

## Stream Restoration Post-Construction Workshop

November 1, 2017

The Natural Channels Initiative held a workshop to discuss post-construction monitoring of stream restoration projects (agenda attached). The workshop was attended by 60 people representing the consulting community, DFO, MNRF, Conservation Authorities, Municipalities, academia and contractors.

Over the last 20 years, various regulatory agencies (e.g., DFO, MNRF, Conservation Authorities, Municipalities) have developed post-construction monitoring requirements for stream restoration projects. The requirements vary widely depending on the type of project. Also, for projects of similar scope and scale the requirements typically vary in terms of parameters, duration and frequency.

Collectively, post-construction monitoring programs completed to date have produced a wealth of untapped data. However, due to differences in monitoring protocols, including data collection techniques and a lack of means for sharing data, there have been limited opportunities for the greater stream restoration community to learn from past projects. Additionally, the lack of consistency between jurisdictions and projects has made it difficult for proponents to understand costs and schedules at the outset of a project.

In recognition of the fact that different projects warrant somewhat different post-construction monitoring protocols, the Workshop organizers advised attendees to focus the discussion on larger stream restoration projects (e.g., approx. 1 km); those carried out to compensate for loss of fish habitat.

The morning session opened with a presentation by TRCA outlining why they monitor and some of the lessons learned. The workshop attendees then listened to presentations by five individuals outlining their preferences/requirements with respect to post-construction monitoring. Presentations were made by individuals having considerable experience with stream restoration projects and included the following: a private sector consultant, a conservation authority, DFO, a contractor, an academic. The morning session finished with a presentation outlining post-construction monitoring practices in North Carolina, a jurisdiction with an established track record and clearly articulated program requirements.

During the afternoon, the attendees divided up into three breakout groups: 1. Channel/Geomorphology; 2. Water Quality/Benthic Invertebrates/Fish and, 3. Vegetation. Each group was asked to work towards a consensus on types of parameters to be measured and the duration and frequency of the monitoring. The breakout groups were directed to avoid the issue of determining success or failure, as there was limited time available and this discussion is better handled in a subsequent workshop. With the assistance of a facilitator and a note taker, the groups worked towards consensus.

The following tables present the findings of the three breakout groups. When bundled together, the results of this workshop provide a draft protocol for post construction monitoring activities for larger stream restoration projects aimed at providing fish habitat. The Natural Channels Initiative proposes these to be a framework for agencies to consider as a starting place for the monitoring of future

projects. Based on the feedback at the Workshop, there is a desire for agencies to move towards a more consistent protocol for post-construction monitoring, to facilitate future data sharing opportunities that will ultimately benefit the stream restoration community as a whole.