

Land capability classification of reclaimed lands in Alberta – history and future



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Abstract

Land capability classification in Alberta commenced in the 1960's as part of the Canada Land Inventory: Soil Capability Classifications for Agriculture (1965) and Land Capability Classification for Forestry (1967, 1970). Modifications to these rating systems were made for Alberta natural lands during the 1970's and 80's, with further revisions made in the 90's by cooperative government-industry-consultant committees to make the rating systems applicable to reclaimed lands.

Agricultural or forest capability reclamation assessments, dictated by the land use, have been applied as part of Environmental Impact Assessments and to a lesser extent, Reclamation Certificate Applications since the 1990's. Several industry and government-funded soil and vegetation monitoring projects were also established during this time, as well as numerous graduate and industry-lead research projects, all geared to better understand and improve reclamation practices. What has since emerged from this work is the importance of soil-vegetation relationships based on ecological site types as a driver of land capability, a key consideration that is missing from the current system.

So, are we heading in the right direction and what might we implement to better our knowledge, processes, and outcomes? A few options, such as combining edaphic features, ecological sites, forest productivity, and carbon status are proposed for consideration by industry, consultants, government, universities, and land managers. Renewed collaboration and sharing positive and negative reclamation results provides a preferred pathway to best practices, and more cost-effective and successful reclamation. Alberta is a world leader in land reclamation. It is now time to make refinements based on reviewing past work, selecting the best methods to evaluate the reclaimed lands to meet foreseeable needs, and defining a succinct approach that will work well here and be a model for other provinces and beyond.

Biography

Leonard Leskiw, P Ag, has as a farming background, a B.Sc. and M.Sc. from the U of A, and about 50 years' experience in soils work across Canada and internationally. He conducted many projects including: soil survey, agricultural capability, irrigation suitability, forest capability, soil reclamation and remediation, environmental impact assessment, conservation and reclamation planning, construction monitoring, long term soil and vegetation plot monitoring, and teaching soils and reclamation courses at the University of Alberta as well as for industrial clients.

Leonard worked on government and industry committees in establishing pipeline reclamation criteria, the well site reclamation criteria, and land capability classification systems for reclaimed soils for agriculture and forestry, which all became regulatory guidelines for the Alberta Government. As lead or co-author he published several papers in the Canadian Journal of Soil Science.