Maintaining riparian forests during stream corridor restoration

Problem statement

- Stream restoration is an important tool for improving water quality in degraded streams

- Qualifying conditions and best practices provide guidance for minimizing environmental impacts

- BUT this guidance is inconsistently utilized. In some cases:
  - Functioning forest buffers are removed to make way for stream restoration
  - Hydrological changes can result in tree mortality

- Riparian forest loss can eliminate thermal refugia and reduce organic inputs (with implications for functional lift and stream health)

Proposed cross-GIT funding project

- Work with urban stormwater, stream health, healthy watersheds, and wetlands workgroups

- 2 major components:
  - Assess how forests are currently accounted for in different jurisdictions at multiple phases of stream restoration (planning, permitting, implementation, post-restoration)
    - Literature and policy review
    - Interviews
  - Quantify impacts of stream restoration on riparian forest cover (both during and after restoration)
    - Spatial analysis using high-resolution data
    - Explore opportunities to couple with on-the-ground monitoring

- Compile report
  - Identify opportunities to better incentivize practices that will improve synergies between stream restoration and riparian forest cover

Relevance to CBP Management Strategies and Science Needs

Riparian Forest Buffer Management Strategy

- Work to achieve a net gain of forest buffers

- Protect riparian forest buffers in local land use regulations

Water Quality GIT

- Develop improved understanding of the potential benefits, and risks, of selected practices and policies to provide benefits to multiple outcomes.

Science Needs

- Establish guidelines and relationship between stream corridor restoration activities and functional lift to support project election, design, construction and monitoring to produce better stream health outcomes (Stream Health outcome)

- Monitor forest buffer change using high-resolution data (Riparian Forest Buffer outcome)