Waste Connections of Canada

MASTER SITE DEVELOPMENT PLAN

HIGHWAY 21 IWMF

March 2024

TOWNSHIP planning + design inc.

WASTE CONNECTIONS OF CANADA

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Executive Summary

Waste Connections of Canada Inc. (WCC) proposes to develop an Integrated Waste Management Facility (IWMF) in Kneehill County, Alberta. The IWMF is privately operated and includes collection, transportation, processing, recycling, treatment, and disposal of various types of waste generated by businesses, industry, commercial, institutional and agricultural operations, and residential communities. A portion of the IWMF includes a Class II landfill that is subject to strict provincial approvals and ongoing oversight, including posting financial security and filing annual reports. The day-to-day operations for a Class II non-hazardous landfill involve the progressive development of the site over multiple years, and in this instance, striving to maintain agricultural lands where possible.

To facilitate the IWMF, WCC is seeking to redesignate the subject site into two Direct Control (DC) land use districts. DC districts provide Council "direct control" over development. The DC Bylaws' permitted use category lists a number of uses that are principally required to operate a landfill, and are generally approved by Alberta Environment and Protected Areas (AEPA). The discretionary uses category of the DC Bylaws includes uses considered ancillary to the IWMF operation and are generally at the discretion of the municipality to approve. The DC 7 District covers the portion of the site dedicated to the uses required to operate a landfill and its critical infrastructure, including the primary permitted use, a landfill facility, as well as ancillary discretionary uses such as a scale house, administrative offices, recycling collection point, and storage and maintenance buildings. The DC8 District covers the remainder of the site and includes permitted and discretionary uses largely similar to those listed in the DC7 District, but it does not include a Class II Waste Management Facility. Council has the discretion to set the development standard on discretionary uses in both districts. The two DC Bylaws, coupled with a Master Site Development Plan (MSDP), aim to create the planning framework to support the IWMF, while providing Kneehill County with a detailed overview of the proposed uses and processes.

A DC District is a planning tool, subject to Council's direction and control. They are used to regulate specific developments that do not fit into existing standard land use districts. An IWMF is an example of such a unique use. We recognize that Waste Management Facility is listed as a discretionary use in some of Kneehill County's land use districts; however, there are other uses listed in these districts that do not align with the intent of a waste management facility. Therefore, the DC Districts were developed to guide the uses specific to the IWMF. The DC Districts provide some flexibility over the duration of the project, allow for tailored regulations to address the unique uses, and encourage innovation over time as technology advances. The DC Bylaws also balance the interests of local landowners, the community, and WCC by ensuring that the IWMF meets specific municipal and provincial standards while considering broader public interests. WCC will also establish a Community Enhancement Fund in collaboration with Kneehill County and community members, which will be allocated to services and resources in Kneehill County that serve its residents.

The Master Site Development Plan (MSDP) is another planning tool that outlines a comprehensive framework to describe the components of the project and the approvals pathways. This MSDP provides a detailed breakdown of the municipal and provincial regulatory process to demonstrate how the uses in the two DC Districts will be implemented and managed. For instance, the permitted uses listed in the DC 7 District are those principally required to operate a landfill facility and generally approved by AEPA with conditions.

Finally, WCC appreciates that waste management facilities are long-term developments of significant tenure. Stakeholders can be certain that WCC is committed to a true community partnership, and will work with local organizations and local businesses, and continually engage with stakeholders to ensure they remain an active partner. WCC values employees, expects the highest standards from the leadership team, and seeks to give back to the local communities where their facilities are located.

Existing Site Conditions

1.0 Introduction

Waste Connections of Canada Inc. (WCC) is developing an Integrated Waste Management Facility (IWMF) in Kneehill County (the County). An IWMF is a comprehensive facility that combines various waste management processes and technologies to effectively collect, transport, process, recycle, treat, and dispose of different types of waste in an environmentally sustainable manner in compliance with municipal and provincial regulatory requirements. The IWMF consists of various activities; however, the primary activities are for landfill and operational uses that will be progressively developed over time. A portion of the lands will be required to support ancillary and accessory uses to the landfill operation. The total IWMF site is +/- 536.86 acres (+/- 217.23 ha) which is divided into two Direct Control Districts. DC7 consists of +/- 301.51 ac (+/- 121.99 ha) which supports the principal use of a Class II, non-hazardous landfill and ancillary uses in the operation of the landfill. The DC8 consists of +/- 235.35ac (+/- 95.24ha) which accommodates ancillary and supporting uses for landfill operations as described in this MSDP.

Purpose of Direct Control Districts (DC)

