



# Genesee Operations

## Land Use Guidelines

# Capital Power Genesee Land Operations Land Use Guidelines

## Summary

These Land Use Guidelines (the Guidelines) summarize the practices for how Capital Power manages its land for the Genesee Land Operations. They were developed to meet the needs of the operation and other users of the land, and to meet specific regulatory requirements that govern Capital Power’s land holdings in the Genesee area.

In 2007, an initial land use review was conducted to form the basis of these Guidelines. Since the first issue, feedback has been received from the community, other land users and stakeholders that have shaped the application of the Guidelines.

In 2011, as part of the Genesee Mine Extension Application, an End Land Use Plan (ELUP) was developed to illustrate how the land will be returned once the Genesee operations reach the end of their useful life. These Guidelines reflect the goals in the ELUP so the land is managed the same way it will be left once the Genesee operations end. The Guidelines are reviewed periodically to ensure they remain appropriate and fair, and align with the ELUP.

In 2015 Capital Power received a number of amendments to approvals to operate the Genesee Coal Mine for an additional ten years from the Alberta Energy Regulator:

1. Environmental Protection and Enhancement Act Approval No. 10404-03-00;
2. Water Act Amendments No. 00157408-00-04 and No. 00210935-00-03; and
3. AER Mine License C2005-12.

The Guidelines cover:

- Land management;
- Land access;
- Environmental management, and;
- Reclamation management.

<b>Capital Power Genesee Generating Station</b>	Box 20, Site 2, RR1 Warburg, AB T0C 2T0
---	--

Main Reception	780-969-8500; 780-848-8300 (local)
Security	780-969-8505
Manager, Land Services	780-969-8618
Public Consultation	780-848-8474 (local) publicconsultation@capitalpower.com

<b>Westmoreland Coal Genesee Mine</b>	PO Box 460 Warburg, AB T0C 2T0
---	-----------------------------------

Main Reception	780-848-7786
----------------	--------------

## Contents

About the Genesee Operations .....	4
Genesee Generating Station (Capital Power) .....	4
Genesee Mine (Westmoreland Coal Company) .....	4
Public Consultation and Review .....	5
Introduction .....	5
Objectives .....	5
1.0 Land Management .....	6
1.1 Land Acquisition .....	6
1.2 Land Sales.....	6
1.3 Surplus Item Disposal.....	6
1.4 Land Leasing .....	7
1.5 Cropping On Reclaimed Lands.....	7
1.6 Cattle Grazing.....	8
1.7 Public Coal Sales .....	9
1.8 Water Management.....	9
1.9 Water Policy .....	10
1.10 Local Cemeteries .....	11
2.0 Land Access.....	12
2.1 Resource Development/Industry.....	12
2.2 Roads .....	12
2.3 Recreation.....	12
3.0 Environmental Management.....	13
3.1 Wildlife Monitoring Programs.....	13
3.2 Biomonitoring Programs .....	13
3.3 Air Monitoring Programs .....	13
3.4 Dust and Noise Management.....	14
3.5 Natural Areas.....	15
4.0 Reclamation Management .....	16
4.1 Reclamation .....	16
Stages of Reclamation .....	16
4.2 Reclamation certificates.....	17
4.3 Trees and Forestry .....	17
Glossary .....	18
Schedule “A”: Groundwater Supply Policy.....	24
Capital Power Commitment .....	24
Background.....	24
Groundwater Monitoring .....	24
Application of the Policy .....	24
Affected Area .....	24
Complaint Investigation and Mitigation Measures.....	25
Water Policy Q&A .....	26
Water Policy Glossary .....	28
Water Well Verification Program for Landowners .....	29
Approved List of Water Well Contractors.....	29

## About the Genesee Operations

---

### **Genesee Generating Station (Capital Power)**

In 1982, the City of Edmonton signed a Development Agreement with the County of Leduc for the construction and operation of the Genesee Generating Station (GGS). Genesee Unit 2 (G2) was the first unit to receive approval and began operations in 1989<sup>1</sup>. Genesee Unit 1 (G1) was the second unit to receive approval and began operations in 1994. Genesee Unit 3 (G3), one of the most advanced, fuel-efficient, and environmentally progressive coal-fired facilities in Canada, began operations in 2005.

The three units at Genesee are responsible for providing more than 1,200 megawatts (MW) of base load power to the Alberta electricity grid. Capital Power owns and operates G1 and G2, and G3 is operated by Capital Power and jointly owned by Capital Power and TransAlta Corporation.

Future plans for Genesee Station include a joint venture project between Capital Power and ENMAX (proposed Genesee 4 & 5), a combined cycle natural gas-fired generation facility just east of G3. The project will have a nominal generation capacity of 1,060 megawatts. Site preparation began in 2015, with completion of the first unit of the project expected in 2019.

### **Genesee Mine (Westmoreland Coal Company)**

Fuel for the three Genesee units comes from the surface coal Genesee Mine adjacent to the plant. Mining began at Genesee in 1988. The mine is operated continuously 24 hours a day, 365 days a year by Westmoreland Coal Company. Each day, approximately 15,500 tonnes of low-sulphur coal is mined (5 million tonnes annually). There is enough coal in the recently approved Genesee mine permit boundary to fuel all three units for 50 years each.

The mining process involves removing overlying soil and rock layers (overburden) to expose and extract coal reserves, using two electric walking draglines, electric shovels, loaders, dozers, graders, scrapers and haul trucks.

### **Westmoreland / Capital Power relationship**

The Genesee Mine is a Joint Venture (JV) arrangement between Capital Power and Westmoreland Coal Company, and includes a JV Committee with three members from each company. Under the JV agreement, Westmoreland Coal Company operates the Genesee Coal Mine including all mining operations, infrastructure control, and on-site support services. Electricity, natural gas, water, and sewage systems are all provided to the mine by Capital Power.

Land used for mining purposes is owned and managed by Capital Power on behalf of the Joint Venture.

---

<sup>1</sup> Orderly construction of the buildings dictated that G2 be built before G1.

### **Public Consultation and Review**

The Land Use Guidelines were initially developed in 2007 in consultation with area stakeholders to ensure the land owned by the operation is managed to a fair and reasonable standard. All land users have an opportunity to provide input into the Guidelines governing the land management at Genesee, for consideration.

The Land Use Guidelines summarize the different policies, procedures, and practices that ensure the responsible management of Capital Power land. To ensure alignment with the business needs of the operation, the ELUP and regulatory requirements, the Land Use Guidelines remain a living document.

New conditions or circumstances may warrant updates to ensure optimal land use at Genesee and these policies and programs will continue to remain fair and inclusive. Updates in this version reflect the feedback we've received from land users, changing operational requirements and alignment with the ELUP.

Input from land users, area residents, local business and other stakeholders is encouraged, and will be implemented as necessary.

