

Towards a Shared Foundation for Innovation and Evolution

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Disclaimer

- These slides represent the personal views and opinions of the Panel members, and do not necessarily reflect those of the organizations they work for or associate with, including the Alberta Chapter, Canadian Land Reclamation Association.

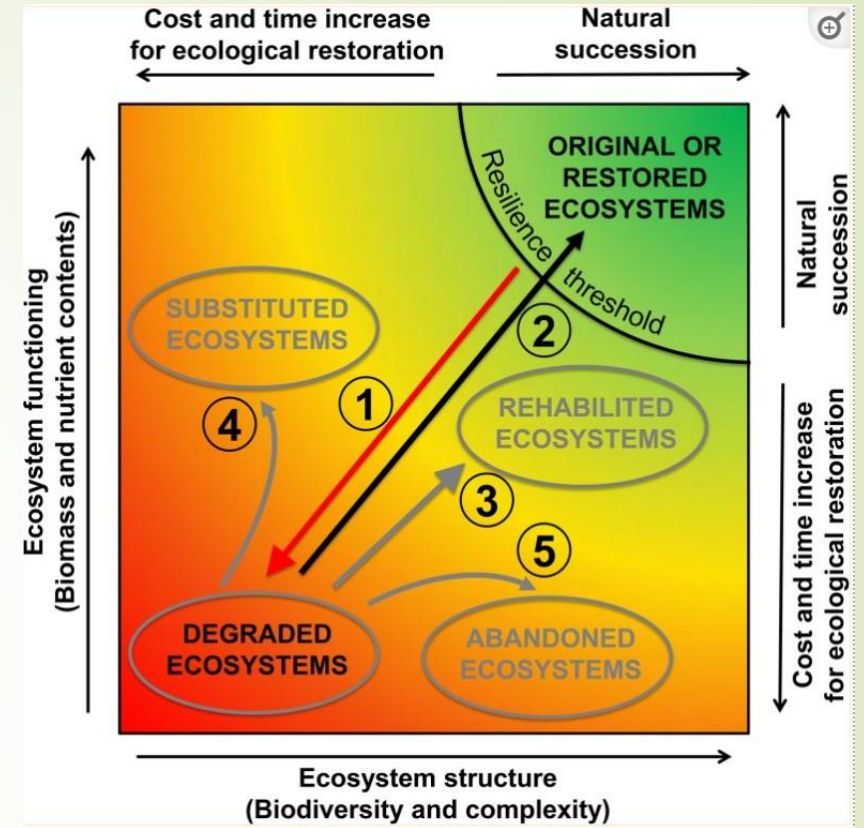


Panel Goals

- Start a broader conversation about the **principles** that should inform where we want to get to and how we want to get there.
- Establish a **safe place** for challenging status quo, existing assumptions, and misconceptions through dialogue with colleagues, industry and government.
- Encourage practitioners to discuss and then agree on:
 - What our reclamation **goal** is (as people working in the industry and as members of the public)
 - What **success** looks like
 - How to **measure** success, and
 - Do all these together make sense (**achievable** at a reasonable cost in a reasonable timeframe).

What are we Trying to Achieve?

- The statutory requirement in EPEA is **Reclamation not Restoration**
- **Equivalent Land Capability** allows for:
 - Returning what was there before **OR**
 - Creating an alternative land use that is deemed equivalent
- Reclamation embodies both outcomes whereas restoration aims only for the first one



Gastauer et. al., 2019 Ambio
48(1): 74-88

Consistent Approaches



- Should there be **Consistency Across Sectors and Jurisdictions**, or are there **valid reasons** for treating land types, land uses, sectors, and “problems” differently?
- Can we get **Policy Alignment** such that the reclamation expectations under the Public Lands Act, EPEA and the *Water Act* are similar?
- Further, how can we support AER and AEPA to bring that alignment into decision making?