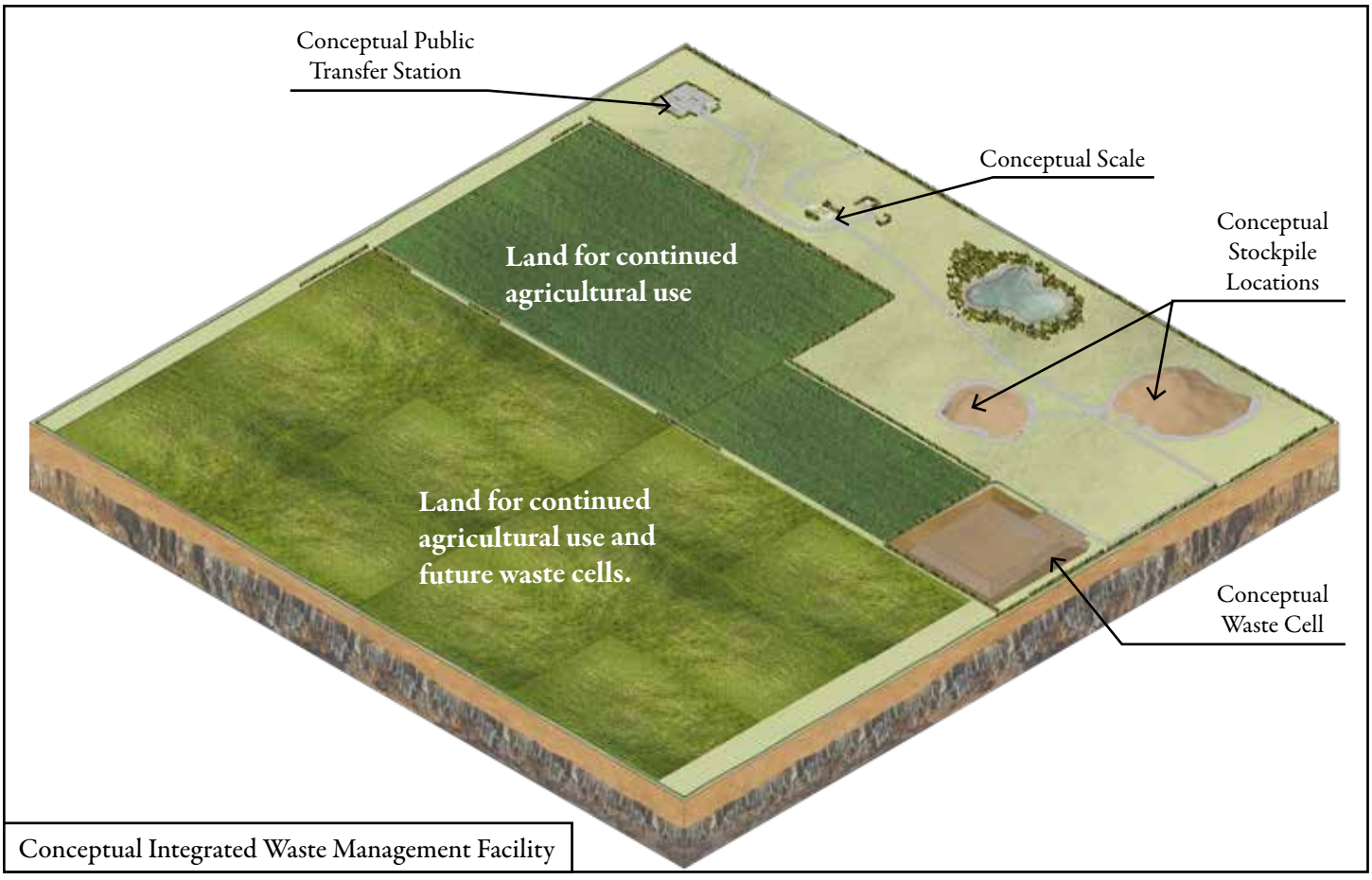
A Direct Control (DC) land use district is the most appropriate planning tool for the IWMF given that the districts in the Kneehill County Land Use Bylaw that allow for a Waste Management Facility include other uses that do not align with the intent of a waste management facility. As the name suggests, the site's development is under the "direct control" of Council and the approving authority. DC districts offer flexibility for municipalities to address unique developments while ensuring they comply with municipal objectives and policies. As outlined in this MSDP, there are two Direct Control districts proposed. DC7 contains a list of permitted uses, including landfill, that are primary considerations in the operation of a IWMF and are usually approved and issued operating permits by The Province of Alberta (the Province). Ancillary discretionary uses such as a scale house, administrative offices, recycling collection point, and storage and maintenance buildings are also included. The DC8 District covers the remainder of the site and includes permitted and discretionary uses that are largely similar to those discretionary uses listed in the DC7 District, but it does not include a Class II Waste Management Facility.

Each of the DC District Areas are outlined on **Figure 6: Direct Control (DC) District Areas**.

Purpose of the Master Site Development Plan (MSDP)

An MSDP was viewed as the most appropriate planning tool to pair with the two DC Districts because it addresses the many technical, regulatory, social, and administrative considerations of locating and operating an IWMF. An MSDP typically refers to a comprehensive development plan that may be required for development projects, and associated planning approvals pathways, that describe the important aspects of the project. An MSDP often details the approval process for developments that involve multiple phases, require the coordination of multiple municipal and provincial levels of approval, have a significant duration of tenure, and have significant environmental or infrastructure considerations.

This MSDP outlines a comprehensive planning approach to the IWMF and the framework of approvals. Projects often require the coordination of various government agencies and departments, and, in this case, operational oversight approvals are required from AEPA that must align with the issuance of approvals from Kneehill County. This MSDP takes a wide view of all applications required, and includes studies and engagement processes to ensure that the applications are well understood by all involved. This MSDP is also intended to allow for some flexibility in the implementation of the DC Districts. This MSDP, combined with the two DC Districts, provide strong Council oversight, some flexibility, ongoing stakeholder engagement, and coordination of various departments within Kneehill County and the Province for the duration of the project.



Conceptual Integrated Waste Management Facility

Site Selection Rationale

The process of seeking out a suitable site for an IWMF requires the evaluation of various criteria that align with municipal and provincial regulatory requirements. Prior to deciding to locate this project in Kneehill County, WCC evaluated a number of locations in Alberta to find the one that best met the conditions and environmental criteria to allow for successful development of an IWMF project. The following factors were considered in the selection process:

- **Willing Host**: Kneehill County's Strategic Plan supports continued economic development, and one of its goals is to ensure Kneehill County is prepared for waste management needs;
- **Willing Landowners**: lands involved in the application are owned by landowners who understand and support the project;
- **Accessibility**: the selected site is close to a provincial highway; and
- **Optimal Site Conditions**: the selected site provides the conditions to meet strict environmental and geological conditions as outlined in the ***Environmental Protection and Enhancement Act*** (***EPEA***), ***Water Act***, ***Standards for Landfills in Alberta***, ***Waste Control Regulation***, and municipal criteria.

Additional key considerations include the impact of the IWMF on agricultural uses, area residents, the environment, and the infrastructure available to the site. The selected site has direct access to the provincial highway system (Provincial Highway 21) along Township Road 29-0. WCC's proposed access would involve the upgrade of provincial and County infrastructure to meet the expectations of the Province and the County. This access route was proposed based on several considerations including proximity to the Provincial Highway 21 corridor, safety, sightlines at the intersection, and absence of any current dwelling units or individual residences currently in place along the Township Road 29-0 corridor. The site currently supports agricultural uses and will continue to do so in the long term, which is why it is included as a use in both of the DC Districts. WCC has agreements in place to continue farming activities on parts of the site not required for IWMF operations.