## **Introduction**

---

As the land holder for the Genesee operations, Capital Power has an obligation to manage its land in an environmentally and socially responsible manner, through the ongoing application and development of land management practices and stewardship.

### **Objectives**

- Ensure Capital Power's land management practices comply with applicable government laws, regulations and corporate and industrial standards;
- Ensure the current use of Genesee lands align with Capital Power's values and strategic long term plan including the ELUP for Genesee;
- Maintain protection of the environment and conservation of resources as integral components of Capital Power's business and decision making processes;
- Reflect transparent and respectful policies through meaningful and ongoing stakeholder engagement;
- Ensure Capital Power maintains land management practices that are relevant, consistent and fair; and
- Continually improve practices by recognizing changes in local and regional land management practices.

## 1.0 Land Management

---

Land Management refers to all aspects of acquiring, maintaining and selling the land owned by Capital Power, and is guided by sound and balanced environmental practice using proven and new agricultural principles. As the land owner, Capital Power is responsible for ensuring the maintenance of the land, and that a variety of land uses are achieved.

### 1.1 Land Acquisition

Capital Power purchases land to ensure a reliable supply of fuel for the Genesee Generating Station. Land is purchased from owners in advance of the land being required for mining purposes. The land is then managed from the time it is purchased, through the reclamation process up to when the land becomes surplus to Capital Power's operational requirements.

After purchase of the land, if a farm yard is present it will be decommissioned to:

- Ensure the site is safely secured (to prevent theft and vandalism) and to eliminate any hazards to staff and the public;
- Dispose of surplus items (refer to 'Surplus Disposal' in Land Management section);
- Abandon water wells to Alberta Environment Standards and ensure the aquifer is protected; and
- Remove septic systems and concrete foundations to prepare the site for eventual use by the mine.

### 1.2 Land Sales

Capital Power's long term goal is to return purchased lands to the public, once the land becomes surplus to operational needs. Although not all land owned by Capital Power is used for mining purposes, it serves other operational needs including: a buffer for operational safety, cooling pond, power lines and other uses related to power generation.

As needed, Capital Power-owned land may be sold or traded to facilitate the purchase of other land required for operations. Remaining surplus land may be offered for sale to the public.

Surplus land is sold on a current market value basis. Land values are determined by an independent appraiser. Surplus land is offered for sale (in priority) to the:

1. Former landowner;
2. Former landowner's immediate family; and lastly
3. The public.

### 1.3 Surplus Item Disposal

During yard site decommissioning, items are deemed surplus if they:

- Cannot be used by Capital Power or Westmoreland Coal;
- Can be salvaged; and
- Are not deemed a hazard or liability.

Surplus items typically include: houses, grain bins, sheds, barns or other out-buildings and miscellaneous items.

The opportunity to purchase surplus items is offered to:

1. The former landowner and immediate family at the time of land purchase; and
  2. The public.
- All items are offered “as is” and must be picked up at their current location by the removal date listed;
  - Items not removed by the removal date will be considered abandoned, the payment forfeited and the items disposed of at the discretion of Capital Power;
  - Responsibility for removal is at the purchaser’s cost and risk;
  - Capital Power assumes no liability for loss or damage to the item (or person salvaging the items);
  - The site must be left in a safe and clean condition after item pick-up;
  - Site access permits, if required, must be arranged prior to pick-up; and
  - All purchases must be paid in full, before the item can be removed.

#### **1.4 Land Leasing**

Land not required for operational purposes may be offered for lease (on a cash rental basis) for agricultural purposes. Subletting of leased land to another person is not permitted.

All Capital Power-owned properties offered for lease are independently appraised by a third party to determine the lease rate. Lease rates are based on market value rental rates of land in the region.

Rental land is offered (in priority) to:

- Current Lessee;
- Renters or residents of adjoining land; and
- The public.

The process:

- Individuals leasing land must demonstrate an ability to carry out the terms of the lease agreement;
- Leases will typically be for a term of three years, with the option to renew for additional terms;
- Some land may be leased for annual terms;
- Capital Power will make every effort to provide timely notification for new leases and renewals in consideration of agricultural planning;
- If there is more than one equally qualified candidate for a lease, the lease is awarded by a lottery process. A draw would take place with all applicants present; and
- Capital Power reserves the right to terminate the lease at any time if the terms of the lease are not being met.

Contact the Manager, Land Services (**see p. 1**) for a copy of the land lease agreement.

#### **1.5 Cropping On Reclaimed Lands**

This procedure applies specifically to leases on reclaimed land. The reclamation of Capital Power land in the Genesee Mine Permit Area involves an extensive program with the goal of obtaining reclamation certification from the Alberta Government, including capability demonstrations for the public and various government organizations. As part of this process, crops are grown to establish and validate productive agricultural land.

Agricultural crops are grown on reclaimed land in rotations consistent with accepted agricultural practices. Reclaimed lands are leased by Capital Power to local farmers who can meet the management practices required to facilitate the acquisition of a reclamation certificate.

Required management practices may include:

- Seeding and tillage practices (e.g. Minimum Tillage);
- Ability to work safely in proximity to industrial equipment and activities;
- Participation in mine safety training and the adherence to mine rules and regulations;
- Ability to accommodate changes to agricultural activities due to mine operational requirements;
- Ability to adopt cropping practices and crop rotations at the request of Capital Power;
- Ability to accommodate requests to establish research plots on leased land.

Reclaimed mine land will be offered for rent on the same basis as general land leasing.

## **1.6 Cattle Grazing**

Capital Power offers cattle grazing opportunities at rates comparable to other pasture rentals in the region. Grazing rates are established by a third party appraiser, to provide a price per animal unit that are comparable with other pastures offering similar services. Pasture opportunities are advertised as required, and priority is given to local residents.

The operational cycle of a pasture consists of taking in and distributing cattle, overseeing the quality and condition of the grass, moving cattle, ensuring adequate water and providing salt.

Typically, farmers are offered the ability to bring up to 100 cow/calf pairs. This total is subject to annual pasture conditions and the number of cattle owners wanting to bring cattle. Approval to bring additional animals is at the sole discretion of Capital Power.

Pasture agreements are one-year terms. Available pasture land is determined annually and can be reduced or increased from year-to-year, depending on the land operational needs. This will determine pasture stocking rates.

The period for grazing is typically five months, commencing mid-May and ending mid-October.

General conditions for entry to pasture:

- All cattle must be branded with a distinct registered brand;
- Cattle must pass inspection by a veterinarian prior to pasture entry (horns, hooves and general herd health);
- The owner must provide evidence of all required vaccinations;
- Owners must be willing to share common pasture (i.e. no assigned pastures);
- Each cow must have a calf at-side when entering the pasture;
- Bulls will be provided by the owners and herds will be mixed into manageable groups. All bull calves must be castrated before entering the pasture;
- Genesee pasture operates as a cow / calf pasture only; and
- Owners must have (minimum) \$1M liability insurance.



