

Ministry of Environment  
Environmental Protection Branch

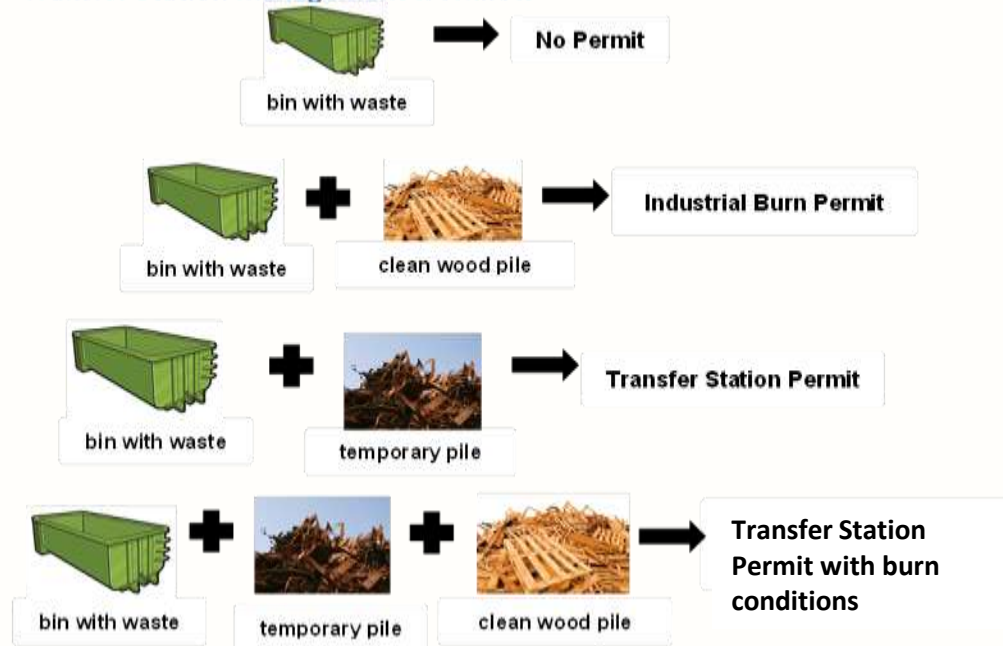
**Landfill Basics**

**Fall 2018**

# Transfer Station

## Permitting Requirements

### Transfer Station management workflow



# Transfer Station

## Permitting Requirements

Application form for a permit to operate needs to include:

- A. Site Suitability Report that describes the siting of the transfer station based on site information in order to determine the design requirement to protect the environment
- B. Design Plan that includes:
  - The location with respect to the surrounding community
  - A site plan
  - Details of waste types and quantities for temporary storage
  - Incorporate environmental protection and control systems

# Transfer Station

## Permitting Requirements

- Permit must be posted on site and if unable, at least at office
- Site must be supervised during operation hours
- Gate and perimeter fencing to prevent unauthorized access
- Entry gate signage
  - Must contain Name/owner, hours of operation and emergency contact phone number
- Required to have an operations plan
- Required to have an emergency response plan

# Transfer Station

## Design



### Collection of temporarily stored waste

- Good separation
- Set back distances – as determined by local by-laws
- Designated areas- ensure good visibility for site supervisor
- Easily accessible
  - For drop-off or pick up

# Transfer Station

## Closure

- Steps to closing a site:
  1. Provide written notice to the Environmental Protection Officer.
  2. Post a visible notice at the entrance warning against trespassing, illegal dumping and vandalism.
  3. Inform anyone affected by the site closing
  4. Ensure the site is clean of any litter, unused containers, unused tanks, or waste in temporary storage areas, including recyclable materials, and dispose of those items
  5. Remove waste bins and any material piles
  6. Submit a closure plan to the Environmental Protection Officer.

# Landfill

## Regulation

- EMPA
  - Industrial Effluent Works Permit (Industrial Waste Works Permit)
    - Private, more than 20% industrial waste
    - Requires financial assurance in place
- Municipal Refuse and Management Regulations 1986
  - MRMR permit
    - Municipally or government owned
    - No financial assurance

# Landfill

## Permit

The landfill permit to operate includes:

- Site must be fenced and signed
- Site must be supervised while open, and gate closed and locked while not supervised
- Allowable acceptable waste
- Cover and compaction frequency
- Information on reporting spills/incidents
- Annual reporting requirements
- Groundwater/storm water monitoring requirements
- Clean wood pile burning requirements
- Emergency response plan
- Operations Plan



# Compliant Landfill Design

Before



After



# Landfill Construction

## Site Suitability Report

The site suitability report should describe the siting of the facility and the results of the technical investigation. The technical investigation is used to fully characterize the site-specific design requirement and protect the environment.