Kneehill County is characterized by its rolling hills and prairie landscapes. It is situated in the Red Deer Region and is part of the Canadian Badlands, an area known for its unique geological formations. Kneehill County is home to several small communities and hamlets, including Three Hills, Trochu, Linden, Carbon, and more. Three Hills is the largest town within Kneehill County and serves as a hub for services and amenities in the area. WCC appreciates that the County's unique diversity offers significant agricultural land base and infrastructure, as well as opportunities for outdoor recreation and exploring the natural beauty of the region.

The site is identified on **Figure 1 - General Location with Site Photos.**

View "A"

View "B"

View "C"

View "D"

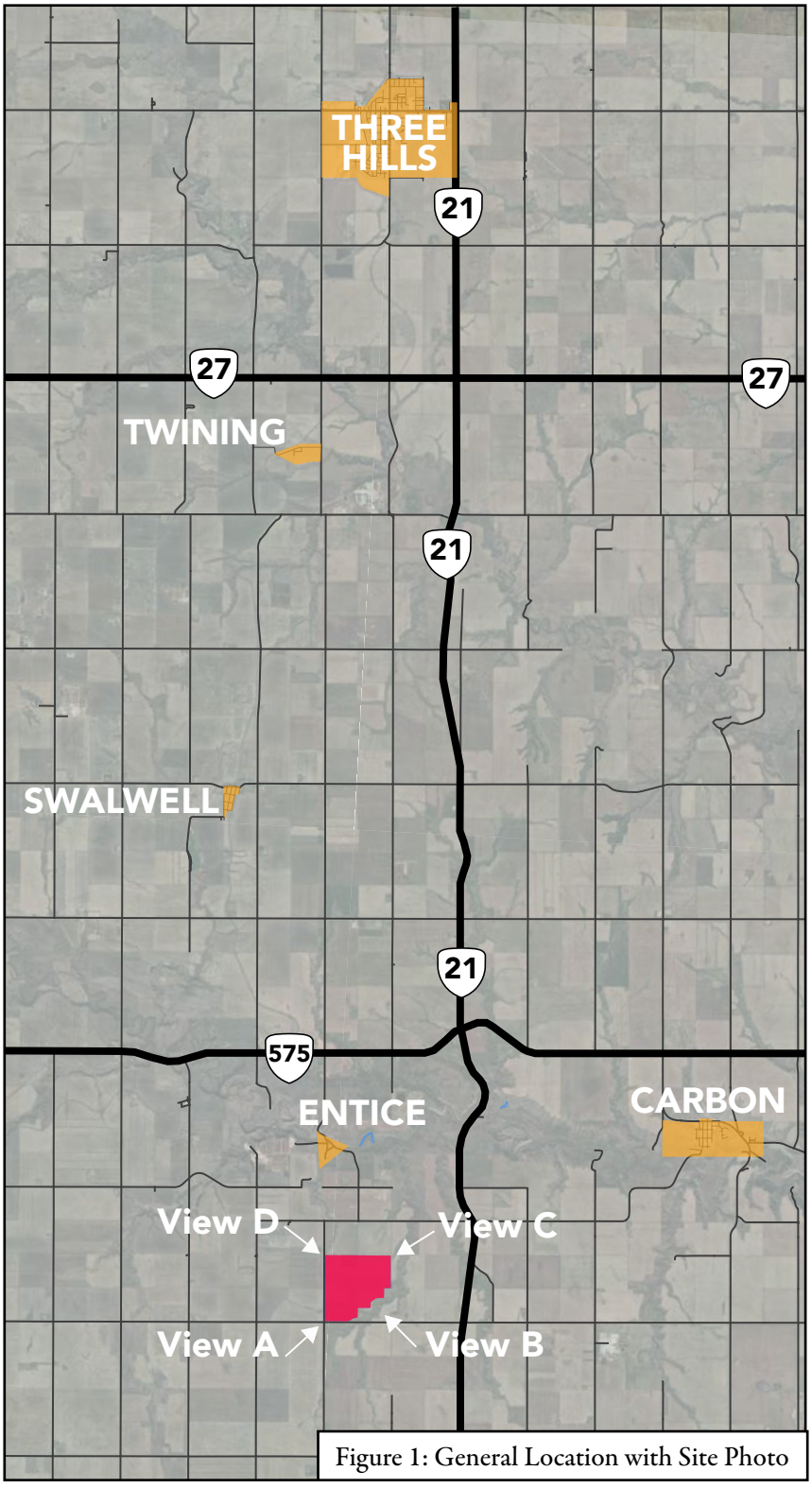


Figure 1: General Location with Site Photo

IWMF Subject Lands
Surrounding Communities

2.0 About Waste Connections of Canada

WCC is a leading provider of solid waste collection, waste management, and environmental services. WCC specializes in the management and disposal of various types of waste in the communities they live in and serve, including residential, agriculture, and certain types of Industrial, Commercial and Institutional waste (IC&I). WCC's statement of operating values are consistently relied upon and form the foundation of WCC's culture and operations and guide all decisions. The values of WCC are as follows:

SAFETY

WCC strives to assure complete safety of their employees, customers and the public in all operations. Protection from accident or injury is paramount in all they do.

INTEGRITY

WCC defines integrity as "saying what you will do and then doing it." WCC keeps promises to their customers, employees, and stockholders. Do the right thing, at the right time, for the right reason.

CUSTOMER SERVICE

WCC provides customers the best possible service in a courteous and effective manner, showing respect for those that they are fortunate to serve.

TO BE A GREAT PLACE TO WORK

WCC maintains a growth culture where their employees can maximize their potential personally and professionally. The objective is to provide an inclusive environment where people enjoy what they do and take pride in their work. WCC aims to embody a work hard, play harder culture.

TO BE THE PREMIER WASTE SERVICES COMPANY

WCC continues to provide superior returns to the community and their shareholders, remain environmentally responsible, and grow in a disciplined way, deploying resources intelligently and benefiting communities they live in. WCC remains a "different breed".


25 Years
Waste Connections
Connect with the Future
NYSE
W1 C8 I3
SAFETY DRIVEN
Culture matters
Waste Connections
Connect with the Future
INVESTMENT IN SUSTAINABILITY

Partnering with Communities

WCC has an extensive geographic presence across North America, Canada, and Alberta. WCC has private solid waste management facilities in Calgary, Edmonton, Red Deer, Lethbridge, Rocky View County, Medicine Hat, and the County of Paintearth. WCC takes great pride in the established long-term relationships with the communities in which they operate. WCC has a high degree of integrity and is accountable for the commitments it makes.

