

# First Nations Solid Waste Management Initiative Opportunities/Discussion

Links to Learning Presentation

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Indigenous Services  
Canada

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Autochtones Canada

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# First Nations Solid Waste Management Initiative

- Commenced in 2016, under Budget 2016
- Solid waste taken out of infrastructure budget
  - First time that dedicated funding was set aside for Solid Waste
- ISC Alberta has a dedicated Solid Waste Team
- Limits and financial constraints on capital and O&M
  - Yearly budget

# Solid Waste Management – overview of waste management options

# Solid Waste Options

There are 3 different solid waste management systems:



DIRECT HAUL



WASTE TRANSFER  
STATION



LANDFILL



Increasing Capital and O&M Requirements

# Direct Haul

Direct haul involves household waste collection from individual residential houses. Waste is transported directly to a landfill for appropriate disposal.

- Waste is taken away from each household on a regular schedule and directly driven to an off-reserve landfill.



# Direct Haul Considerations

## Cheapest, most sustainable option

- Only requires an appropriately sized collection truck
- Collection is done in 1-2 days

## Zero land requirements

- No land is required to store waste

## No stored waste in the community

- All waste is taken directly away from the community

Community members do not need to take their household garbage anywhere

# Direct Haul with a Waste Diversion Station (WDS)

- Uses direct haul to transport household waste directly to a landfill for appropriate disposal
- The Waste Diversion Station is a fenced compound that allows for hazardous materials, appliances, batteries, tires, paint cans, etc. to be temporarily stored.
  - Each type of waste material is neatly stored in a 'cell'
  - Once the WDS has a filled 'cell', the attendant arranges pick up by a processor.





# Waste Diversion Station Benefits

- Relatively small land requirements for the fenced compound
- No household waste stored in the community
- Waste is diverted from the landfill (whites, tires, etc.)
- Community sets hours for the WDS
  - Since no household waste is being stored, hours can be minimal (typically only few hours)
  - E.g. 3 days a week





# Waste Transfer Station (WTS)

- The Waste Transfer Station (WTS) is a large facility where household waste is stored and also has a waste diversion area.
  - Household waste is collected from the houses by a small Public Works collection truck.
  - The waste is emptied and stored in large roll off bins at this facility.
  - Once bins are full enough they are hauled away to a landfill in a roll off truck.



# Waste Transfer Station Considerations

## A Larger land base is required

- Additional space is needed to accept household waste and haul it away in large trucks

## Household waste is stored in the community

- Can become messy if waste is exposed to elements (snow, rain, wind) and animals

## Waste is diverted from the landfill (whites, tires, etc.)

## Self hauling of diverted materials to the WTS

## Illegal dumping outside of waste transfer station

- If community members do not find the WTS times adequate

## Larger O&M costs

- More labour and equipment associated with the facility, roll off truck driver wages and roll off truck O&M

# Landfill

A Landfill is an engineered facility that accepts waste that will be stored permanently.

- If you have one, you do not pay tipping fees anymore
- Typical economically viable landfill requires waste of at least 10,000 persons

## **Least desirable option**

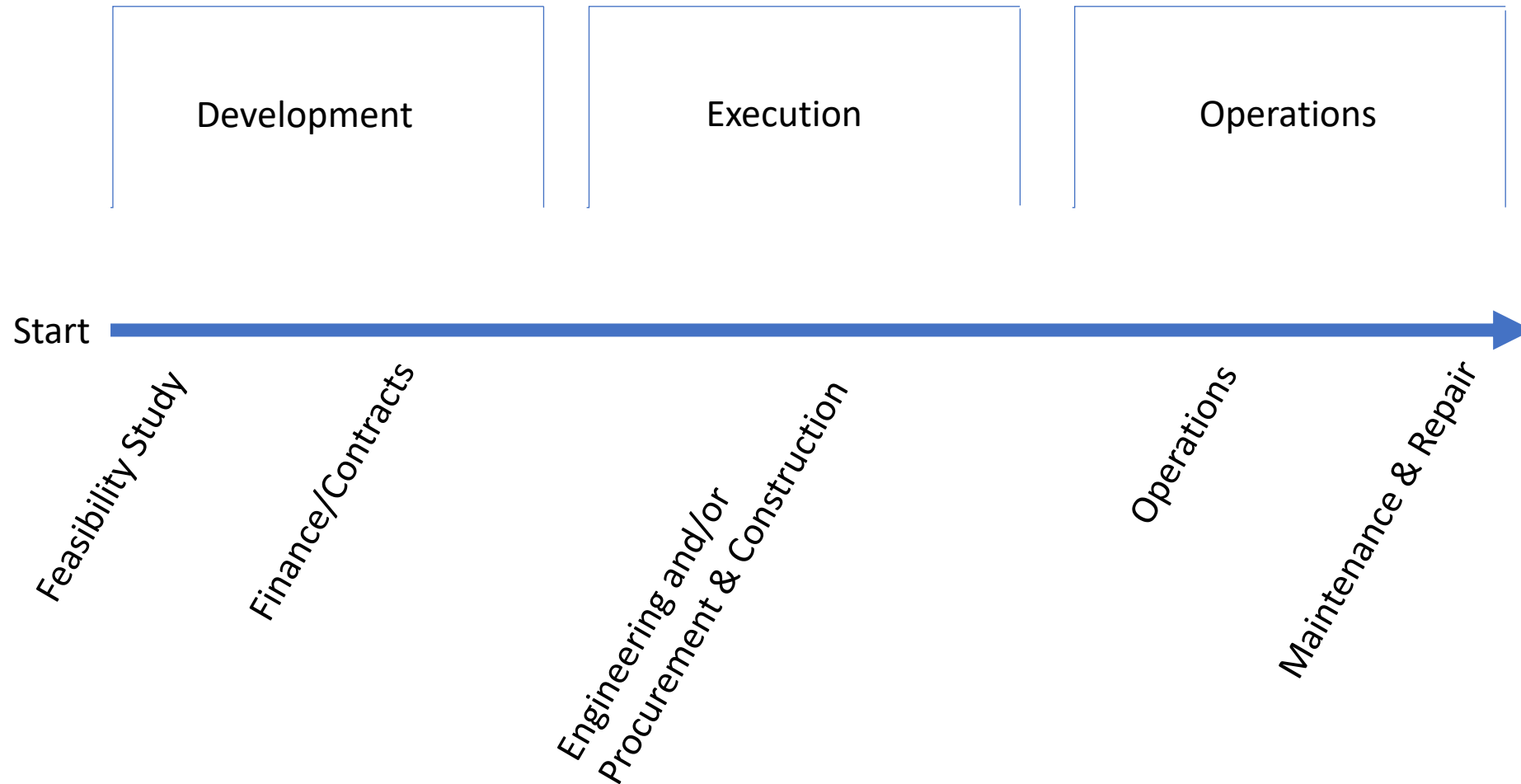
- Most expensive to construct and to operate (need dozer/loader/packer, labour intense)
  - High O&M costs (labour, equipment, capping material, etc)
- Large land base is permanently tied up and becomes an environmental liability
- Need to be careful that no hazardous waste goes into the landfill





# Project Lifecycle

Include milestone points of new contracts/procurement stage



# Economic Development Opportunities

- Local labour during construction
  - Can be band owned company, or a contractor hiring local labour
    - Must adhere to TB policies for tendering and procurement
- Local equipment
  - Band owned company or align with contractor
    - Must adhere to TB policies for tendering and procurement
- Employment opportunities at facility
- Clean up and remediation of former dump sites
  - Leads to land to develop for EcDev opportunities



# Questions?

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