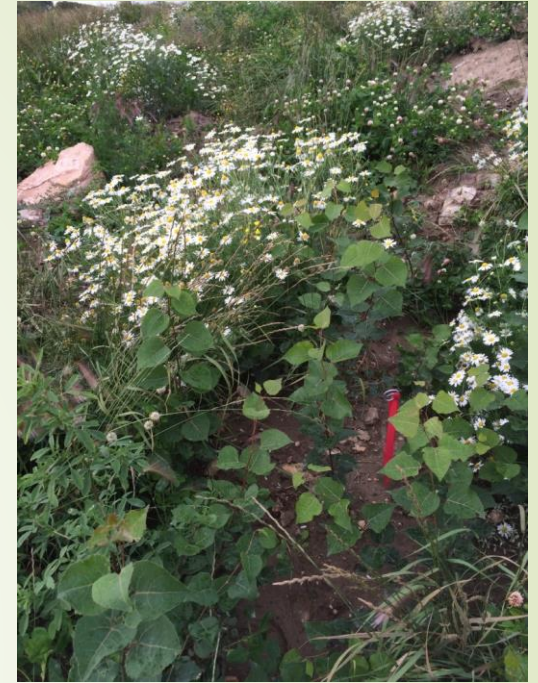


Decisions and Standards

- How do we reduce **Decision Paralysis** created by fear of applying for and issuing reclamation certificates for large disturbances?
- Can we confirm what the reclamation expectation is for all disturbances (i.e., **Standard of the Day**) and enable the **Record of Progressive Reclamation** to reduce end-of-day paralysis.
 - This is especially critical in large disturbances, or in disturbances that span different conservation and reclamation regulatory regimes.

Outcomes, Rules and Criteria

- Are we interested in **Outcomes or Rules** (if outcomes, then do we care about how we get there)
- How do we ensure the desired outcomes are reflected in **Certification Criteria**?
- How do we ensure the desired outcomes and criteria are **Reasonable and Achievable**?
- Is it appropriate to occasionally **break the Rules** to better achieve the Outcome?