WCC is a development and community partner. WCC takes great pride in its involvement at the local community and grassroots level where it actively makes contributions towards the well-being of the communities and residents they serve (e.g. charitable donations, scholarships, community events, volunteer programs, local employment). These partnerships demonstrate a strong commitment to the community and a drive toward the betterment of people and places. Stakeholders can be certain that WCC is committed to a true community partnership, and will work with local organizations and local businesses, and continually engage with stakeholders to ensure they remain an active partner.

WCC has a culturally ingrained commitment to environmental sustainability and responsible waste management. WCC regularly implements innovative and eco-friendly waste management practices, such as recycling, composting, and energy recovery to protect the environment.

WCC Community Initiatives

3.0 Proposal Overview

WCC intends to operate an IWMF that supports a permitted use Class II landfill facility on the selected site. In addition to the primary and ancillary activities of the IWMF that will support the community, the IWMF can provide other opportunities for community benefit such as waste-related services (e.g. agricultural plastic recycling collection; the collection, transfer, and processing of wood, metals, and concrete); and financial support through a Community Enhancement Fund. Through community engagement and collaboration, additional services and allocation of community funds will be evaluated based on community feedback.

In Alberta, landfills are regulated by AEPA, and they are classified based on the type of waste they receive and handle. A Class II landfill is allowed to dispose of solid non-hazardous waste as defined in provincial legislation. This typically includes municipal solid waste (MSW), certain types of Industrial, Commercial, and Institutional (IC&I), Construction and Demolition wastes, and agricultural waste. The waste that will be received at the facility will be a combination of local waste and waste from private contracts with WCC.

The IWMF is a comprehensive facility that combines various waste management processes and technologies to effectively handle, treat, and dispose of different types of waste in an environmentally responsible manner. These facilities are designed to address multiple aspects of waste management, including waste reduction, recycling, and safe disposal of residual waste.

The general characteristics of an IWMF that hosts a Class II non-hazardous landfill in Alberta include:

Waste Types

- Municipal Solid Waste (MSW): household waste, commercial waste, agricultural waste, and other non-hazardous materials.
- Non-hazardous Industrial Waste: waste from industries that does not contain hazardous substances.
- Construction and Demolition Debris: inert materials from construction and demolition activities.

Waste Source

- Local and regional waste.
- Private contracts managing Class II non-hazardous waste.
- Opportunity to explore waste management partnerships with local business, communities, and Kneehill County.

Regulatory Compliance

- The landfill must comply with provincial regulations to ensure that waste disposal operations are conducted in an environmentally responsible manner. Regulatory compliance is extensive and holds WCC accountable for all aspects of operation and closure. The compliance activities required under ***The Standards for Landfills in Alberta (The Standards)*** are summarized in **Appendix E**.

Engineering Controls

- Class II landfills have engineered features such as liners, leachate collection systems, and landfill covers to control environmental effects. Monitoring is conducted to ensure that engineering controls are functioning as intended.

Facility Operations, Monitoring, and Reporting

- The landfill is required to implement monitoring programs to evaluate potential environmental effects, including groundwater quality and gas emissions. Annual reporting of environmental performance to AEPA standards is required. The permit for operating a Class II landfill needs to be renewed every 10 years, allowing for additional public engagement at these stages to ensure that there are no adverse effects on to the public.

Financial Security

- As per ***The Standards*** (**Appendix E**) and ***EPEA***, approval will require WCC to review and revise the cost estimate for closure and post-closure of the landfill on an annual basis. WCC must submit a current financial security bond to be held in trust with the Alberta Treasury at intervals requested by AEPA.

Operations

- The operations for a Class II, non-hazardous landfill involve the progressive development of the site over multiple years while striving to maintain agricultural lands where possible. In addition, the IWMF offers ancillary uses on site that are intended to divert waste from landfill disposal and redirect materials for further recycling and/or re-use. For example, ancillary uses at this IWMF may include installation of a recycling transfer station.
- A transfer station for ancillary materials could include the collection of agricultural plastics, metal, wood, and concrete. Agricultural plastics could be collected on site and transferred to a stewardship organization for processing. WCC intends to collect wood and process it into chips for use and application on this site (e.g. internal access roads, on-site dust abatement). Other waste stream materials such as metals and concrete could also be collected and transferred off-site to a third-party for processing or reuse.

Closure and Post Closure Requirements

- Closure and post-closure requirements involve the completion of landfill capping and the management of the facility for at least 25 years following final closure.

Chaparral Landfill, Calgary, AB

3.1 Site Context & Location

The IWMF is proposed to be located on +/- 536.86 acres (217.23 ha) in Kneehill County. The IWMF will utilize +/- 301.51 ac (+/- 121.99 ha) of the subject lands for primary landfill and supporting landfill uses, and +/- 235.35ac (+/- 95.24ha) of the subject lands will be utilized for ancillary operations. The remainder of the land not included in the IWMF will remain in agricultural use.

The IWMF site can be accessed from Provincial Highway 21 by taking either (1) Township Road 29-0 and Range Road 24-2 or (2) Township Road 29-1A and Range Road 24-2. WCC is proposing to utilize Township Road 29-0 as the principal access to the IWMF site as it does not pass any privately-owned residences, which was an important criteria when deciding how best to access the IWMF. The application proposes to upgrade Township Road 29-0 to a non-road ban standard (meaning that vehicles using the road would have no seasonal weight restrictions) with a lower speed limit and to upgrade the Provincial Highway 21 turning access to Township Road 29-0 to facilitate safe traffic movements.

The IWMF site is currently under private ownership, and is designated Agriculture and Local Rural Commercial land use districts. A comprehensive land use redesignation and land assembly process will occur in order to facilitate the redesignation and reorganization of ownership of the IWMF site. The required redesignation and subdivision process is detailed in this MSDP.

