

Administrative Guidelines for Gravel Pit Reclamation

1. Government of Alberta, Alberta Environment Regulations
 - a. Code of Practice for Pits
 - b. Regulation of pits
 - i. Class I pits
 1. Five hectares or more in area
 2. Subject to the Code of Practice for Pits or an existing approval under the *Environmental Protection and Enhancement Act*
 3. Pits with an existing approval must convert to a registration by November 1, 2008
 - ii. Class II pits
 1. Less than five hectares (on private land)
 2. Any size (on public land)
 3. Subject to the requirements of the Act and the Conservation and Reclamation Regulation
 4. Operators must comply with all requirements of the Environmental Protection and Enhancement Act and its regulations and Codes of Practice. In addition, they must comply with the Alberta Water Act and all other applicable provincial and federal laws.

Progressive reclamation is recommended during pit operation as it may take two to three years to return the land to an equivalent capability. Once a development stage is complete, overburden and subsoil can be directly placed into depleted pit areas to achieve the contour grade for reclamation. Reclamation should focus on restoring gentle landforms, establishing equivalent drainage and reconstructing an acceptable soil. Reclaimed land surfaces must be at least one meter above the water table's shallowest depth. A Reclamation Certificate is required under the *Environmental Protection and Enhancement Act*.

The end land use for the pit should be decided during the planning stage, in consultation with the landowner. This is based on an assessment of the type of operation, its location and surrounding uses. The end use usually dictates the sloping requirements. Some typical end uses include: cultivation, hay land, pasture, native grassland, forest, wildlife habitat, water bodies, and industrial or residential subdivisions.

Procedures:

1. Profile each pit area prior to stripping.
2. The Public Works Department will determine a reclamation plan and establish a cost estimate for each pit. The reclamation plan will be presented to the landowner for information purposes.

3. When gravel pits are stripped, the Public Works Department will ensure that the different soil types encountered will be stockpiled separately.
4. At the end of each construction season, the Public Works Department will review each gravel pit to determine whether reclamation should take place the following year.
5. Soil removed by the County, while working in the area of a pit, will be stockpiled in the pit for use in reclamation.
6. Material replaced during reclamation will be placed according to surrounding conditions and the *Alberta Environment Regulations and the Code of Practice for Pits*.
7. Rocks will be removed from the reclaimed area as often as required to meet the regulation required by Alberta Environment and the *Code of Practice for Pits*.
8. The grass mixture will be applied by the Public Works Department in a manner suitable to sustain the proper growth and root development required by Alberta Environment and the *Code of Practice for Pits*.
9. Reclaimed areas will be inspected twice each year, spring and fall, to determine the condition of the grass.
10. This policy will be included as an Appendix in gravel pit agreements with landowners.

Calculation of Liability:

Once gravel has been crushed and removed from the gravel pit, a municipality is responsible for the cost to reclaim the municipally owned gravel pit. In addition, depending on the contract with a landowner, the municipality may also be responsible for future costs to reclaim a gravel pit located on a landowner's property.

Depending on the reclamation work required, the municipality would accrue annually on a pit by pit basis, an expense based on a fixed cost per tonne (or yard) of gravel removed from the pit during the year. The fixed cost per tonne is based on the estimated reclamation plan. The expected reclamation amount is then divided by the expected tonnes of gravel to be produced to arrive at a cost per tonne.

As the municipality reclaims the gravel pit, the liability previously accrued is reduced. Any difference to the liability accrued versus the actual costs incurred should be adjusted in the year the final reclamation work is completed.

It is important the Municipality have a policy in regards to gravel contracts to ensure the Municipality's policy is applied consistently.