Structure of a Compensation Bank
Database of restoration opportunities

Wetland, forest, riparian, meadow, in-stream

Integrated Restoration Prioritization

- Area prioritization
- Restoration concept plans
- Desktop and field analysis
- Detailed design
- Implementation

Compensation Planning

- Compensation Protocol
- Development review
- Municipal compensatory requirements
- Species at Risk

Jurisdictional Strategies

- Terrestrial Natural Heritage
- Watershed Strategies
- Fish Management Plans
- Remedial Action Plan

Municipal and Partner Strategies

Restoration planning for partner strategies, goals, objectives
Mechanisms for Compensation Banking

Generally there is a framework of federal, provincial and municipally-led land use regulations that both directly or indirectly support compensation banking. Specifically the most significant are:

- Fisheries Act (DFO)
- Conservation Authorities Act,
- Environmental Assessment Act (EAA)
- Planning Act
- Regional Official Plans
- Local Official Plans
- Secondary Plans
- Regulated features or areas
- Species at Risk Act
- Voluntary involvement
Compensation Planning

Development Triggers

No Compensation
avoid, minimize, or mitigate

Compensation Required

Restoration Opportunities Bank
- Database of restoration opportunities
- Site prioritization and identification

Compensation Allocation
- Valuation of Compensation
- Approval
- Fund allocation
- Implementation
Ecosystem Services Compensation is the replacement of lost ecosystem functions and services, either through adjustments on site or payment for restoration off site.
Protocol Purpose and Scope

(Section 1.0, page 3)

• **Purpose:**
  – To develop and adopt a common approach for ecosystem and services compensation for determining **when** compensation is appropriate and **how** to implement it.

• **Scope:**
  – Terrestrial natural system
  – Private land development and public infrastructure projects
1. Compensation must be considered within the established conservation hierarchy of Avoid, Minimize, Mitigate, Compensate.

2. Compensation outcomes should strive to fully replace the lost ecosystem functions and services regionally, if not locally.

3. The compensation decision process should be open and transparent.

4. Compensation outcomes should be consistent and replicable.

5. Compensation should be directed to on-the-ground restoration and be informed by strategic watershed and restoration planning.
What is a Compensation Bank?

Often called conservation banking, species banking, habitat banking, biodiversity banking, biodiversity offsets, compensatory mitigation or ecological footprint offsetting.

There are essentially three scenarios:

1. Legislation or Policy requires the proponent to implement the compensation (Provincial Species at Risk)

2. Real credits or product can be purchased from banker or on the open market (Carbone Trading, Aquatic Habitat Bank)

3. Agencies can manage the bank and take cash in-lieu (Current ad hoc development review).
Types of Compensation Banks

- Habitat Capital (Mitigation banking)
  Aquatic Habitat Bank

- Financial Capital

- Opportunity Capital
Habitat Bank Components

Area Management Strategy

Ecology
Ecosystem & habitat classification
• Discrete ecoclasses & variables
• Identification of system limitations & requirements

Standardized valuation
• Evidence-based metrics and eco-currency (e.g. PCI, WSA)

Standardized policy & monitoring
• Compensation established before Authorized Harm
• Pre/post construction monitoring

Precautionary Approach
• Allow for natural variation / variability & lag times in trading

Habitat Banker

Economics
Proponent / Regulator Benefits
• Cost-effective
• Streamlined process
• Defensible & transparent

Standardized Eco-currency
• Habitat /production ratios to enable trade between ecotypes

Cost estimates / habitat unit
• Use past project planning, construction, monitoring, inflation

Synergies
• Economy of scale across projects
• Similarities across stakeholders

Habitat Bank “Win-Win”

Ecosystem Objectives (Measurable) Stakeholder Interests/ Obligations
- 4.6km of stream reconnected
- 3 Online Ponds removed
- 325m stream channel
- in-stream habitat
- 6ha of riparian habitat
- 2ha of wetland restoration
Brock North Lands
Stream Restoration Opportunities
MTO Redside Dace Overall Benefit

- 5 barriers and crossings removed
- restored access to watercourses 10.8 km
- stream restoration 902 m
- riparian plantings 11 ha
- wetland restoration 1.5 ha
- nodal reforestation 1.5 ha
Constraints of Compensation Banks

- Effective enforcement and monitoring can be problematic and often a problem with many programs.
- Programs with no established criteria for determining appropriate levels of impact often do not fully detail the direction of compensation, and can be ineffective.
- A lack of quality assurance, accounting and transparency appear to be systemic problems with many existing programs.
- The true value and understanding of complex systems is likely underestimating the need or amount of compensation.
- Establishment of appropriate fees can be problematic due to subjectivity and lack of scientific rigour.
- Compensation can take the place of restoration, resulting in little net gain.
Habitat Capital (Aquatic Habitat Bank)
- Limited by initial investment
- Can be overdrawn
- Addresses the lag of restoration maturation
- Real value or true cost accounting
- Currency / habitat calculations for complex ecological systems are difficult
Constraints by Bank Type

- Financial Capital
  - Inflation causes problems
  - Accountability and management costs are problematic
  - Transparency is critical

- Opportunity Capital
  - Greater accountability
  - Less requirement of common currency
  - Real cost accounting
  - Heavier management cost
  - Requires high level of trust, communication, and between partners