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## **Standards for Native Revegetation**

Ecological Restoration Workshop:

**March 21, 2018**

**Holiday Inn Airport- Polo Park**

**1740 Ellice Avenue**

**Winnipeg, Manitoba**

The way we revegetate disturbed land is an essential facet of remediation and environmental protection.



Undisturbed native prairie in Saskatchewan



**Some level of disturbance to habitat and other valued ecosystem components is unavoidable and can often be minimized.**



Proper revegetation is a critical facet to minimizing a project's potential negative effects. Here we see a major construction site in the process of native plant revegetation.



**East Side Road Construction Site**



East Side Road Construction Site in 2011



**This is the same project approximately 2 years later using efficient and effective, science-based revegetation protocol.**



**The way we revegetate disturbed land is an essential facet of remediation and environmental protection.**

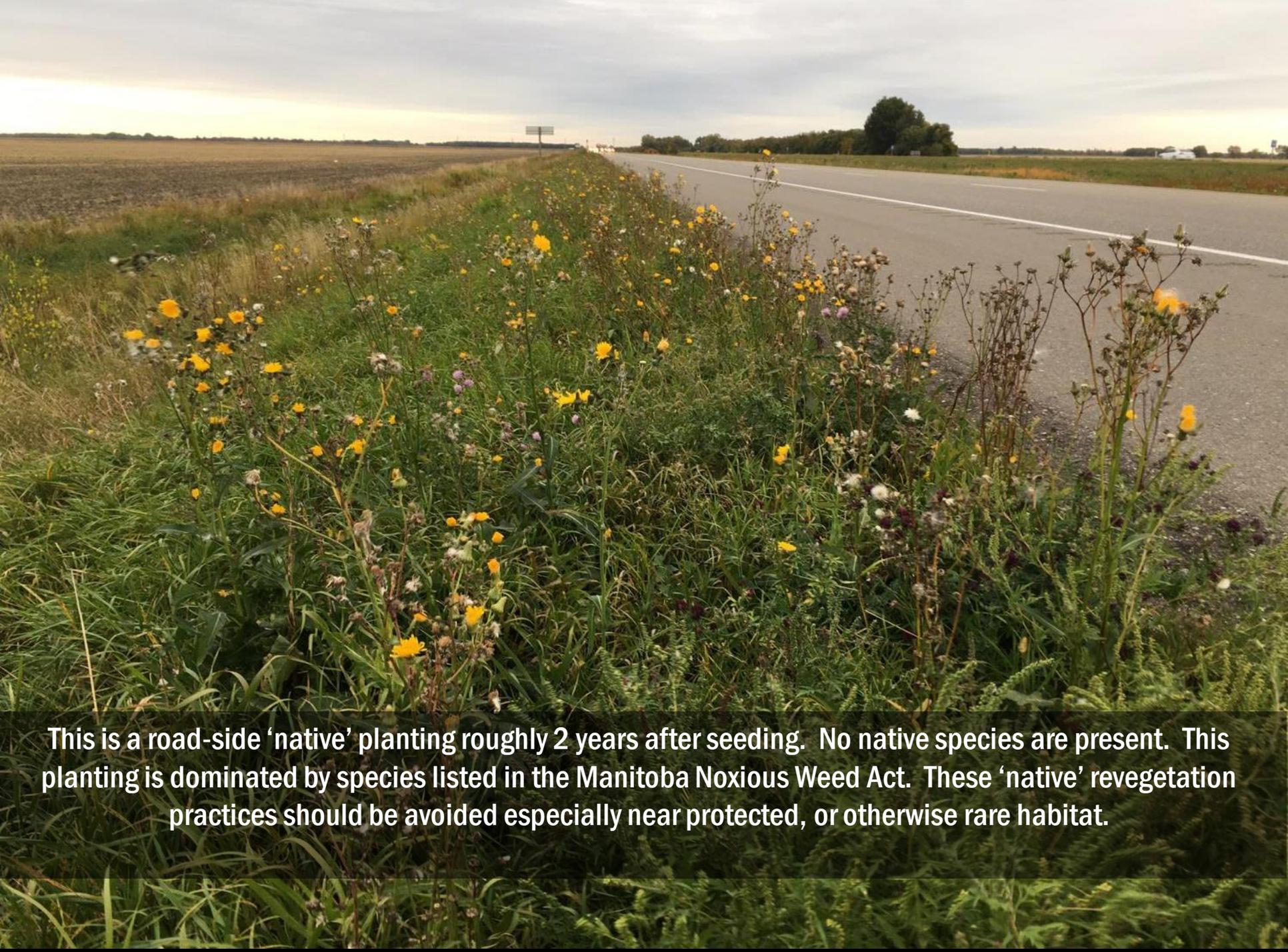
**Revegetation work is the final, and arguably, most important step in site restoration.**



