needed to learn if historical population numbers are being achieved.

• The compensation catalogue is in its early stages. Matching compensation needs to a project site may pose some challenges. Some SAR, like Butternut, have already established guidelines in the legislation as to what kind and how much compensation is needed to fulfill the permit requirements.

11:30 – 12:00 p.m. The Structure of a Compensation Bank (Ralph Toninger, TRCA)

• Restoration Planning can be compared to a tool box, containing tools such as Compensation Planning, Jurisdictional Strategies, Municipal and Partner Strategies, Integrated Restoration Prioritization all of which can used to find projects and funding in a Restoration Opportunities Bank

• TRCA is currently working on an Ecosystem Service Compensation Protocol that will offer guiding principles for:
  o Habitat Capital;
  o Financial Capital; and
  o Opportunity Capital.

• Indicative of complex socio-economic and ecological systems, Compensation Banks are often criticized for their lack of quality assurance, accounting and transparency. The challenge of assigning the true value of ecological goods and services is amplified by deficiencies in scientific evaluations.

12:00 – 1:00 p.m. Lunch

1:00 – 2:30 p.m. Working Groups Sessions

A clear distinction between mitigation and compensation must be made. Compensation work is implemented off site, while mitigation is applied to features that remain on the affected site. It’s important to note that compensation should not have a negative connotation. Once the Ministry of Natural Resources issues a permit, compensation work can provide a great opportunity to restore ecological goods and services. It should be
viewed as a tool in our toolbox, not just a penalty applied to a proponent. The same process can be applied to the acceptance of stormwater management. A decade ago, stormwater management was seen the same way, but now it’s an accepted part of the process.

Watershed Restoration Prioritization
Discussion Questions & Summary from Group 1

*TRCA and CVC are currently working on a methodology and framework for setting priorities for restoration on a watershed basis. Prioritization involves combining various strategies, plans and initiatives for both terrestrial and aquatic systems, upon which a vast assortment of environmental data as well as threats to ecosystem health can be overlaid. The goal is to create a repeatable decision-making tool for restoration site selection that is empirically defendable. The current framework takes a watershed approach, and utilizes 30 ha sub-catchments.*

**Objective:** To provide insight and gain consensus on the information used for restoration planning, and strategies for prioritizing where restoration should occur.

**Question 1:**

a) *Looking at the existing data layers provided are there any others that might be relevant to prioritizing restoration in the watershed?*

- Demographics
- Human health and well being
- ID highly active groups and landowners
- Prov. Significant Areas
- Municipal Strategic Plans
- Historical ecology
- Quality of natural area
- Land ownership
- Soils, contaminated soils
- Sewer and storm water mapping (urban settings)
- Invasive species
- Ceremonial releases (culturally important sites)
- Landfill sites, historical sites
- ORM, Greenbelt Plans
- Livestock operations
- Trails, informal trails, mountain bike
- Unvegetated riparian areas
- Projects from other groups
- Local and regional scales
- Local parks plans
- Infrastructure repairs (urban contexts)
- Source water

b) *Prioritize the entire list of data in terms what would be the most valuable to restoration planning*

- Too many objectives and how to prioritize; needs to be tailored.
- Gear objectives to targets
- Historical to current data
- Soils data and hydro
- Land ownership – less disturbed on private lands, more opportunities
• Natural Heritage System with aquatic components
• Barriers, roads in terrestrial context
• Regional watershed monitoring data to support decisions
• Priorities differ from urban to rural systems
• Existing programs and funding; overlap
• Liability

c) List any challenges or issues with any of the data that might need to be addressed to improve its utility
   • Urban vs. rural
   • Management initiatives
   • Finding similarities and ID gaps
   • Timing
   • Finding targets and thresholds
   • % natural cover vs. quality of cover
   • Relevant monitoring data
   • Using catchment approach may not capture all terrestrial aspects (corridors, linkages); not supported by science
   • Managing stormwater, managing abundant resources
   • Nested thresholds, changes with scale
   • Quality vs. Quantity
   • Limited funding

d) How should we rank making poor systems good vs. making good systems great?
   • Cost effective measured benefit, based on objectives
   • Protect what you have first
   • Good to great is better than poor to good; increasing productivity
   • Value of forest cover
   • Not to overlook the importance of systems in urban settings
   • Feasibility; access
   • Priorities at site levels – scale criteria accordingly
   • Look upstream of projects

Restoration Banking Approaches

Discussion Questions & Summary from Group 2

A Restoration Bank is a means to formalize potential restoration opportunities and can take many forms. These opportunities can be made available for priority restoration activities, but can also be made available to planners, developers and regulators, where compensatory actions or municipal land planning decisions are required. The currency of a restoration bank, and its management, are critical to its success and utility.

Objective: To seek feedback on the framework of a Restoration Opportunities Bank and to discuss its utility for compensation banking.