In selecting a location for an IWMF in Kneehill County, considerations included the impact to agricultural uses, area residents, environment, and infrastructure available to the IWMF site as further described in section **1.0 Introduction**. For areas of the IWMF site not required for IWMF operations, WCC has agreements in place to continue agricultural uses. The IWMF site is located near an identified Environmentally Significant Area (ESA); however, the landfill waste footprint will not be developed in the ESA and the required setbacks from the ESA will be met. Should any development be required in the ESA (e.g. a stormwater outlet), detailed technical studies will be conducted to inform the process in a manner that respects the ESA and aligns with municipal and provincial regulations.

The topography of the IWMF site is outlined on **Figure 2: Topographical Assessment**. The landfill is located and designed to respect the coulee setbacks and associated topography.

WCC has worked with landowners involved in the land assembly to ensure they understand and are aware of the IWMF proposal. WCC has obtained permission from landowners and secured options to own and develop the IWMF in its proposed location.

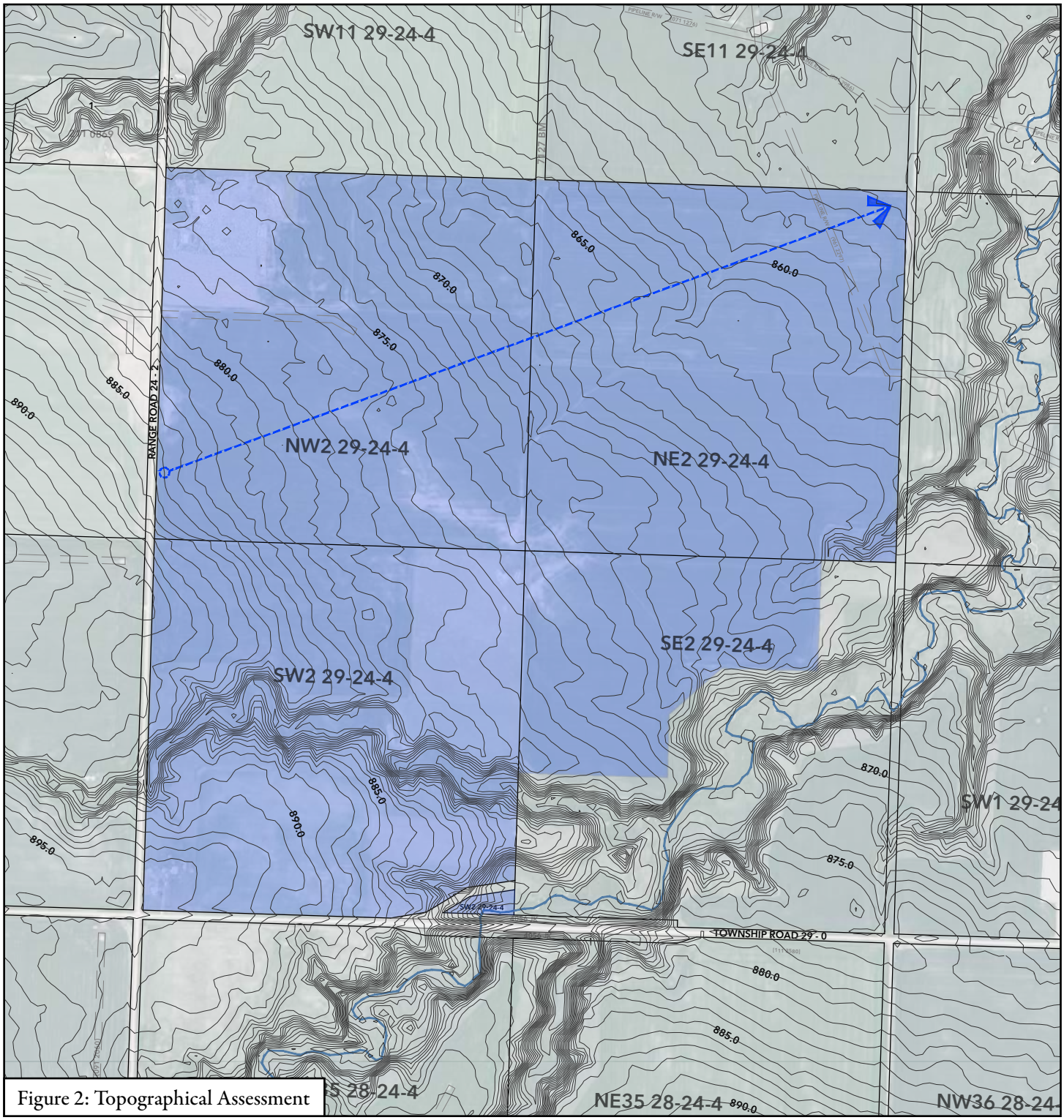


Figure 2: Topographical Assessment

IWMF Subject Lands
1.0m Contour Interval
29.0m Grade Decrease

3.2 Community Benefits

The day-to-day operation and progressive development of an IWMF supports growth of the local economy for employment, products, and services throughout its lifespan. WCC actively seeks opportunities to work with communities that host their projects to optimize costs while improving services and financial contributions for the benefit of residents.

Direct Benefits

Locating an IWMF in Kneehill County provides the opportunity for several direct benefits that are observable, measurable, and attributable to the IWMF. These are initiatives and benefits that will directly and positively impact Kneehill County and its residents. Direct benefits the community can expect include the following:

Economic Resilience & Job Creation:

The development and operation of IWMFs create employment opportunities for employees, contractors, and third-party service providers. Services required range from facility construction and maintenance to waste management and recycling activities.

Community Enhancement Fund:

The development of a Community Enhancement Fund is a portion of WCC's financial commitment to the community.

1. Community Enhancement Funds are typical commitments WCC provides to the host community. Through collaboration with community leaders, local residents, and stakeholders, the Community Enhancement Fund helps create a financial framework that benefits the community.
2. Upon successful redesignation and regulatory approvals, a Community Enhancement Fund will be committed with seed funds of $50,000 in 2025 and $50,000 in 2026.
3. Subsequently, a royalty program will be negotiated with Kneehill County and a portion of the royalty program will be committed to the Community Enhancement Fund for future years.

85K Bicycles donated

$10M Cumulative donations from Waste Connections Golf Classic for Kids

WCC in the Community

Royalties for the Host Community:
Royalties for the host community are based on “out of county” waste received at the IWMF.

Transition:
Kneehill County currently has a Class III landfill nearing end of life. WCC is open to exploring waste management partnerships with Kneehill County to support a transition from this facility to WCC’s IWMF, as required.