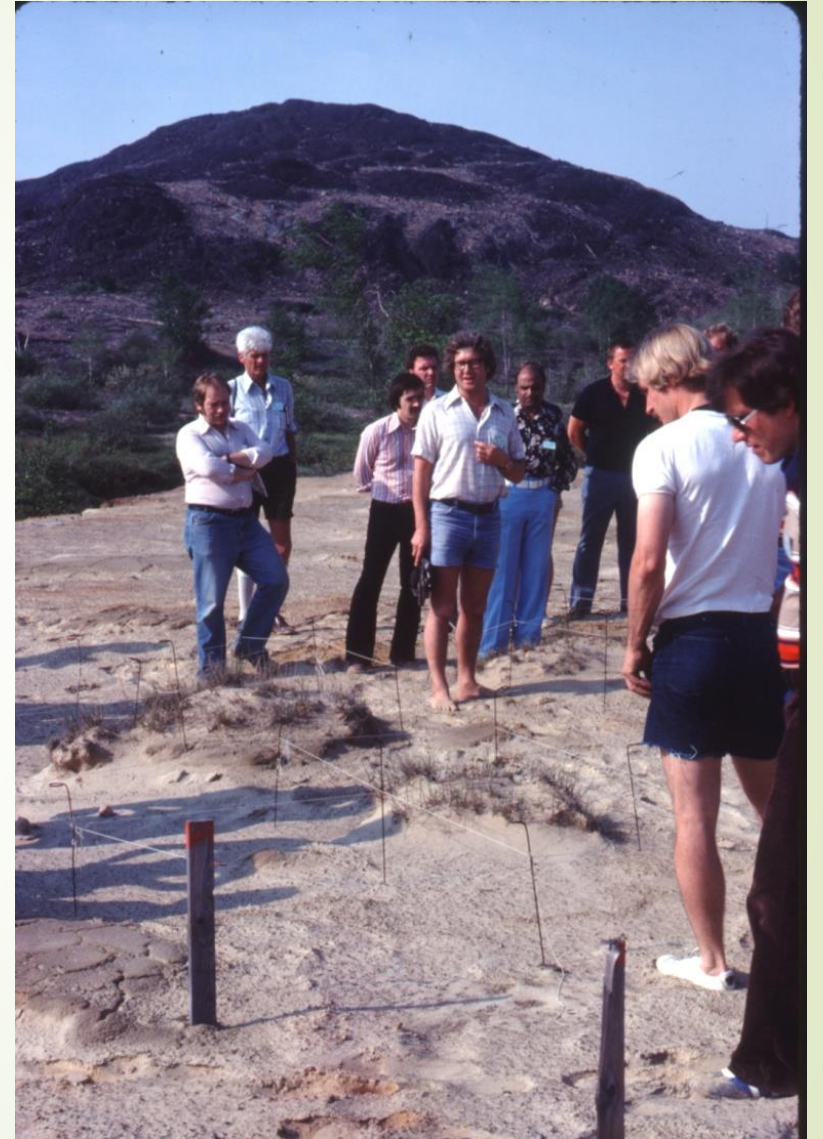


The Role of Professionals

- When and why should **Professional Judgement** be accepted?
- Can we rely on the professional organizations to ensure **Accountability** of members who make professional judgements?

Open Dialogue

- We shouldn't be afraid to talk about our challenges with reclamation – there should be an open-door policy to have candid conversations to learn from each other.
- Conversations should include the policy maker and the regulator as well as industry and consultants.
- Only the formal submissions should go on file – let us engage without fear.





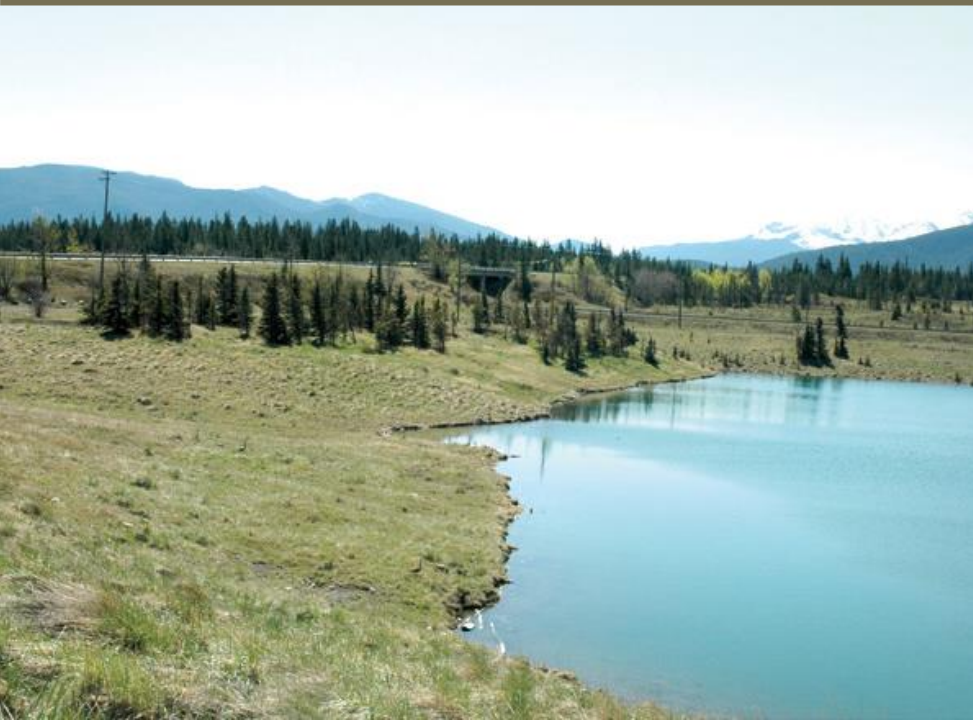
Learning from Failure

- We should be comfortable in talking about our failures as they are also valuable for learning.
- Our focus and praise on success not failure creates fear to try new things. As a result, research and development may stagnate.
- Isolated failures do not need to trigger a guideline; save those for challenges that are consistently experienced across the sector.