Question 1: Please start with introductions and a statement of how the individual is involved in restoration planning or compensation.
a) Use the list provided from the morning presentation as a starting point to further discuss where a prioritized restoration bank would help to achieve the goals or objectives of any additional plans, strategies, or duties.

- Terrestrial Natural Heritage Strategy
- Watershed Strategies
- Fish Management Plans
- Remedial Action Plan
- Regional Partner Support
- Development of strategic restoration implementation plans (e.g., Transport Canada Lands, Brock North Lands, Municipal Partnerships)
- Development of goal specific restoration strategies
- TRCA Development Compensation

A prioritized restoration bank would help to achieve goals related to:

- Land securement/acquisition
- New DFO legislation
- Sub-watershed plans
- Regional strategies
- Official Plans
- Planning Act
- Environmental Assessments
- Urban forest strategies
- Voluntary compensation, e.g., from MTO, OPG
- Provincial Species at Risk, e.g., Bobolink strategy

b) Using the Markham Pre-development ROP planning scenario, discuss the importance and value of the restoration opportunity data for the development area. Please summarize discussions and answer the following questions.

- Would restoration opportunities for wetlands, riparian habitat, stream restoration, and BMPs aid in the review of a typical plan for development?

Pre-development scenario:

- How far compensation dollars reach – long term remediation
- Required vs. voluntary compensation to be defined because of derogatory connotation – need to change culture
- Concern regarding public vs. private land ownership

It was mentioned that agencies such as the Darlington nuclear power plant were interested in the ROP bank’s contents. However, TRCA’s 7,000 identified restoration opportunities are only in the GTA. It was agreed that the best approach is for proponents to perform compensation activities within their own eco-region, since that is the area that will bear the initial loss of ecological goods and services.

c) Within the area of compensation planning that you may be involved in (e.g., banking, evaluating, implementing or regulating), list the gaps or difficulties that truly stand in the way of achieving complete ecosystem compensation. Conversely, what is the greatest thing standing in the way of your duties?
Data gaps and knowledge gaps:
- Quantify loss: what habitat will be lost
- Clear understanding of goals: you need to know what you want
- Lack of agencies/organizations/groups working together
- Lack of ability to measure, e.g., intangible benefits such as those to human health
- Conflicting mandates between policies, e.g., province’s growth strategy vs. various conservation strategies
- Need to have standardized banking methodology/protocol
- Don’t incentivize compensation over protection and mitigation
- Concern about implementation feasibility
- Biased toward natural systems and ignores opportunities in urbanized settings
- Idea of a “legacy map” that would show sites where compensation has been done so that it is permanent. Worst case scenario would see a compensated site destroyed 25 years later for development, which is subsequently compensated elsewhere. This would result in a net loss to ecosystems in long term.

d) In a development scenario where compensation is required, discuss the typical steps involved in the development and approval of a compensation package. What are the greatest hurdles to overcome?

Hurdles in public projects over private projects:
- Large public infrastructure
- Approvals process is linear in nature
- Public funds are used to both develop and compensate – issue of charging the taxpayer twice
- Some projects receive exemptions from compensation

The MNR raised an interesting question: Would the approvals process allow a proponent to compensate something on their own lands over a “better” opportunity in the ROP bank? Some proponents are thinking strategically long term. The example given was that a proponent would plant a 30-metre riparian buffer today to avoid obtaining a Redside Dace permit when the adjacent area is altered/developed in 15 years.

e) In your area of focus, where are the areas that could benefit the most from ROP data on restoration opportunities?

Geographic areas to benefit most from ROP data:
- Unprotected rural areas
- Urbanized areas that require unique approach and may have higher costs

Overall summary points:
- “Compensation” must be defined and differentiated from “mitigation”. Analogy with stormwater ponds – in the past stormwater ponds were viewed in the same negative light as compensation may be now. Today, stormwater pond creation is just part of the development process. It is hoped that compensation will lose its negative connotation the same way.
- A consistent, neutral definition of compensation also means that groups doing mandatory compensation don’t represent it as a voluntary restoration, and similarly, groups performing voluntary restoration activities can frame their communications in a manner that avoids confusion with compensation.
“Analysis Paralysis” often hangs up a process in the planning stages. The ROP bank will help get to the action stages faster.

2:30 – 2:45 p.m. Break

2:45 – 3:15 p.m. Break Out Session Summary

3:15 – 3:30 p.m. Next Steps and Wrap Up (Deborah Martin-Downs, TRCA)

Making data available to Conservation Authorities and regional municipalities is the best way to achieve our common goals. Using a holistic approach, a shared methodology and clearly defined protocol is possible. Creating terminology that makes the distinction between volunteer and mandatory compensation could add value to the exercise.

A steering committee will be formed to advance the work that was presented in today’s workshop. If you would like to be part of this group, please contact:

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3:30 p.m. Workshop Adjourned