Upgrading local roads for increased safety and adding turning lanes:
The road upgrades to the Highway 21 and Township Road 29-0 intersection, as well as the upgrade of Township Road 29-0 benefits other operations and activities in the area.

Environmental Sustainability:
By incorporating recycling and innovative technology, IWMFs have the potential to contribute to controlling waste disposal to protect the environment, conserving resources, and reducing greenhouse gas emissions.

Waste Reduction:
IWMFs promote waste reduction and diversion of waste streams by offering recycling opportunities, thereby reducing the volume of waste disposed of in landfills. This helps in the recovery of valuable resources and reliance on raw materials and extends the lifespan of landfills.

Diversification and Stabilization of Property Tax Base:
WCC’s operation would be a stable contributor to the local economy through property taxes. A stable and diversified tax base keeps residential property taxes lower as these alternate uses incur a greater proportion of overall tax payments.

General Labour and Employment Opportunities:
The operation of the IWMF is expected to require mechanics, equipment operators, management personnel, accounting and administrative staff, and scale operators. Examples of these types of roles include site manager, landfill manager, operations supervisor, equipment and maintenance manager, equipment operators (for equipment such as a dozer, compactor, articulated dump truck, excavator, grader, water truck, etc.), lead hand, heavy duty mechanic, and site labourers. The opportunity exists to fill these positions locally.

Indirect Benefits

Indirect benefits are those that occur as a consequence of the IWMF being constructed and operated within the County. For instance, third party supplies and services are sourced in the local community, as required, for the operation of the IWMF. At other landfill facilities in Alberta, WCC spent up to $600,000 annually in local area procurement for ongoing on-site operations. Indirect benefits to the community may include the following:

On-Site Third-Party Operational Support:

Services required to support the operation of an IWMF include diesel fuel and lubricant supply, equipment parts and tires, landscaping needs (e.g. perimeter screening, seed and grass), office supplies, food and beverage supplies, construction material supply (e.g. sand, gravel, etc.), road maintenance services, welding supplies, weigh scale maintenance, and vehicle support services.

On-Site Third-Party Support Contracts for Specialists:

This includes sourcing of environmental monitoring services (e.g. groundwater monitoring), electrical/mechanical maintenance services, vacuum trucks, bird/wildlife specialists), services to enhance pollinator habitats (e.g. bee friendly plantings and apiaries), facility construction services (e.g. structures and roads etc.), topographic surveying, and third-party services for waste recovery/ reuse operations.

Potential community benefits are offered by WCC locally. Additionally, through the public engagement process, WCC will engage with the local programs and not-for-profit groups to understand their needs and seek their feedback on opportunities for financial support. This effort will be reflected in our “What We Heard Report” to Council.

4.0 Regulatory Process Summary

To redesignate the IWMF site from Local Rural Commercial and Agriculture districts to Direct Control (DC) districts, a detailed planning approvals process is required. This section outlines the municipal and non-municipal approvals required in order to develop and operate an IWMF on this site, and includes an overview of applicable legislation and the areas of responsibility for approving a use of this nature. **Figure 3: Hierarchy of Plans** demonstrates the hierarchy of documents that establish the planning policy framework and inform the development of this project.