During the grazing period, Capital Power will arrange for:

- Examination of livestock to determine suitability for admission to the lands;
- Weekly livestock inspection for obvious injury and disease;
- Supply and place salt and mineral as required;
- On veterinarian advisement, treat minor health problems such as foot rot, lameness, mastitis, pinkeye, pneumonia, bloat and other minor health conditions;
- Notify the owner of any major health problems regarding the owner's livestock;
- Move livestock;
- Provide maintenance for all fencing; and
- Manage weed control in all pasture areas.

### 1.7 Public Coal Sales

Capital Power provides public coal for domestic purposes:

- Screened to lump size only (three inches and larger);
- Sold in one tonne tote bags for pick-up at a specified location;
- Coal quality varies; and
- Pricing is based on the average retail price of domestic coal at other coal mines.

Public coal sales are offered on Saturday mornings **by appointment only**. To make an appointment, contact the Manager, Land Services (see p. 1).

### 1.8 Water Management

The purpose of Water Management Plan for the Genesee Mine is to:

- Preserve the quality of groundwater resources in the area;
- Keep clean surface mine water out of the mining areas;
- Ensure any surface or groundwater in contact with mining activities is of acceptable quality, prior to release into local drainage systems; and
- Divert all mine wastewater to the Genesee Cooling Pond.

Water management for the Genesee Generating Station and Mine is conducted primarily through operation of the cooling pond. This man-made pond serves as a holding tank for water to be used in the cooling process for the station, and also receives mine runoff.

Mine drainage follows a set of criteria governed by the quality of water being handled. Clean water is defined as surface runoff from undisturbed land (generally pre-mine and reclaimed areas). Mine waste water is defined as runoff originating from the mine, excluding undeveloped areas.

Ground water levels in the area have been continuously monitored since 1980. Water monitoring involves three main areas: surface water (quality) and groundwater (quality and potentiometric surface). Frequency of sampling and measurements vary depending on regulatory and in-house requirements.

### **Groundwater Protection – Emergency Spill Response Plan**

Informed and trained employees are the first line of defence in the prevention and mitigation of hazardous waste spills. Annually, employees review Standard Practices and Procedures specific to hazardous waste management, emergency preparedness, and response to spills. Emergency Response Teams for each shift are trained to respond to environmental spill emergencies. External emergency response services are retained to assist in case of a major environmental incident.

### **Mine Water Management**

Clean Water – ditches around the perimeter of the mine divert clean water to local water sheds with a key goal of the mining operation being to preserve downstream drainage basins.

Mine Water – management has three primary zones:

- Pre-mine Disturbance (topsoil stripped);
- Active Mine Disturbance (bench, opened cut, spoils, and ash disposal areas), and;
- Post-mine Area (reclaimed, yard, and buildings).

For operational reasons, surface water must be controlled (as much as possible) before it enters active mining areas. Interceptors and finger ditches are used, and sumps are excavated within the bench to collect additional runoff and act as pumping transfer stations from surface and groundwater retrieved from the active mining area. Locations of sumps, pumps, and ditches must continually change to accommodate the requirements of advancing mine activities.

### **Water Monitoring**

Characteristics of overburden and mine hydrogeology are assessed annually to determine potential impacts to groundwater. Genesee operations have established several standpipe piezometers in (pre and post) mining areas to monitor the water table. Water levels in piezometers (or ‘monitoring wells’) are monitored (at minimum) annually (but typically more frequent), with the data summarized annually by a Mine Engineering Technician. Hydrogeological data is forwarded to a consultant for analysis and review.

Impacts of mine infrastructure and ash disposal areas on surface and groundwater are also monitored. Piezometers are located in the active mine in areas that represent potential for creating impacts. Regular monitoring of water quality provides assurance that if impacts exist, early intervention and mitigation can be implemented.

## **1.9 Water Policy**

In place since 1982, Capital Power’s Water Policy addresses local area resident’s feedback over the potential for mine activities to adversely affect local area water wells. The policy recognizes mining activities may disrupt aquifers that provide water for local residents.

The policy was updated in 2014 after extensive consultation with local area residents and is attached as **Schedule “A”**.

### 1.10 Local Cemeteries

Subject to Provincial regulations, Capital Power will not undertake mine activities within 400 metres of the perimeter of four local cemeteries located in or near the Genesee Mine Permit Area:

- Genesee Community Cemetery, (SE 33-50-3-W5M),
- St. John's Lutheran Cemetery, (NE 10-50-2-W5M),
- St. Francis Cemetery (SW-2-50-3-W5M) and;
- Telfordville Cemetery (LEGAL0

Genesee Operations commits to:

- Providing access to the cemeteries at all times, regardless of mining activities;
- Annual grants towards the maintenance of each cemetery; and
- Upon reasonable notice, Westmoreland Coal will suspend mining operations in the immediate vicinity of either cemetery during graveside services – notify Westmoreland Coal (**see p. 1**).

## 2.0 Land Access

---

Capital Power is committed to the security of operations staff, the public, property and its assets. Access to Capital Power lands is generally restricted, but may be granted as necessary.

Inquiries regarding access to CP-owned land should be directed to the Land Service Manager (**see p.1**).

### 2.1 Resource Development/Industry

Westmoreland Coal and Capital Power work with petroleum and natural gas rights developers to allow, (where/when possible) seismic, drilling and pipeline activities within the Genesee area.

CP strives to achieve a balance of coal and petroleum resource development that ensures resources are developed for the maximum economic value and minimum disturbance to the biological, physical and cultural resources of the area.

### 2.2 Roads

Maintenance and upgrading of county roads is the responsibility of Leduc County. Part of Capital Power's taxes to the County goes to road maintenance. As the active mining area progresses, CP will need to close existing public access roads. Consultation with area stakeholders and Leduc County ensures the orderly closure and reopening of roads.

Capital Power will redevelop closed roads to County standards and reopen the roads to the public once mining activities are completed. Notice of road closures (and openings) will be communicated as soon as practical to area residents via local newspapers, the Genesee Connection Newsletter and direct notice, as necessary.

### 2.3 Recreation

Land use for recreational opportunities is included as part of the CP End Land Use Plan (ELUP). Input from Leduc County and the public has been considered in the planning process.

- **Genesee Heritage Park** – Capital Power developed and donated this day-use recreation site in the NW1-51-3-W5 land area. The site is maintained by Leduc County with funding support from Capital Power and Westmoreland Coal.
- **Genesee Cooling Pond** – access is not allowed.
- **Hunting on CP-owned lands** – Capital Power has partnered with the Hunting for Tomorrow Foundation and permits primitive weapons, shot guns and bow hunting on select CP-owned lands.

