August 2024

Wildlife Deterrent Electric Fence Design Plan

This document provides information on the best management practices for designing and implementing wildlife electric fencing at a landfill.

At landfills, well-constructed and maintained fences are critical components in preventing human-wildlife conflicts. Electric fences are a cost-effective method to keep out dangerous wildlife such as bears, wolves, cougars and coyotes. Fences, including electric fences, promote public safety while reducing the risk of dangerous wildlife becoming food-conditioned or habituated, which often results in animal euthanasia. Combining electric fencing with a chain-link fence is even more effective, as it reduces maintenance costs and prevents the garbage from disrupting the electrical circuit.

Applicability

New landfills must submit a wildlife management plan as part of their design plan in their construction application. See the Landfill Design Plan guidance document for more information. The wildlife management plan must assess whether electric fencing should be implemented and included in the design. Specifically:

- Landfills built in a provincial forest or within one kilometre of one, or in areas with prevalent dangerous wildlife (as determined through assessment or as identified by the Ministry of Environment) may need electric fencing.
- Facilities within the provincial forest and/or in areas frequented by dangerous wildlife (defined as bears, wolves, coyotes and cougars) are strongly encouraged to plan for electric fence installation.
- All facilities must have a wildlife management plan as a permit condition, and electric fencing may be required if interactions with dangerous wildlife occur.

Design Criteria

Proponents must justify that the selected design and materials meet the deterrent requirements of the dangerous wildlife expected at the facility. The following criteria list minimum considerations in the electric fence designs:

Chain Link Fence

Proponents should construct and maintain a chain link fence that:

- Surrounds the active landfill cell or areas where waste material or wildlife attractants are disposed of or stored.
- Is at least 1.8 metres (six feet) in height and capable of preventing wildlife access.
- Is buried at least 30 centimetres (one foot) below ground level (where ground conditions allow) or use other preventative measures to deter wildlife from digging underneath the fence.
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Electric Fence

Surrounding the outer perimeter of the chain link fence, the proponent should construct and maintain an electrified high tensile wire fence with the following:

- Constructed of permanent posts, galvanized high-tensile steel wire and sufficient grounding to ensure maximum conductivity.
- Includes at least six strands of wire spaced according to manufacturer specifications.
- The wires consist of alternating hot and ground wires. The top wire must always be hot, and the ground wire can be strung along the bottom.
- Fence posts should be made of sturdy material, such as metal, fiberglass or wood.
- Use an electrified gate that is impenetrable to wildlife.
- Trees and shrubs must be cleared around and below the fence to prevent power shortages or drainage issues. Grass and low-growing vegetation should be regularly cut to maintain visibility.
- Warning signs indicating an electrified fence must be strategically placed at regular intervals around the landfill.

The proponent should maintain a cleared buffer area of at least 20 metres surrounding the fenced boundary to facilitate the following:

- Ease of monitoring, maintenance and repair of the fence.
- Reduce the risk of blowdown and/or vegetation impacting the fence.
- Create a cleared area where dangerous wildlife will be less comfortable and be visible for hazing or other action as required.
- Maintaining a fire break and ensuring a buffered area is clear of all materials easily ignited by wildfire.

Power Supply and Voltage

- The electrified fence should operate at a voltage sufficient to deter dangerous wildlife without causing permanent harm and provide justification for the voltage selected.
- The power source must be adequate for the continuous operation of the fence.

Design Drawings

Electric fence design drawings should be included with the design plan, following the best management practices indicated above or from other jurisdictions in consultation with the ministry. The drawings should be designed and installed by a subject matter expert and include:

- Chain link fencing specifications and placement around the active landfill area.
- Electrified fence specifications including the electrified gate, posts, grounding rod and energizer.
- Aerial overview of the cleared buffered area.

Operation

If the design plan includes an electrified fence, operational details will need to follow best management practices and be included in the site's operations plan. See the Landfill Operations Plan guidance document for more information.

Chain link and electrified fence example (skweldedmesh.com/electric-fence/)