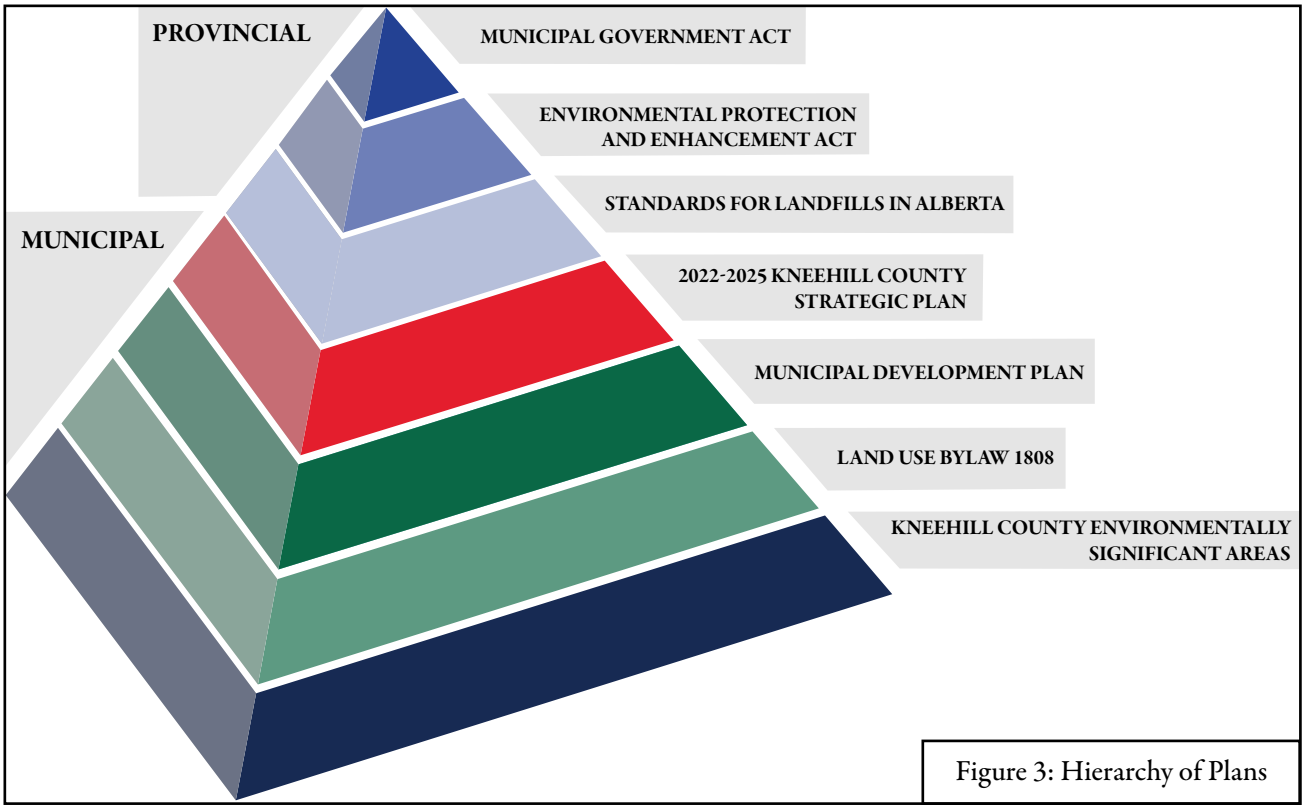
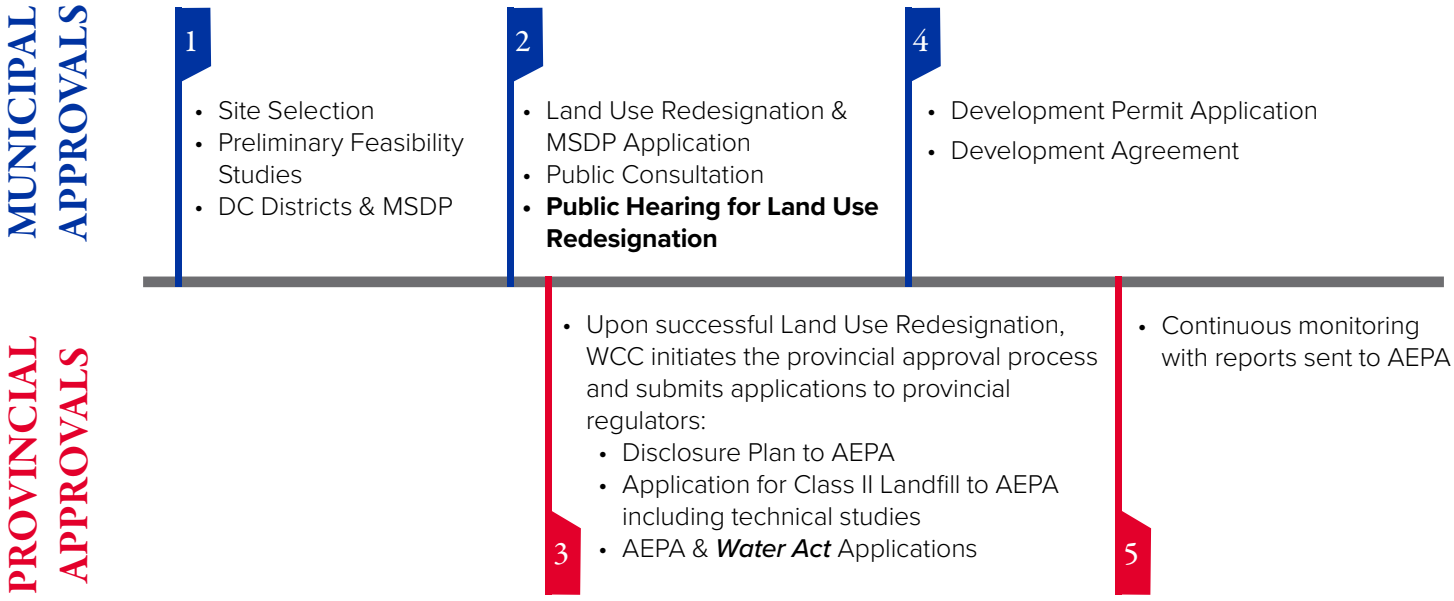


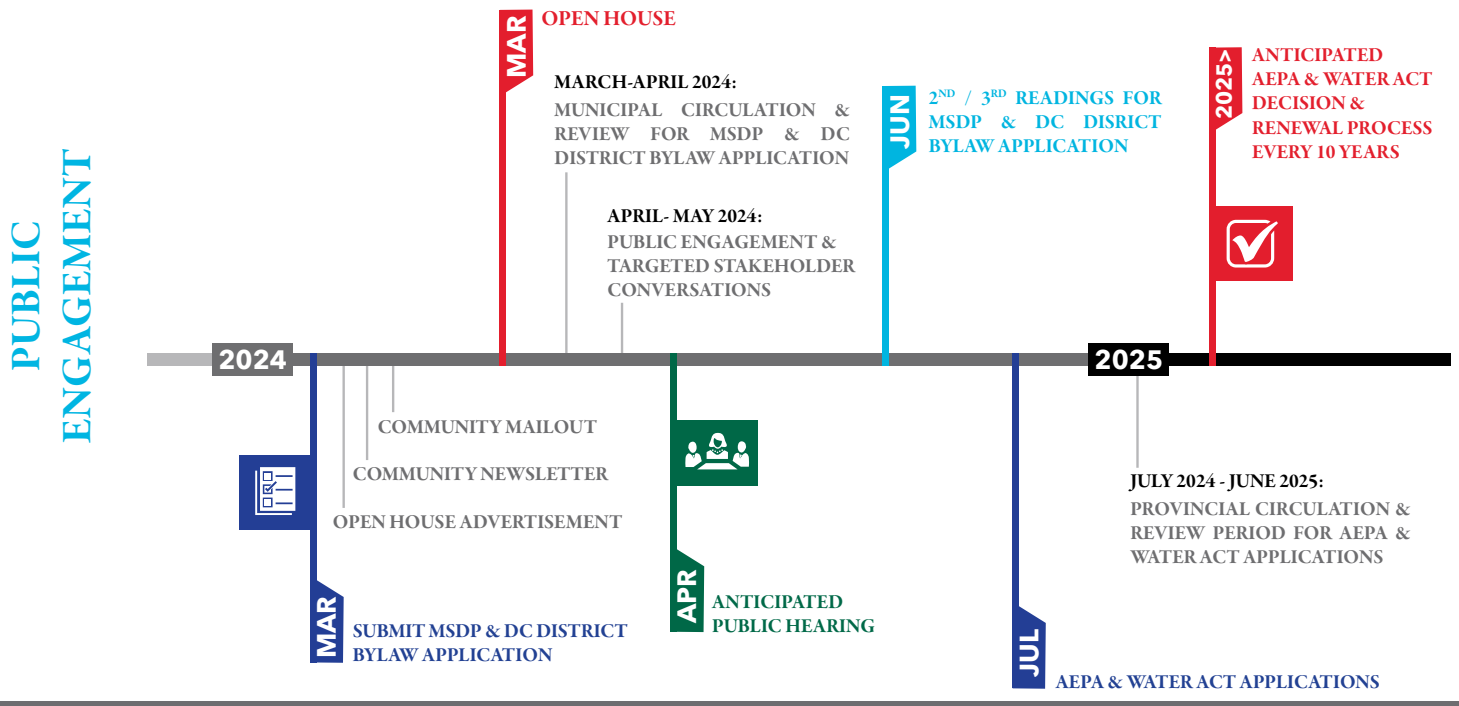
Figure 3: Hierarchy of Plans

Regulatory Process Flowchart

The flowchart below outlines the general process and the governing authorities that WCC will work with throughout the approval and implementation process. The land use redesignation to two DC Districts and this MSDP are only the first step in the municipal and provincial approvals process.