## 3.0 Environmental Management

---

The operating approval for Capital Power’s Genesee Generating Station has a Biomonitoring Program developed in consultation with Alberta Environment and community stakeholders. CP manages the program jointly with TransAlta Utilities.

Selected environmental receptors in the Genesee-Wabamun area are monitored over the long-term to determine any potential effects of the operation to the area. The programs are categorized by the environmental receptor being monitored: wildlife, bio, air, and dust and noise management.

### 3.1 Wildlife Monitoring Programs

This program assesses wildlife in the Genesee region and evaluates the effectiveness of mitigation and habitat enhancement measures to ensure the protection of wildlife. Wildlife is monitored relative to species composition and abundance around the operation.

The Genesee area is home to a wide variety of wildlife. Identified populations include white tail deer, mule deer, moose, coyote, beaver, bald eagle, golden eagle, peregrine falcon and numerous migratory waterfowl. The program involves a number of elements:

- **Annual:** survey of over-wintering migratory birds, Peregrine falcon program
- **Every 5 years:** wildlife aerial survey, raptor/owl survey, songbird survey, amphibian survey, habitat analysis, soil and vegetation analysis

### 3.2 Biomonitoring Programs

This program monitors Chemicals of Potential Concern (COPCs) and other key parameters to determine existing levels and potential long term effects the operation may be having on selected ecological receptors in the Wabamun-Genesee region. As well, the program aims to determine the presence/absence of key species within the Wabamun-Genesee region.

Power generating facilities may impact the environment via:

- Aerial emissions – from stacks; and
- Water emissions – returning water from the cooling pond back to the North Saskatchewan River.

Monitoring focuses on impacts to selected key receptors from each of these emission pathways that serve as indicators of environmental effects. Key receptors (e.g. fish in regional water bodies) are monitored with a defined frequency to determine baseline levels and long-term trends.

### 3.3 Air Monitoring Programs

Four programs better understand the potential long term effects of power generating stations on ecological receptors in Genesee-Wabamun region. In some cases, third party consultants are conducting the research and compile the data on behalf of the operation.

**Ambient Air Monitoring** – an established monitoring network throughout the Wabamun-Genesee region allows for the collection of data to evaluate overall air quality and assess air pollutant trends over time.

**Acid Deposition Assessment** – acidic emissions from generating stations are quantified to understand key indicators of sensitivity to acidification in water and selected ecological receptors. This allows for the assessment of long-term trends in deposition, patterns and ecological impacts.

**Mercury Deposition Assessment** – mercury emissions from generating stations are quantified and provide baseline data for mercury levels in water and selected ecological receptors. This allows the assessment of long term trends in emissions, deposition pattern and ecological impacts.

**Air Biomonitoring** – metals in PM samples from ambient air are collected and analysed to determine PM sources in ambient air.

All programs are conducted on an on-going basis and results are reported according to Alberta Environment guidelines and procedures. Results are available to the public upon request from Capital Power or through FOIP.

### 3.4 Dust and Noise Management

Capital Power and Westmoreland Coal are committed to managing dust and noise levels created by the operation.

#### Noise

Under ISO 14001, Westmoreland Coal Company developed an Environmental Management System that provides a framework to define strategies with respect to noise, including consultant testing of ambient noise every five years and occupational noise every three years.

New technologies, improved procedures and equipment maintenance are all used to diminish the impact of noise on employees, residents and the surrounding environment.

Area residents experiencing noise concerns can contact the Land Services Manager (see p. 1); complaints are reviewed on a case-by-case basis. Past practice has resulted in the resolution of complaints through the modification of mining activities, or repairs being completed on equipment determined to be the noise source.

Ambient Noise Surveys are conducted by a qualified consultant at local residences around the operation on an annual basis.

#### Dust

High efficiency emission control equipment removes almost of the fly ash before the flue gas goes to the power plant stack.

- Genesee Unit 1 & 2 – 99.5% removal (ESP equipped stack 1)
- Genesee Unit 3 – 99.8% removal (baghouse equipped stack 2)

Regular monitoring of area dust levels and proactive control measures helps ensure dust from the operations is managed appropriately. Multiple monitoring and control measures manage dust from the operation:

- Seasonal road watering programs on haul roads;
- Ash wetting before transporting it to the mine;
- Ash storage areas capped with non-erosive materials; and
- Fly ash haul trucks washed down and dusted off before entering public highways.

Ambient Dust is monitored in the Genesee area in proximity to the operations.

Rural areas are prone to dust from multiple sources, but residents experiencing dust deposits that they believe are a result of the operation should contact the Land Services Manager (**see p. 1**).

An investigation into the dust source will be conducted and documented, and where possible, additional control measures put in place.

### **3.5 Natural Areas**

Capital Power recognizes the need to maintain natural areas on its land base.

Treed lands outside of the active mining areas may be preserved in their natural state as much as possible. This includes the exclusion of cattle grazing and limiting land clearing for agricultural activities.

Land currently in agricultural production may be removed from that use to accommodate the preservation of natural areas.

As part of the mine reclamation program, CP has and will continue to construct wetland and plant forested areas.

## 4.0 Reclamation Management

---

### 4.1 Reclamation

Reclamation is the process of restoring a disturbed site to a desired condition within a specified period of time. The reclamation plan for the Genesee Mine involves returning the equivalent or better land capability. The Alberta Environmental Protection and Enhancement Act (AEPEA) Conservation and Reclamation regulation currently defines equivalent land capability as:

*“... The ability of the land to support various land uses after conservation and reclamation is similar to the ability that existed prior to an activity being conducted on the land, but that the individual land uses will not necessarily be identical...” (AR 115/93)*

The objective is to provide a range of similar planned end uses in similar locations to those currently in existence:

- Lands capable of sustainable agriculture, including livestock grazing;
- Lands capable of self-sustaining and naturally maturing wildlife habitats;
- Productive wetlands and watercourses;
- Lands for recreational opportunity;
- Lands for commercial resource development; and
- Lands that will be planted to forest.

Westmoreland Coal and Capital Power are committed to follow established practices and guidelines during the development, operation and reclamation of the Genesee Mine. Consultation with the local community and provincial regulators provides direction for end land use after reclamation.

Reclamation activities will sequentially and progressively follow mining, and are an integral part of mining activities. The time from initial disturbance through final reclamation is approximately 6-8 years.

### Stages of Reclamation

#### 1. Land clearing

- Based on the mine plan, areas identified for mining require removal of trees and brush one to two years in advance of mining.

#### 2. Topsoil salvage

- Stripped ahead of mining and either stockpiled or directly placed on land undergoing reclamation.
- Salvaged to the depth of the “A” horizon (~20 cm or 8 inches).
- Used for either direct placement in reclaimed areas or placed in storage piles for future use.

