



Native Plant  
Solutions

# Treatment Wetlands

Treatment wetlands are human-made, engineered systems that use natural wetland elements like plants, algae, microbes, light, water and soils to improve water quality. The benefit of these systems is that they can provide high-efficiency water quality treatment with very low operator input.

Combining the benefit of low operations and maintenance with high treatment efficiency has led to their application in systems such as stormwater and Low Impact Development (LID) facilities, municipal wastewater lagoons, mining operations, landfills, agricultural and livestock operations.

## Why consider treatment wetlands?

**A sustainable choice** — Treatment wetlands utilize biotic and abiotic mechanisms to render contaminants innocuous via natural processes such as sorption, uptake, transformation, translocation, microbial degradation and photolysis. Once the system is established, the wetland does the work for you — no need to add additional chemicals or mechanical processes to reach your water quality targets.

**Economic advantage** — Native plant species are naturally adapted to our climate and environmental conditions. This makes them a truly sustainable, low-cost option for treatment purposes. They provide a long-lived and low-maintenance solution that will help reach your treatment targets every year, and offer a low-cost decommissioning option at the end of their lifespan. When designed properly, no vegetation harvesting is required.

**Ecological benefits** — Our research shows the water quality flowing from our treatment wetlands is often better than the receiving waterbody. This ensures your receiving environment is always accepting the best water possible.

As living systems, treatment wetlands provide habitat for many species of insects, birds, amphibians and other wildlife, with their plants and soils sequestering significant amounts of atmospheric carbon as well.

## Our services

- Site design, plant selection, procurement and plant establishment
- Site preparation and on-site construction services
- Post-planting management and site commissioning
- Water and soil testing, and interpretation of the results
- Operational and maintenance manuals at the time of project handoff
- Regulatory support for our clients, including project reporting

## Why choose Native Plant Solutions?

NPS is the country's leader in the design, construction and commissioning of treatment wetlands. We are proud of our reputation for delivering projects to our clients that are environmentally and financially sustainable. We can provide you with the specialized team these projects require: plant specialists, engineering, water and soil experts and environmental contaminant specialists.

The key to successful treatment using wetlands is to ensure the amount of vegetation required for treatment is matched with treatment needs based on flow inputs and the contaminants of concern. This important relationship drives wetland cell design and sizing, and it is often overlooked in wetland designs.

To learn more about NPS, our projects and expertise, visit [nativeplantsolutions.ca](https://nativeplantsolutions.ca)