

Alberta Regulations - Leachate

**Alberta Environment and Parks
Presented By: Carol Nelson**

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Minister Shannon Phillips



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Remember, it is mandatory that you transport your watercraft with the drain plug removed!

Ongoing Situations

- Whirling disease found in fish in Banff National Park
- Temporary Restriction Order – Motorized Use in Hummingbird Trail System
- Bear Closure – MT Kidd R.V Park

For details on these and other notices, see:

- [Ongoing Situations](#)



Alberta Environment and Parks

- **Proud stewards of air, land, water and biodiversity**
- **AEP is a ministry of the Government of Alberta and consists of:**
 - Alberta Recycling Management Authority
 - Alberta Used Oil Management Association
 - Beverage Container Management Board
 - Climate Change and Emissions Management Fund
 - Environmental Appeals Board
 - Environmental Protection and Enhancement Fund
 - Land Compensation Board
 - Land Stewardship Fund
 - Land Use Secretariat
 - Natural Resources Conservation Board
 - Surface Rights Board

Leachate

Where does it come from and why is it important to you.

What is a Leachate

As a liquid moves through a solid it picks up characteristics of the solid.

1. Volume of liquid directly impact the type of leachate that is produced

2. Rate (or contact time) directly impact the type of leachate that is produced

3. The type of solid directly impacts the type of leachate that is produced



The landfill Design and How it works for you

Barriers

- Daily Cover
- Intermediate Cover
- Final Cover (Cap)