#### 3. Subsoil salvage and placement

- Pre-strip fleet (cable shovel / loader and haul trucks) removes the overburden (subsoil) in advance of the dragline operation, and develops a suitable bench for the draglines to operate from.
- Salvaged subsoil is hauled through the active mine and placed in an area that is being reclaimed or stockpiled for future reclamation.
- Subsoil is placed to a 1.0 metre depth in an area of final design elevation and landscape features.



#### **4. Subsoil conditioning**

- Prior to topsoil placement, subsoil is conditioned to pull rocks to surface and loosen compacted soil.
- Overburden and other material recovered (i.e. piled by the dragline and dumped by the pre-strip fleet) are re-contoured using tracked dozers.
- A deep tillage cultivator is used to condition the subsoil.
- Rocks are removed and the subsoil is smoothed to create a leveled surface for topsoil placement.

#### **5. Topsoil placement**

- Topsoil is placed to a thickness 18-20 cm (8 inches).
- In winter, haul trucks place the topsoil into long rows called “cells”; topsoil is then spread uniformly over the surface of the subsoil with a dozer.
- In the spring, the freshly laid topsoil is cultivated and seeded to annual crops.

#### **6. Crop rotations**

- After the topsoil is placed and leveled, the land is re-vegetated according to end land use plans. Capital Power manages the land by:
  - Renting to local farmers who plant agricultural crops such as wheat, barley and canola.
  - Once weeds are under control alfalfa is brought into to the crop rotation.

#### **4.2 Reclamation certificates**

Capital Power will apply for reclamation certificates from the AER as a final step in the reclamation process. The reclamation certificate confirms the land has been returned to a condition that is equal to or better than its pre-mined condition.

#### **4.3 Trees and Forestry**

Westmoreland Coal and Capital Power are committed to follow pertinent established practices and guidelines during the development, operation and reclamation of the Genesee Mine. Managing the forest habitat within the mining area is part of reclaiming land to equivalent or better land capability.

Trees in the pre-mine area may be salvaged by qualified parties. Trees with no merchantable value are cleared by Westmoreland Coal prior to removing topsoil. The woody debris is disposed of into the active mine cuts, or used as ground cover in reforestation areas.

Capital Power will develop treed / reforested areas in both reclaimed and other lands owned by the company for: wildlife habitat, carbon capture, recreation, biomass for fuel, lumber, etc. Capital Power may lease land to third parties who have the ability to grow and manage reforestation projects.

## Glossary

---

### **Active Mine**

At Genesee, the Active Mine is the area that extends from where the topsoil is first removed to where it finally gets placed for land reclamation.

### **Adjoining Property**

Any quarter section of land surrounding the parcel in question.

### **Backfill (*Fill*)\***

1. Operation of refilling an excavation.
2. Material placed in an excavation in the process of backfilling.

### **Baseline\***

A surveyed condition that is a reference point on which later surveys are coordinated or correlated.

### **Bedrock\***

The solid rock that underlies soil and the regrowth or that is exposed at the surface.

### **Berm\***

A mound or wall of earth used to retain substances or to prevent substances from entering an area.

### **Best Management Practice\***

Operating practice that enhances the sustainability of the resource to which the practice relates; it must be practical and economically achievable.

### **Biodegradable\***

Able to be decomposed, as a result of the action of microorganisms such as bacteria. Materials are considered biodegradable if they decompose relatively quickly.

### **Biodegradation\***

The process of destruction or mineralization of either natural or synthetic materials by the microorganisms of soils, waters, or wastewater treatment systems.

### **Biodiversity\***

Totality of the richness of biological variation, ranging from within-species genetic variation, through subspecies and species, to communities, and the pattern and dynamics of these on the landscape.

### **Bottom Ash**

The heavier particles that fall to the bottom of the furnace after the coal is burned and the mineral matter that is separated from the coal pulverizers before the coal is burned.

### **Buffer\***

An area designated to be undisturbed by an industrial activity. Buffers may preserve environmental features (river banks), provide safety (beside pipelines or buildings) or protect property (roads, property lines). The buffer also provides protection from dust, noise, etc.

A transitional area between two different land uses that mitigates the effect of one land use on the other.

### **Buffer Zone**

The Buffer Zone at Genesee is defined as the area a 1/2 mile or 800 metres from the perimeter of the Mine Permit.

**Clean Fill\***

Uncontaminated subsoil or parent material used as fill for site development purposes, or to replace excavated contaminated subsoil or parent material in remediation and reclamation.

**Cover\***

The area of ground covered by all living (including stems and leaves) and dead (litter) plant material that is produced naturally on a site, expressed as a percentage of the total area. Bare soil is not cover. Cover is also known as ground cover, canopy cover or aerial cover.

**Cover Crop\***

A close-growing crop used primarily for the purpose of protecting and improving the soil between periods of regular crop production or before establishment of the final vegetation on a reclaimed site.

**Crop Rotation\***

A planned sequence of crops grown in recurring succession on the same area of land.

**Current Lessee**

Anyone leasing Capital Power-owned property in the Genesee area at the time that land is being discussed.

**Decontamination (*Decommissioning/Remediation*)\***

The removal, reduction, or neutralization of substances, wastes or hazardous material from a site to prevent or minimize any adverse effects on the environment (now or in the future).

**Drainage\***

The removal of excess surface water or groundwater from land by natural runoff and percolation, or by means of surface or subsurface drains.

**Drainage Basin (*Watershed*)\***

Area tributary to – or draining to – a lake, stream, reservoir or other body of water.

**Drainage (soil)\***

The frequency and duration of periods when the soil is not saturated. Terms: excessively, well, moderately, imperfectly, and poorly drained soil.

**Environmental Impact Assessment (EIA)**

Process for identifying project and environment interactions, predicting environmental effects, identifying mitigation measures, evaluating significance, reporting and following-up to verify accuracy and effectiveness. EA is used as a planning tool to help guide decision making, as well as project design and implementation.

**Easement (*Surface Lease*)\***

A non-possessing interest held by one person in the land of another, whereby the first person is accorded partial use of such land for a specific purpose. (E.g. rights of way for electric power lines or pipelines).

**Erosion\***

The wearing away of the land surface by running water, wind, ice, other geological agents, activities of man or animals, and including such processes as gravitational creep. Erosion may be either normal or accelerated; the latter being brought about by changes in the natural cover or ground conditions, including human activity.

**Excavation**

Cutting or digging of the earth's surface, altering the original landscape by making a hole or hollow (pit).

**Fill (*Backfill*) \***

The depth, of which material is to be placed (filled) to bring the surface to a predetermined grade, also refers to the material itself.

**Fly Ash**

The fine light and glassy particles contained in the flue gases released when coal is burned. At Genesee operations, G3 captures 98.9%, G1 and G2 capture 94% (actual operating condition is around 2% less for both) of fly ash is captured before going up the stack into the atmosphere.

**Former Landowner**

The landowner from whom Capital Power purchased property for operations.