**This is a native/tame grass planting, approximately 2 years after seeding. Planting design failed to consider proper site-preparation, planting and establishment protocol....**



**...these sites are characterized by tame species, noxious weeds and weak planting establishment. Poor planting practices are a leading cause for the spread of weeds and, obviously, poor planting establishment.**



**This is a road-side 'native' planting roughly 2 years after seeding. No native species are present. This planting is dominated by species listed in the Manitoba Noxious Weed Act. These 'native' revegetation practices should be avoided especially near protected, or otherwise rare habitat.**



**This thistle infestation like this is a common outcome of bad revegetation practices. Weeds like Canada thistle spread from these sites into adjacent areas and degrade adjacent habitat including protected areas.**

**Weed encroachment is a serious threat to native biodiversity and healthy eco-system functioning.**

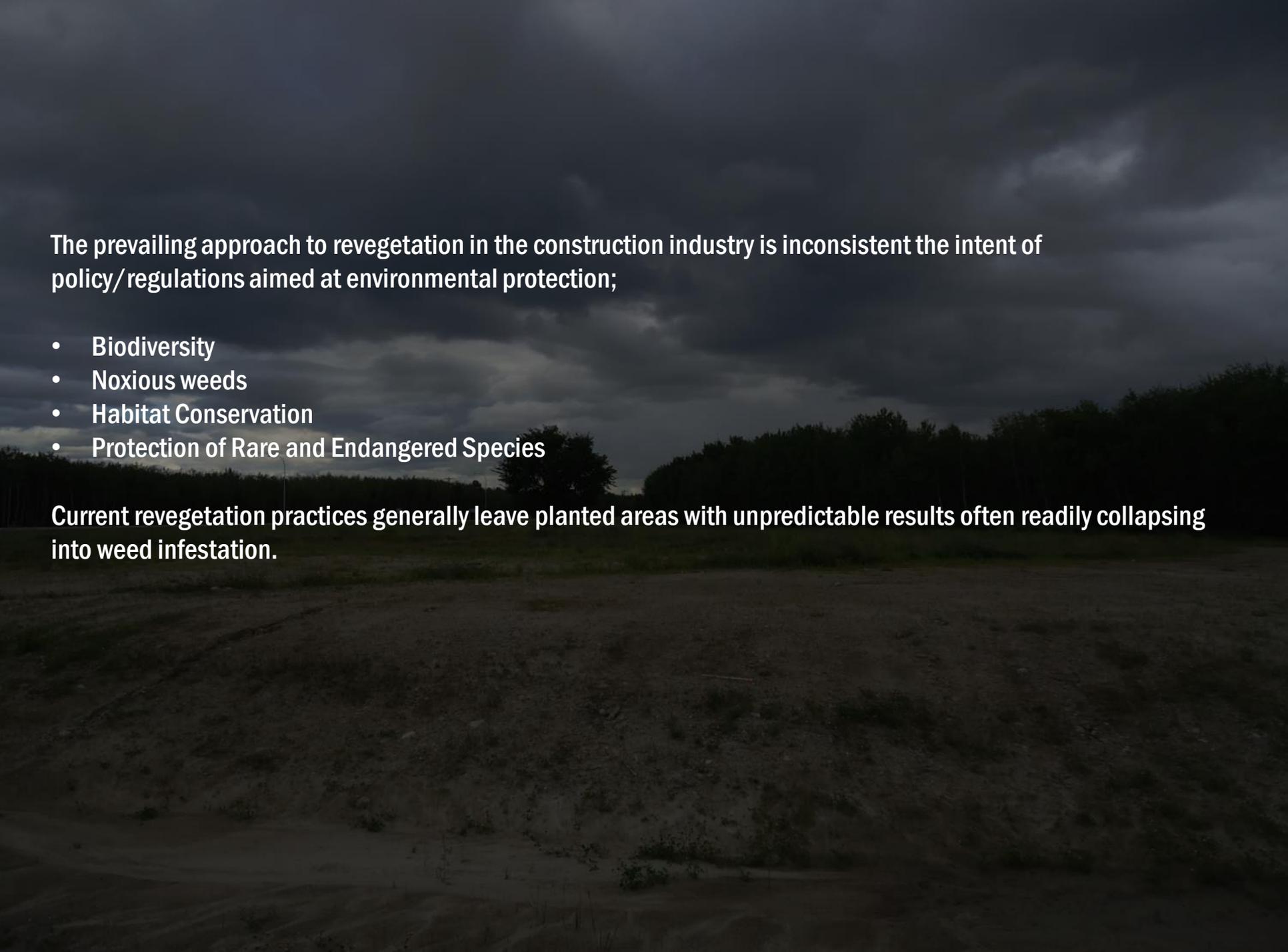
**The most sustainable approach to restricting the spread invasive (ecologically disruptive) plant species encroachment is timely and effective native revegetation.**