The report should include:

- a) A site plan that details the topography and surface water hydrology within 1000 meters of the proposed site.
- b) A statement or document describing the geological and hydrogeological conditions.

# Landfill Design Plan

The report should be prepared by a person who possesses the core skills and competencies including a design that meets the applicable best practices and should:

- a) Identify the location and the relationship with host site and surrounding communities.
  - Setbacks – 500m from a restaurant, canteen, cafeteria or any other place where food is cooked or prepared for human consumption or is consumed, a motel, hotel, domestic residence or any other building occupied as a residence; a school, church, community centre or recreation facility or similar public building;
    - 100m of a highway or a cemetery
    - 457m from residents
- b) Identify the activity proposed including volumes, types of waste and anticipated waste tonnage to be disposed of each year and the design life.

# Landfill Design Plan

c) Considering the results of the technical investigation include construction QAQC procedures and incorporate environmental protection through:

- Seepage barrier system
- Surface water management
- Groundwater Monitoring
- Leachate collection
- Final cover system
- Landfill gas management

d) Include a site plan showing:

- legal site boundary
- geographical location of site access, roads, earth works, buildings, buffer zones, and infrastructure
- hydrologic information, land use and other environmental information
- areas designated for different waste types

# Landfill Operations Plan

**The operations manual can be seen as the instruction manual on how to run the site. Information may include:**

- What type/amount of waste is be accepted and how is it being documented?
- Where does the waste go once it is accepted?
- Is training or certification required?
- What happens in the event of upset conditions?
- Details on cover and compaction requirements/frequency
- In the event of complaints from the public how does the facility plan to manage them

# Landfill Emergency Response Plan

**The Emergency Response Plan is important for operators to know what to do and who to call in the event of:**

- Fire
  - Spills
  - Medical Emergencies
  - Accidents
  - Unauthorized material received or discovered at the landfill
  - Surface water contamination
  - Extreme weather
- 
- SWANA Northern Lights has a template available for guidance

# Landfill Closure

- Apply to Ministry for closure
- Submit closure plan:
  - Indicate date of closure
  - How and when remaining materials will be disposed/recycled
  - Final plans for any structures on site
- Apply interim cover to the landfill
- Clean the site of any litter, tanks, temporary waste storage areas, recyclable materials
- Environmental Site Assessment to assess for potential impacts to potential receptors such as groundwater, soil, and surface water on and off site
- Corrective Action Plan to indicate final cover system and any other work required to ensure public safety and protection of the environment

# Landfill/Transfer Station Guidance Documents and SaskInteractive

- More information on transfer stations and landfills can be found at:  
<http://www.environment.gov.sk.ca/solidwaste>
- Use the SaskInteractive site for information on all open/closed landfills and transfer station in Saskatchewan:  
<https://gisappl.saskatchewan.ca/Html5Ext/index.html?viewer=saskinteractive>  
(select the *Solid Waste Management* layer)



# Waste Stewardship and Recycling

Program Updates

# Good news, Saskatchewan!

You've contributed to some impressive recycling and waste reduction in our province in 2017:

- More than **400 million beverage containers** recycled through SARCAN
- More than **409,000 litres of paint** collected and diverted from landfills
- More than **2,200 tonnes of waste electronics** collected and recycled
- More than **18 million litres of used oil** and almost **two million oil filters** recycled
- Over **480 municipalities** have blue box recycling programs
- **41,250 tonnes of printed paper and package materials** recycled

# Agricultural Plastics



- January 1, 2018 Cleanfarms launched the industry-operated recycling program for grain bags
  - First regulated program in North America
  - Full funding transition November 2018

[www.cleanfarms.ca/SKGrainBag](http://www.cleanfarms.ca/SKGrainBag)
- Transition from the provincially-funded pilot project available since 2011
  - Over four million kilograms of ag plastics recycled

# Waste Electronic Equipment



The electronic products recycling program expanded - May 1, 2018

- The third product expansion in ten years of having a provincial program
- New materials include microwave ovens, floor standing printers, game consoles, GPS units and more
- Operated by Electronic Products Recycling Association - [www.epra.ca](http://www.epra.ca)

# Household Hazardous Waste

Online consultation - Fall of 2017



- Categories most supported
  - Waste Household Hazardous Materials
  - Rechargeable and Other batteries
  - Fluorescent Lights
  - Pesticides
- Themes
  - ✓ Accessible and efficient
  - ✓ Harmonized
  - ✓ Accountable and Transparent
  - ✓ Extended Producer Responsibility
  - ✓ Education and Awareness

# Household Hazardous Waste



- Next Steps

- Fall 2018 - Development of Regulations

- Aligns with 2018-19 Ministry Operational Plan

- Develop and implement a Household Hazardous Waste program

# Questions?

saskatchewan.ca