**Habitat\***

The natural environment of an organism.

**Haul Road\***

Road from pit to loading dock used for transporting mined material by truck.

**Immediate Family**

The former landowner's spouse and their children in succession of birth.

**Landfill\***

An engineered waste management facility where waste is disposed by placing it on or in land with minimal adverse human health and environmental effects.

**Land Reclamation\***

Bringing the post-mined surface of the land into equal or more productive capability than it was before mining began. Refers to the productive quality of the land as opposed to the landscape itself (does not mean the contour of the land has to be replaced exactly to what it was before it was disturbed).

**Land Use Planning\***

The development of plans for the uses of land that, over long periods, will best serve the general welfare, together with the formulation of ways and means for achieving such uses.

**Lessee\***

One who acquires the right to use the property of another from whom the lease is obtained, or who rents property under a lease.

**Lessor\***

One who rents real property to another or conveys or leases the right of the use of real estate to another.

**Local Area Resident**

Residents north of Strawberry Creek and south of the North Saskatchewan River.

**Mine (*Pit/Quarry*) \***

Any opening in, excavation in, or working of the surface or subsurface for the purpose of working, recovering, opening up, or proving coal, a coal bearing substance, oil sands or an oil sands bearing substance and includes any associated infrastructure. (Regulatory definition)

**Mine Permit\***

A mine permit is a designated area by the regulatory groups in Alberta that allows the permit holder to explore for coal under certain specific conditions.

**Mine License\***

License to physically mine coal in a designated area and in a manner approved by the regulatory groups within Alberta for a set number of years; typically ten.

**Mitigation\***

The process of rectifying an impact by repairing, rehabilitating or restoring the affected environment, or the process of compensating for the impact by replacing or providing substitute resources or environments. Actions that lessen the severity and or duration of the effects on the environment.

**Mulch\***

Any material such as straw, sawdust, woodchips, leaves or loose soil that is spread on the soil surface to protect the soil and plant roots from the effects of raindrops, wind erosion, soil crusting, freezing and evaporation.

**NO<sub>x</sub>**

Nitrogen Oxide.

**Native plant\***

A plant that grows naturally in the local area.

**Noxious Weed (*Nuisance Weed/Restricted Weed*)\***

Provincial designation for weeds with the ability to spread rapidly and cause severe crop losses and economic hardship. These weeds must be controlled to prevent further establishment and spread.

**Nutrient (*Essential Element/Macronutrient/Micronutrient*)\***

An essential chemical for the growth and development of organisms.

**Occupant (*Owner*)\***

A person, other than the registered owner, who is in actual possession of the land or entitled to be in possession of the land.

**Open Pit Mine (*Mine Dump/Strip Mine*)\***

Procedure of mining that involves the complete removal of materials over the product being mined in a series of pits. Material from the pits may be cast into previous pits but is more often cast onto external spoil piles or dumps.

**Overburden\***

Materials of any nature, consolidated or unconsolidated, that overlie a deposit of useful materials.

**Pre-strip Fleet:** consists of a mining shovel and haul trucks that remove a layer of overburden to improve the efficiency of the dragline.

**Reclamation (*Rehabilitation/Restoration*)\***

The process of reconvertng disturbed land to its former or other productive uses.

**Remediation (*Decontamination*)\***

The removal, reduction, or neutralization of substances, wastes or hazardous material from a site to prevent or minimize any adverse effects on the environment now or in the future.

**Right-of-Way\***

An easement in lands belonging to others obtained by agreement or lawful appropriation for public or private use. The right of passage or of crossing over someone else's land.

**Riparian\***

Refers to terrain, vegetation or simply a position adjacent to or associated with a stream, flood plain, or standing water body.

**SO<sub>x</sub>**

Sulphur Oxide gas.

**Stakeholder<sup>Ω</sup>**

Any individual, group or business with a vested interest in the success of an organization, who may contribute directly or indirectly to an organizations business activities. Someone who may also be concerned with the outcome of a specific project, effort or activity, such as a community development project or the delivery of local health services.

- Internal – within an organization
- External – outside an organization

E.g. Owner, manager, shareholder, investor, employee, customer, neighbour, partner and/or supplier, etc.

**Subsoil (*Topsoil*)\***

Soil material identified (or described) as B and C in the Canadian System of Soil Classification. The soil material found beneath the topsoil but above the bedrock. Technically, the B horizon; broadly, the part of the profile below plough depth.

**Subsoiling (*Chiseling / Ripping*)\***

The breaking of compact subsoils, without inverting them, with a special knifelike instrument (chisel), which is pulled through the soil usually at depths of 30-60 cm (12-24”) and spacing of 60-150 cm (2-5’). The tillage of the subsurface soil, without inversion, for breaking up dense layers that restrict water movement and root penetration.

**Surface Lease (*Easement/Lease*)**

Any agreement entered into by an owner or occupant with an operator under which the surface of the land may be used and that provides payment of compensation (rental or otherwise).

**Topsoil (*Surface Soil/Subsoil*)\***

Soil material identified (or described) as A, L, F, H and O in the Canadian System of Soil Classification. The uppermost part of the soil ordinarily moved in tillage, or its equivalent in uncultivated soils, and normally ranging in depth from 5-45 cm.

**Trace Element (*Micronutrient*)\***

Chemical element present in a minor amount in water or soil.

**Watershed (*Drainage Basin*)\***

All lands enclosed by a continuous hydrologic-surface drainage divide and lying upslope from a specified point on a stream.

**Wetland\***

Land having the water table at, near, or above the land surface or saturated for long enough periods to promote wetland or aquatic processes as indicated by hydric soils, hydrophytic vegetation, and various kinds of biological activity that are adapted to the wet environment.

Wetlands include peatlands, fens, bogs and areas influenced by excess water but that for climatic, edaphic or biotic reasons, produce little or no peat. A wetland may also be shallow open water, generally less than 2 metres deep.

**Definitions obtained from:**

- \* Alberta Environment Glossary of Reclamation and Remediation Terms Used in Alberta 7th Edition (May 2002)
- # International Association for Impact Assessment
- Ω <http://www.investorglossary.com/stakeholder.htm>

## **Schedule “A”: Groundwater Supply Policy**

---

*\*This Policy is intended to replace existing water policies for the Genesee operations. It was developed in consideration of the Genesee Mine Extension Application, submitted in 2011.*

### **Capital Power Commitment**

Capital Power (CP) is committed to working with each land owner within the Area of Potential Influence (API) who is experiencing Water Supply Issues to ensure their household and/or farm existing groundwater supply is not interrupted or diminished as a result of mining activities.

Regardless of the cause, affected land owners will be supplied with an alternative water supply while the concern is being investigated and resolved. The water supply will be comparable to what the land owner had prior to experiencing the issue. The commitment applies to CP today, and to what it may be in the future.