Leachate drainage systems

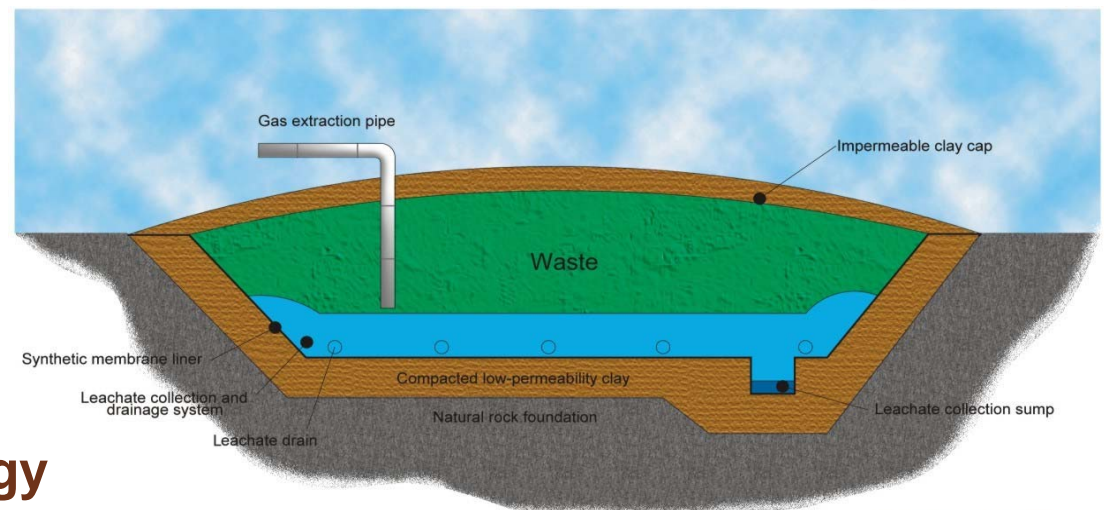
Liner

- Clay
- HDPE

Natural Siting

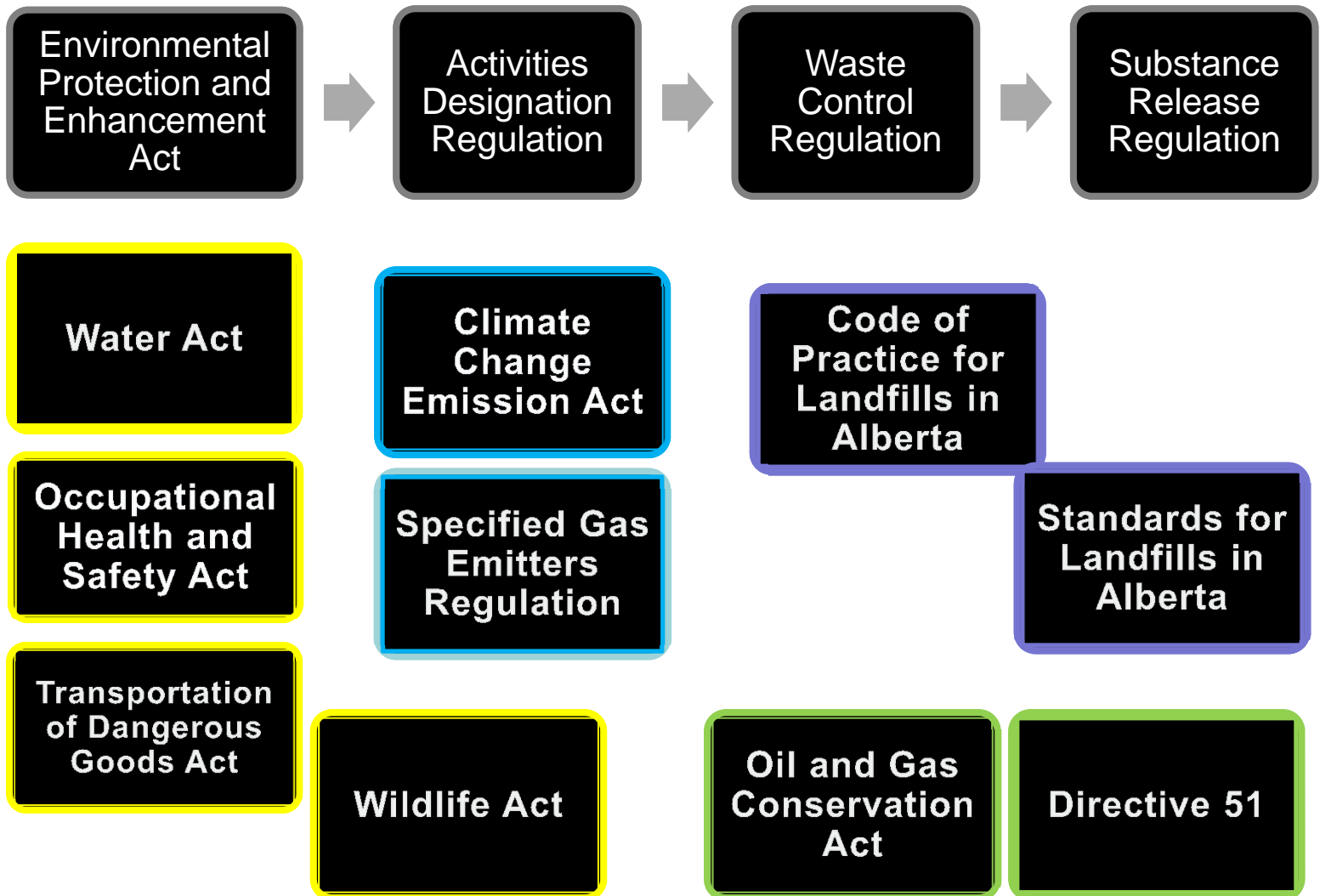
- Geology
- Hydrogeology

Groundwater Monitoring



Legislation related to:

- monitoring, storage, treatment, disposal



Waste Control Regulation (WCR)

- **Purpose of regulation is to:**
 - **Protect Albertans and the environment from waste**
 - **Provides requirements for how waste must be managed**
- **WCR outlines requirements for:**
 - **Waste management facilities**
 - **Storage**
 - **Characterization and classification**
 - **Limitations for importation**
 - **Waste Disposal**
 - **Operator certification**
 - **Financial security**

Activities Designation Regulation (ADR)

- **Purpose of regulation is to:**
 - **Provide clarity to the department oversight for activities**
 - EPEA approvals
 - Registrations (Code of Practice)
 - Notifications
- **ADR outlines requirements for Activities such as:**
 - **Type of waste management facilities**
 - Class II landfills and Class III landfills
 - Class I landfills
 - Storage Sties (transfers stations)
 - Composting facilities,
 - Hazardous waste facilities
 - **Includes landfills under reclamation (closed) for duration of post closure period (minimum 25 years.)**

Are you flushing your dollars?

1. Preventative Actions
2. Waste Diversion
3. Pretreatment
4. Automation
5. Storage and Disposal



What are you doing to reduce Leachate Costs

1. Preventative Actions

- **Fill planning**
- **Surface drainage**
 - On-site snow storage
- **Progressive capping**
- **Types of barrier layers (cap)**

What are you doing to reduce Leachate Costs

2. Waste Diversion

- Household Hazardous Waste
- Electronic Recycling program
- Tires
- Pesticides Container Program
- Beverage Container Recycling
- Paints
- Lubricating Oils
- Other global & Federal initiatives
 - Example: Persistent Organic Pollutants (POPs)

What are you doing to reduce Leachate Costs

3. Pretreatment

- Rotating Biological
- Evaporation / Settlement
- Transpiration – limited plant applications
- Reverse Osmosis

4. Automation

- Leachate drainage system and
- depth of leachate (or head level)

What are you doing to reduce Leachate Costs

5. Disposal and Storage

- **Storage Pond**

- **Primary Liner**
- **Secondary Liner**
- **Secondary Leachate Collection System**
 - also called a leak detection system
- **Action Leakage Rate**
- **Pond Freeboard & winter storage**
 - expected capacity?

What are you doing to reduce Leachate Costs

5. Disposal and Storage

- **Storage Tanks**

- **Guidelines for Secondary Containment for Above Ground Storage Tanks (1997)**

- Secondary Containment
 - Designed to contain 110% volume of the tank
 - Specified minimum berm height
 - Routine inspection
 - Removal of any accumulated material from the secondary containment system

What are you doing to reduce Leachate Costs

5. Disposal and Storage

- **Off Site Disposal**

- **Wastewater Treatment Plant**

- Types in your area?

- **Deepwell Disposal**

- (scheme disposal sites are regulated by AER)

- **As authorized by the Director**

- Limited applications

The logo for the province of Alberta, featuring the word "Alberta" in a white, cursive script font. A small orange square is positioned at the end of the word, partially overlapping the letter 'a'. The logo is set against a vertical banner with a geometric, low-poly pattern in various shades of orange and brown.

Questions

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