## Standards

Currently in the construction industry there are no science-based standards or performance criteria for native revegetation. The '*Green-is-Good*' mind-set is often the *de-facto* criteria.

Revegetation practices and existing compliance criteria in the construction industry tends to enable low quality (weed infested) revegetation work.



The prevailing approach to revegetation in the construction industry is inconsistent the intent of policy/regulations aimed at environmental protection;

- Biodiversity
- Noxious weeds
- Habitat Conservation
- Protection of Rare and Endangered Species

Current revegetation practices generally leave planted areas with unpredictable results often readily collapsing into weed infestation.

The long term ecological stability and health of protected landscapes, is only as good as the stewardship practices that surround these areas.



**Appropriate native revegetation practices on disturbed ground is vital to the protection of adjacent ecological resources.**





**This is a riverbank planting in its 4<sup>th</sup> year following planting. Revegetation was undertaken using science-based native revegetation protocol. This is enduring revegetation work that shows a high degree of resistance to noxious weed encroachment.**



Here is a similar planting in year 1...



...in year 2...



...in year 4...



**A Ducks Unlimited Canada native grass planting approximately 10 – 12 years following planting. This site had been periodically managed using properly timed controlled burns.**



**A native grass planting at the Royalwood Phase II housing sub-division in Winnipeg approximately 8 years following planting (at the time of this photograph).**

**The way we revegetate disturbed land is an essential facet of remediation and environmental protection.**

**Revegetation work is the final, and arguably, most important step in site restoration.**



**Science-based native revegetation practices, which offer high-quality, enduring revegetation results should be a standard element of environmental reclamation on disturbed land and for the protection of adjacent protected/rare habitat.**



### The Endangered Species and Ecosystems Act (recent):

- Protects Tallgrass Prairie and Alvars
- At the Minister's Discretion:
  - *Recovery Strategy for Threatened and Endangered Species*
  - *Establish Ecological Zones of Protection*

### Ecological Preserves (Tallgrass Prairie):

- The 2005 Memorandum of Agreement between Nature Manitoba and the Province.



Science-based native revegetation practices should be considered as part of any *recovery strategy for threatened and endangered species / ecosystems and in establishing ecological zones of protection.....*

Revegetation effort may be tailored to zones of priority based on proximity to endangered habitat (like the tall grass prairie)



## Standards Start with the Regulators

Engage Revegetation Professionals to;

- Revise revegetation standards, methods, schedules and compliance criteria to promote state of the science native revegetation practices where appropriate;
- Update existing, and forth-coming, environmental licensing requirements to promote science-based revegetation practices;
- Develop internal revegetation guidelines to help 'screen' for good revegetation planning and execution;
- **Establish Ecological Protection Zones (EPZ) around endangered ecosystems or other high value habitat and require that revegetation professionals be engaged to undertake the work.**