### **Background**

The Genesee Mine is a Joint Venture (JV) arrangement between CP and Westmoreland Coal Company. Under the JV Agreement, Westmoreland Coal Company operates the Genesee Mine including all mining operations, infrastructure control, and on-site support services. Mine land is owned and managed by CP.

Coal mining operations at the Genesee Mine may affect neighbouring water supplies as mining continues. Drawdown of aquifer levels within the active mine and diversion of surface water does occur and is inevitable in all mining operations.

### **Groundwater Monitoring**

CP, in conjunction with Westmoreland Coal Company, uses a network of monitoring wells to monitor and evaluate all of the major groundwater-bearing areas before mining activity begins. They are located throughout the planned, reclaimed and adjacent mining areas so that changes to the groundwater flow can be measured. In some areas, piezometers are used.

As required in our operating license, CP reports water level information from its monitoring wells to the Alberta Energy Regulator (AER). This information reflects groundwater changes in the water-bearing formations in the area of our active mine operations.

In February, 2013 as part of the Genesee Mine Licence Application, Alberta Environment and Sustainable Resource Development (AESRD) requested the Genesee Mine undertake a field verified survey of water wells, dugouts and springs in the project area. The survey provided AESRD with an updated record of water sources to allow for an evaluation of the density of water users in the adjacent lands currently surrounding the Genesee Mine.

The information has been added to the *Alberta Water Well Information Database*.

### **Application of the Policy**

#### **Affected Area**

Based on results from the monitoring wells and assessments completed in 2011 and 2012 as part of the Genesee Mine Extension Application, it has been determined that the Genesee Mine has the potential to impact groundwater up to a distance of two kilometers (1.2 miles) from the mine disturbance area.

However, in consideration of the Genesee Community, CP has extended the API as denoted by the yellow boundary in the attached map: *Genesee Mine Extension Proposed Water Policy 2012*.



The API is within:

- Southeast of Highway 770 by the Strawberry Creek;
- Northeast and northwest of TWP 504 by the North Saskatchewan River;
- Southwest by a four kilometer (2.5 miles) distance from the mine disturbance area.

All land owners are encouraged to practice good well maintenance to the best of their ability. It is the land owner's responsibility to develop their own water supply.

### **Complaint Investigation and Mitigation Measures**

Below is the process that CP and land owners within the API will follow if a land owner experiences a loss of or change in water supply from an existing water source. This applies to all wells as long as there are no more than four separate households or residences per quarter section.

**\*Note:** The terms 'you' and 'your' below refer to a "land owner within the API".

1. Upon first noticing an issue with your water supply that you suspect is due to mining activities, you are advised to call CP's Land Services Manager.
2. **If an emergency water supply is required**, you are advised to call the Land Services Manager or the Genesee Station Guardhouse. CP will cover the cost of the temporary water supply 100 per cent, as long as the location it is required at is within the API (see attached map).
3. CP will initiate and cover the costs of an investigation. If the cause of the Water Supply Issue is uncertain, or the land owner and CP cannot agree on the cause, a more in-depth investigation may be conducted<sup>2</sup>.

CP will provide at least two third-party investigators for the land owners to choose from and if the land owners do not agree to the two names provided, they can provide an additional two names<sup>3</sup>. If CP and the land owners cannot agree on a name on the list, the selection of the third-party investigator shall be left to the Director.

If the investigation determines:

- a) The Genesee Mine **is** the cause of the Water Supply Issue; CP will cover 100% of the costs associated with restoring the water supply.
- b) The cause of the Water Supply Issue **cannot be determined**; CP will cover 100% of the costs associated with restoring the water supply.
- c) The Genesee Mine **is not** the cause of the Water Supply Issue; the well owner will be responsible for covering the costs of restoring the water supply.

E.g. Supply issues not a result of the Genesee Mine would include a lack of appropriate well maintenance affecting water supply, and/or mechanical or electrical failure of equipment.

---

<sup>2</sup> The in-depth investigation may include: an interview with the land owner (to establish the concern and identify past, present and future uses of the water supply); a review of the driller report on the well, the CP inventory data, the pertinent piezometer or observation well data, or any pertinent mining activity data, if applicable; measurements of water levels in the well manually and/or with a data logger; collection of a water sample; a pumping test; a water system inspection to ensure proper functioning, and; a review of well owner maintenance records, where available.

<sup>3</sup> All third-party investigators involved in a formal, in-depth investigation shall be a registered hydrogeologist with The Association of Professional Engineers and Geoscientists of Alberta (APEGA).

In cases (a) and (b) above, CP's first choice will be to attempt to re-establish water by drilling a deeper well or drilling more wells. If drilling is not possible, an alternate water supply will be provided. CP will pay for the alternate water supply with all needed hook-ups. CP will supply and deliver the quantity of water as set out in the *Water Act* for typical household and for agricultural use that is licensed or registered under *Water Act*. The land owner will be responsible for paying for any additional water needed beyond what is stipulated in the *Water Act*.

In all cases, regardless of the cause of the Water Supply Issue, CP will cover the cost of a continued temporary water supply while the investigation is being conducted. If the Genesee Mine is determined not to be the cause of the Water Supply Issue, the temporary water supply will still continue, provided that the land owner is actively taking steps to have the problem corrected.

4. In all cases, a findings report will be produced and a meeting will be arranged with the land owner to review. Both the land owner and the regulator will receive a copy of the report.

**Contacts:**

- Capital Power Land Services Manager (780-969-8618)
- Genesee Station Guardhouse (780-969-8500)

For responsibilities regarding well maintenance, see **Alberta Resource and Sustainable Development: [www.environment.alberta.ca/01317.html](http://www.environment.alberta.ca/01317.html)**.

## **Water Policy Q&A**

### **1) What if I have an issue with my water supply?**

Land owners may notify Capital Power at 780-969-8618 as soon they notice a problem that they suspect may be related to mining activities. The complaint will be investigated to determine the cause of the problem.

Land owners with concerns regarding interference with their water supply from a licence holder such as CP, can also call a 24-hour hotline phone number jointly run by the AER and AESRD (1-800-222-6514) or contact the Director at (780) 427-9922.

### **2) Who will have to pay for the water supply while my complaint is investigated?**

CP will pay the full cost of providing a temporary replacement water supply until the complaint is investigated and a final report is discussed with the owner. If the report concludes that the land owner is responsible for restoring the water supply, the temporary water supply will continue until the water supply has been restored provided that the land owner is taking reasonable steps towards resolving the issue (i.e. working with a company to order replacement parts, conduct maintenance, etc.)

### **3) How do you know if mining has caused a loss of water?**

The Genesee Mine relies on the information obtained from our network of monitoring wells and piezometers. In addition, extensive assessments were completed by third party water experts for the Genesee Mine Extension Application in 2011 and 2012. Based on this information, we have an understanding of how and where the mine is likely to cause changes in water supply for nearby landowners. Monitoring wells are installed between the mine and existing water wells to monitor levels.

