

EXPERIENCES IN RECLAIMING RAILWAYS UNDER ALBERTA'S NEW RECLAMATION GUIDELINES

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INTRODUCTION

Central Western Railway (CWR) was obligated to abandon 64 km of railway in the Alberta Plains region east of Consort. This line was built in 1914. This was the first line to be abandoned under the new guidelines proposed by Alberta Environmental Protection. This paper will present the experiences in planning the reclamation, as at time of publication work was still ongoing. This paper will focus on the unique features of reclamation in comparison to other linear developments, and discuss the application of Alberta Environmental Protection's Draft Reclamation Criteria for Abandoned Railways. In effect, since the reclamation is underway, this paper is but an interim report, and further experiences will be presented at the conference.

DISCUSSION

Features of Reclamation of Railways

Railways share the same reclamation challenges as other linear developments as they often include:

- access challenges after the track is pulled,
- crossing several different habitats,
- water body crossings, and
- slope stability issues.

Therefore similar tools can be used. The preparation of reclamation plans is made easier by the presence of accurate surveys and the fact that the right-of-way (ROW) stands out clearly on air photos. Employees often have long tenure and are a valuable source of guidance and information.

Railways also pose some unique challenges in reclamation. Rail transport can not tolerate steep grades or curves so land forms and features are more severely bisected than by other linear developments. Cuts and fills are more pronounced, and drainages are more severely affected and sometimes permanently altered.

In addition, the high activity of railway building occurred in the late 19th Century and early 20th Century. Top soil salvage was in most cases not recognized, and often the equipment was not available for phased stripping. However that same lack of equipment and horsepower meant that less ROW was disturbed.

Many railways were also built before water conservation acts and regulations were enforced. Many were built under Federal Statute which either took precedence in law, or at the very least removed them from provincial or local jurisdiction. The consequent fact is that drainages were often altered or stopped altogether.

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Another outstanding issue is environmental contamination concerns. It is extremely difficult to assess potential contamination as activity on individual lines varies so greatly. One could face almost pristine conditions, or alternatively an old Division Point could still be contaminated from activities during the steam era.

However, some advantages to the reclamation specialist come with the additional challenges of reclaiming railways. Firstly, vegetation is often well established. In many cases, railways were built before the surrounding land was cultivated and provide an ecological refugia particularly for native plant species. It appears they may also provide a travel lanes for wildlife, but the evidence is circumstantial.

Secondly, the track itself often has a high salvage value. A prudent railway company or reclamation specialist can ensure that the surface and subsurface structures will be removed by the Salvager at the time the rails are recovered. The rails' salvage value generally pays for the extra effort in removing other infrastructure. This is made more important since once the rails are removed, access is very much restricted.

Lastly, the land is often valuable as either a row required by another entity, an ecological refugia, or for the extension of existing activities on neighbouring parcels of land.

Application of Reclamation Criteria for Abandoned Railways

During the planning of reclamation, representatives of Alberta Environmental Protection joined CWR representatives and the reclamation specialist to tour the line in detail. Structures requiring removal were noted, as were areas where excessive ballast required removal.

The most difficult decisions to make surrounded the questions of removal of culverts. Such removal often requires the need for extensive regrading and disturbance of stable, revegetated, slopes; however their retention raises the concern of an eventual collapse of the culvert, and the leaving behind of often pronounced artificial cuts and fills. The results of those discussions are still ongoing; and their resolution will be discussed further during the presentation of this paper.

The guidelines produced by Alberta Environmental Protection accommodates the potential land use of the ROW, contaminant variability, and the technical issues of shallow grades and pronounced cuts and fills. In short it provides the operator and regulator sufficient adaptability to accommodate the unique features of railways.



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***Conservation and Reclamation:
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