Capability

- What happened to the “capability” part of ELC?
- The shift to capability in 1983 recognized that productivity can be manipulated and that, in forest or native grassland settings, it can take years to confirm vegetation performance.
- It appears that productivity measures, vegetation especially, but also things like biodiversity, wildlife species and numbers, and recreation use, are taking the place of capability





Land Use vs. Land Capability

- Do we understand the difference between land use type under the *Public Lands Act* and land capability under EPEA?
 - Land use type (PLA) – Native Grasslands; Forested Lands (not including wetlands); Cultivated Lands; Peatlands & Mineral Wetlands. A pit lake is considered an alternate land use type.
 - End land use (EPEA) is typically presented as: commercial forestry, biodiversity, wildlife habitat, traditional use, recreational use (as per SED-003), and sometimes industrial use. These end land uses often overlap with each other.
- Furthermore, do we agree that intended end land use is a valid component in the decision matrix of achievement of reclamation success?

Reclamation Plans

- Are the reclamation plans required by approvals or Codes of Practice considered concepts or promises?
- When is a plan “approved”?
- How should changes be considered? How should adaptive management be integrated?
- How should plans be interpreted in enforcement and certification processes?
- Is reclamation planning really a black & white process? What about execution of the plans?



Traditional Use

- How can we ensure traditional uses are accommodated in reclamation plans?
- Do we know what site characteristics traditional uses require?
- Is traditional use a primary goal or one that can be accommodated in other land uses?
- How far apart are 'western science' and 'traditional knowledge'?



Rachelle McDonald, Aseniwuche Winewak Nation IN Powter et al., 2015. Aboriginal Participation in Land Reclamation: Enhancing the Dialogue



Climate Change

- ▶ Can we / should we incorporate future climate conditions into reclamation plans?
- ▶ Do current regulations / policies allow for this?
- ▶ Does the current level of science make this possible?
- ▶ What if we're wrong? How will it impact reclamation certification?
 - ▶ Or do we plant the current species in the appropriate seed zone and assume that they will adapt to future climate conditions at the same rate as the offsite vegetation?

Automated Decision Tools

- Automation of decision processes is great BUT we need to understand and question what happens inside the box.
 - Do the results make sense given what you see in the field?
- Is this the solution to a lack of human resources and funding or an actual improvement?
- Will automation have negative consequences?



Old Documents

- Retaining older versions of regulatory documents allows practitioners to understand how and why rules and practices have evolved.
 - Relying on the memories of those who've been around a long time is not the way to go.
 - Of course, this only works when professionals review the old documents or are familiar with them.
- Lost history means we may reinvent the wheel.

THE LAND SURFACE CONSERVATION AND RECLAMATION ACT
THE REGULATED OIL SANDS SURFACE OPERATION REGULATIONS
DEVELOPMENT AND RECLAMATION APPROVAL NO.OS-1-78

SYNCRUDE CANADA LTD., a body
corporate incorporated under the law of Alberta
(or)
(Occupation if applicant is a natural person)

IS HEREBY GRANTED DEVELOPMENT AND RECLAMATION APPROVAL, pursuant
to the Regulated Oil Sands Surface Operation Regulations for
operations as described in its Development and Reclamation
Application and any amendments thereof or additions thereto made
on or before the date hereof, on lands described in Schedule 1
to the Approval, upon the terms and conditions prescribed in

RECLAMATION ASSESSMENT CRITERIA FOR PIPELINES 2001 DRAFT

1.0 GENERAL INTRODUCTION

Provincial regulations in Alberta require that land disturbed by pipelines must be reclaimed to an equivalent land capability. These criteria measure the return of equivalent land capability for pipelines.

To determine whether equivalent capability has been met, industry and government require a method of assessment which is reliable, replicable, and relatively easy to work with in the field. In October 1996 NOVA Gas Transmission Ltd. (NGTL) established a multi-stakeholder External Soils Advisory Board with the short-term objective of developing a user-friendly, capability-based soil evaluation tool to determine if equivalent land capability has been achieved after pipeline disturbance. Membership included Alberta Environment, Alberta Agriculture, Food and Rural Development, NOVA Gas Transmission Ltd. (now TransCanada PipeLines Limited), PanCanadian Petroleum Limited, Talisman Energy Inc., Can-Ag Enterprises Ltd., J. D. Burke and Associates Ltd., and Pettapiece Pedology.

Three years of development and field testing resulted in the *Reclamation Assessment Criteria for Pipelines – 2001 Draft*. Although many of the factors are relevant, it is not intended as a construction guide or to direct soil salvage. This document should, however, be considered when planning for pipeline construction.