If water levels in the monitoring wells drop towards the mine over time, it is likely that mining is affecting the groundwater in that area.

### **4) How far away from the mine can water problems occur?**

All aquifers that are disturbed in and above the active (open) coal seams have the potential to be affected during mining. The amount that the water level might decrease can vary depending on the particular water bearing formation, or aquifer. Generally, the closer a well is to the mine, the more likely it may be affected.

Water loss has been observed within up to 2 kilometers (1.2 miles) of the *Mine Disturbance Area*. This is determined from water level readings taken at our piezometers throughout the mine and local area. These readings help CP to develop maps of the major water bearing formations showing the extent of the decrease in area water levels.

#### **5) What can I do to maintain my well or water source on my own?**

The Government of Alberta requires land owners to be responsible for properly operating and maintaining their wells to ensure safe water. A number of things can be done by the land owner to ensure the quality of the water is as good as possible.

The Government of Alberta and Leduc County provides workshops for well owners looking for information on how they can protect and maintain healthy water wells for their homes and farm operations.

For more information on the **Working Well Program**, visit the Alberta Environment website or contact the Leduc County Agricultural Department at 780-955-4593.

To order copies of Working Well fact sheets, brochures and other information resources:

Alberta Environment Information Centre  
780-427-2700 (toll-free: 310-0000)  
780-422-4086 (fax)  
[env.education@gov.ab.ca](mailto:env.education@gov.ab.ca)  
[www.environment.alberta.ca/01317.html](http://www.environment.alberta.ca/01317.html)

#### **6) Is CP doing anything to find out about local water supplies before problems could develop?**

Yes. A water well inventory program of area wells is being planned to record and update current sources of water, including water levels and chemistry. CP's inventory will include an interview with each well owner, a description of the well and its equipment, its history and how much water was/ is being used.

Where available, the original driller's record on the well and water quality analysis record will be obtained from Alberta Environment. CP will keep this information on file and send a copy of each record to the well owner. Participation in this program is optional for the well owner. If the well owner prefers, the original driller's record can be used as the base line information for the well.

#### **7) What guidelines does CP follow to assess my water supply?**

Total daily water requirements will be different for each well owner depending on their situation. CP will follow the allocation guidelines set out in the Water Act for typical household and agricultural use.

#### **8) Specifically, what process will CP follow if I experience a problem with my water supply?**

CP will investigate the problem and may hire an experienced water well driller and/or a hydrogeologist to help evaluate it. If it has been determined that the problem could be a result of Genesee Mine activities, then CP will develop a plan to fix the problem and replace your water.

#### **9) What will CP do to ensure that new future subdivisions established in the API have water?**

CP will assist land owners in advance of drilling a well to determine if there are any known issues as a result of mining or if there are any historical issues with water supply in the area. It is the land owner's responsibility to develop their own new water supply.

If a land owner cannot establish a water supply on a newly parceled out subdivision (to a maximum of 4 parcels per quarter section) and wishes to investigate whether the mine is the cause, then CP will initiate an investigation as per the Policy. CP, at a minimum, will require that the land owner pay for the drilling of two new wells to a minimum depth of 92.6 meters (300 feet) each, before CP will initiate an investigation as described in Answer 8 of the Policy.

**10) Does the Policy still apply if I sell my land to someone else?**

The Policy applies to the land location, not the land owner, so in the event land is sold to a new owner the water supply will still be covered under the Policy.

**11) What will CP do if I've had water supply issues that were addressed under the former policy?**

The new Policy starts when it has been approved. The rules of the old policy apply until then. CP will not cover historical costs borne by the land owner under the old policy when the new Policy comes into effect.

**12) How long will the new water policy be in effect?**

The new Policy will be in effect until 2059 or until the final Reclamation Certificate is issued for the mine, whichever is greater.

**13) How often will the new water policy be reviewed?**

The new Policy will be reviewed each time a new mine license is applied for. The mine license at Genesee gets renewed every 10 years.

## **Water Policy Glossary**

**API (Area of Potential Influence)**

Water supplies within this area have been identified as having the potential to be impacted by Genesee mining operations.

**Aquifer**

Any water-bearing formation containing or conducting groundwater, especially ones that supply water for wells, springs, etc.

**Mine Disturbance Area**

All land within the licence area that has been or is currently being used for mining purposes. This includes reclaimed land and land in the process of reclamation, the active pit where the draglines are operating, and areas where pre-mining operations, such as topsoil stripping, are taking place.

\*This is NOT the permit extension boundary. The mine disturbance area is a moving area within the mine permit extension boundary.

**Piezometer**

An instrument used to measure groundwater levels. Piezometers are installed in a number of monitoring wells in and around the *Mine Disturbance Area*.

**Water Supply Issue**

Any issue related to water quality or quantity that can impact the supply of water.

## Water Well Verification Program for Landowners

As part of the Genesee Mine Extension Project, Capital Power and Westmoreland Coal Company will be continuing their mining operations. As coal mining may affect groundwater and diversion of surface water, Capital Power is prepared to undertake this Water Well Verification Program for Landowners.

Capital Power it is committed to offer the following program to all landowners in the area of potential influence (API) being a distance of 2 km (1.2 miles) from the mine disturbance area. The API (as per the attached map) is within:

- Southeast of Highway 770 by Strawberry Creek;
- Northeast and northwest of TWP 504 by the North Saskatchewan River;
- Southwest for 4 km (2.5 miles) from the mine disturbance area.

*All landowners within the API will be provided with a copy of their well information, also available on the Alberta Environment and Sustainable Resource Development website. (\*Note: information only exists for landowners with **registered** wells. If you have unregistered wells on your property, you may choose to register them.*

Further, all landowners in the API will be offered an opportunity **at no cost** to have their groundwater wells tested by one of the approved well contractors selected by the landowner from the approved list of water well contractors, as attached, to inspect their well(s):

1. Review the information on the AESRD website to the extent possible;
2. Attend the well and conduct an aquifer test to establish the specific capacity of each water well;
3. Collect a groundwater sample for routine health and metals analysis; and
4. Collect water well maintenance history and note the condition of the water well.

This program will be offered to all landowners in the API and is the landowners' choice to participate.

Information gathered will then be compiled by Millennium EMS Solutions Ltd. who will distribute a copy of the water well report to the landowner and retain a copy in their database.

## Approved List of Water Well Contractors

1. Papley Drilling Ltd.  
50228 Range Road 241  
Leduc County AB T4X 0M9  
Contact: Ken Papley
  2. BAR-K Water Well Services Ltd.  
50025 Range Road 244  
Leduc County AB T4X 0N8  
Contact: Ken Banks
  3. Another suitably qualified drilling contractor, as agreed to between the landowner and Capital Power.
-