

# Riparian Zone Reclamation

## Why Reclaim Riparian Areas?

The riparian zone is the interface between the aquatic and terrestrial areas of a landscape. If fish habitat is disturbed or disrupted during construction or other activities, federal regulations may stipulate remediation of an affected riparian area. Maintaining healthy riparian zones provides many crucial environmental and economic benefits:

- ✓ Shoreline and riparian vegetation lend stability and erosion protection to riverbanks and shorelines, preventing loss of valuable waterfront property and improving aesthetics that hard structure bank stabilization products cannot.
- ✓ Riparian vegetation can trap sediment and nutrients from surface run-off, improving water quality for downstream lakes and rivers.
- ✓ Riparian and aquatic plant communities can mitigate the magnitude of flood events.
- ✓ The underwater structure created by riparian plants supports aquatic invertebrate communities that, in turn, provide an important food source for fish.
- ✓ Riparian plant communities help to regulate water temperature. This is important in nutrient cycling and critical to the productivity of certain species of freshwater fish.

## Why Native Plant Solutions?

To ensure successful riparian zone reclamation, an understanding of biological systems and their processes is essential. Key factors that determine the success of riparian zone reclamation include:

- ✓ the selection of appropriate plant species for each ecological area of a stream or river (i.e., toe, bank and overbank zones); and for marshes and lakes (i.e., emergent and wet meadow zones);
- ✓ the correct timing of planting; and
- ✓ designs that take into account the nature of local hydraulic forces.

Native Plant Solutions (NPS) understands the significance of these factors and incorporates them into developing and building a successful product that meets our client's needs. NPS has extensive experience in riparian zone reclamation and has pioneered various techniques in 'greening' hard structures used for bank stabilization.



## RIPARIAN ZONE RECLAMATION

### Our Expertise



- ✔ NPS staff specialize in upland, wetland, aquatic and environmental sciences.
- ✔ We are familiar with the regulatory framework related to riparian areas.
- ✔ We have the expertise to develop and implement re-vegetation plans that meet the necessary regulatory requirements.
- ✔ Our staff recognize the level of complexity that must be accommodated in site plans for successful riparian zone reclamation and restoration.
- ✔ NPS has years of on-the-ground experience that allows us to develop effective and efficient techniques, providing quality results and immediate ecological benefits.
- ✔ Our strategies are cost efficient and an ecologically effective means of riparian zone reclamation.

*We offer...*



- ✔ Site assessment
- ✔ Design
- ✔ Plant selection and procurement
- ✔ Tender package preparation
- ✔ On-site supervision
- ✔ Construction and installation of selected plant material
- ✔ Post-planting management
- ✔ Ongoing consultation
- ✔ Supporting research



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### Wuskwatim Habitat Compensation



**Project proponent:** Wuskwatim Power Limited Partnership (a partnership between the Nisichawayasihk Cree Nation and Manitoba Hydro)

**Location:** Wuskwatim Generating Station, Manitoba

**Project description:** Habitat compensation, as required by Fisheries and Oceans Canada, following the construction of a 200-megawatt generating station.

Native Plant Solutions provided no net loss habitat restoration along the forebay and upstream lake at Wuskwatim Generating Station. Our scope of work included assessing the proposed sites; developing strategies for vegetation establishment; designing sustainable wetland vegetation plans; installing vegetation; and performing a post-planting site assessment. The first site, involving 1.1 kilometres of shoreline as well as 6.7 hectares of near shore habitat, required planting by heavy equipment due to its size. At the second site, lack of overland access meant plants had to be brought from donor sites by boat. Working with First Nations communities, wetland vegetation was installed by hand along the normal water level of the operating dam.

We continue to work with the proponents on four additional habitat compensation sites related to the construction of the generating station.

### Sturgeon Creek Channel Diversion



**Project proponent:** CentrePort Canada Way

**Location:** Sturgeon Creek Tributary, Winnipeg, Manitoba

**Project description:** Construction and re-vegetation of fish spawning beds and channel beds following creek diversion as part of the construction of CentrePort Canada Way. The project was designed to meet Department of Fisheries and Oceans regulatory requirements.

Native Plant Solutions prepared the planting plan design, selected and sourced the appropriate plant species, supervised re-vegetation construction activities, and provided post-plant establishment monitoring for 3.45 hectares of spawning beds along Sturgeon Creek.



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*Native Plant Solutions is a consulting branch of Ducks Unlimited Canada and draws on over 70 years of wetland and native grassland knowledge, research and restoration experience. We use sound science to restore and create sustainable landscapes.*