

# Bio-engineering

## Innovative Designs to Maintain Natural and Functioning Ecosystems



Tannas Conservation Services Ltd

### BIOENGINEERING DESIGN

**Regulatory Approvals:** Complete environmental assessments, habitat analysis, reporting, and regulatory applications

**Engineering:** We partner with highly qualified engineers and geotechnical specialists to ensure the structural stability and longevity of each project

**Bio-engineering Designs:** Brush layers, Fascines, Brush Mattresses, Crib Walls, TRM placement, Erosion Control, Vegetated Gabions, Vegetated Riprap, and Vegetated Spurs. We create unique designs for the needs of each project to achieve the highest habitat protection

**Seed Mix Designs:** Creating scientifically accurate seed mixes, incorporation of decades of monitoring, and propagation of native plants to ensure success every time

**Environmental Inspections:** We complete comprehensive environmental inspections for all of our clients' needs

**Reclamation Monitoring:** We have completed numerous long term monitoring programs to ensure the success of each project



## Projects

*Our specialization in restoration ecology goes beyond just placing soil and throwing down seed. We have award winning professionals who have conducted years of research into native plant propagation, restoration of native ecosystems, and have pioneered new techniques in restoration of ecosystems. With a subsidiary company actively growing hundreds of native species on an annual basis, we can ensure that we provide our clients with the best quality plants that will maximize success. Our expertise in bio-engineering goes beyond following pre-conceived designs and involves creating unique designs to meet each projects needs.*



### City of Calgary Bank Stabilization Projects

TCS personnel have been partners with AMEC for the past 3 years completing numerous bio-engineering projects throughout Calgary. These projects require infrastructure to be protected, while achieving the goal of restoring a functioning natural ecosystem with no loss of fish or terrestrial habitat during the restoration process. These projects incorporate new and unique designs and restore fully functioning native ecosystems within an urban and rural environment.

### Sitsika First Nation

TCS personnel completed all environmental assessments, reporting, and regulatory applications for three projects on the Sitsika First Nation lands. The project required TCS to work with the engineering firm to modify the engineering design to meet the expectations of DFO, reach an agreement with DFO to construct during winter, and complete all monitoring during construction of the project.

## Experience

Winners of the 2014 Emerald Awards and Finalists for the 2015 ASTECH Awards with our restoration projects.

With over 20 years' experience working within the restoration industry, we have experience working within numerous industries to meet many different goals.

We have designed numerous bio-engineering projects encompassing kilometers of river and stream channels with our partnering engineering firms, including installation of brush mattresses, vegetated gabions, vegetated riprap, brush layers, vegetated spurs, and fascines, along with other innovative designs found nowhere else.

We completed high quality monitoring programs to ensure restoration success and that any modifications required can easily be incorporated into our adaptive management programs.

Design numerous planting plans and seed mixes for companies across western Canada.

## The Tannas Conservation Services Advantage

Based throughout Alberta, Tannas Conservation Services has extensive experience working across western Canada. Within the hundreds of projects we have completed we have surveyed over 2 million hectares of land in western Canada from the Arctic Ocean to the USA border. Our highly trained and experienced team integrates office and field work allowing the specialist writing the report to be the same person who has been on the ground. This ensures we provide each client with the best quality product.



Tannas Conservation Services Ltd  
[www.tannasenvironmental.com](http://www.tannasenvironmental.com)

Box 31, Cremona Alberta,  
Phone: 403 850 9052  
Email: [info@tannasenvironmental.com](mailto:info@tannasenvironmental.com)  
Cremona, Calgary, St Albert, Pincher Creek