Public engagement occurs concurrent with the municipal and provincial approvals to ensure community members have opportunities throughout the process to learn about the project, have questions answered, and share their comments. The public engagement process and anticipated approval dates are detailed below:



Land Use Redesignation Process Flowchart

The Kneehill County Land Use Redesignation Process follows the steps outlined below. The MSDP is submitted concurrently with the land use redesignation application to provide the County with a comprehensive plan for the intended development. WCC has collaborated with Kneehill County throughout the process as they work toward redesignating the IWMF site from Agriculture and Local Rural Commercial land use districts to DC 7 and DC8 Districts.

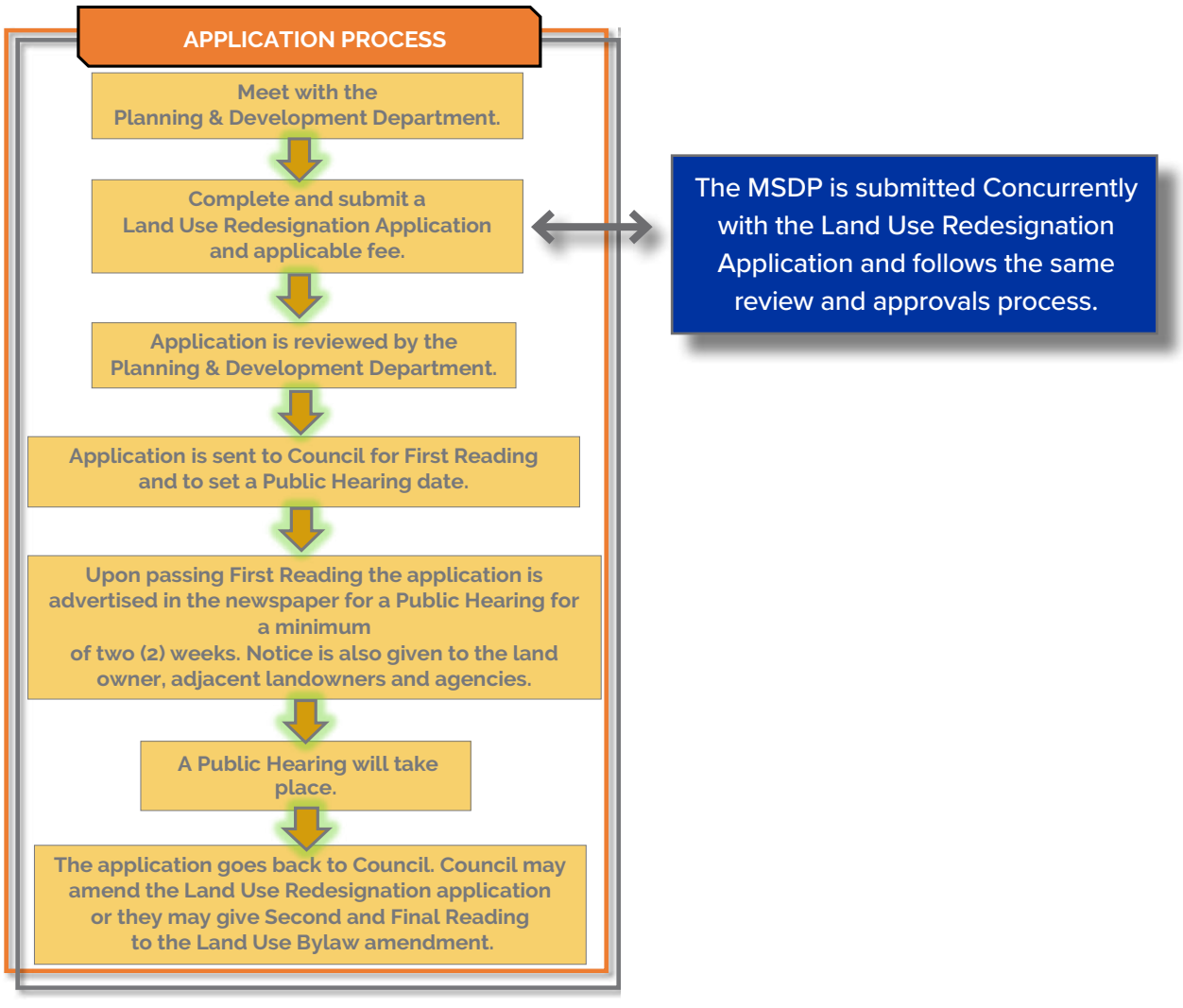


Figure 4: Kneehill County Land Use Redesignation Process

4.1 Municipal Policy Alignment

As the IWMF will be in Kneehill County, it is required to align with Kneehill County's strategic direction and established policy plans. A summary of the applicable plans and policies, and the IWMF alignment with them, is described below:

4.1.i 2022-2025 KNEEHILL COUNTY STRATEGIC PLAN

The Kneehill County Strategic Plan (the Strategic Plan) was developed to provide guidance to Kneehill County over a four-year term. The Strategic Plan describes goals for Kneehill County including sustainable infrastructure, high quality road networks and infrastructure, growth of economic activity, fiscal sustainability, and comprehensive resiliency. The IWMF aligns with the key pillars of the Strategic Plan to ensure that Kneehill County is prepared for future waste management needs. The IWMF will provide the mechanism to Kneehill County to facilitate socially and fiscally responsible waste management in the long term. In addition, the IWMF will be a driver of economic growth, new employment and development in the county, and provides enhanced recycling opportunities (e.g. Agricultural Plastics). We recognize there are four pillars to the strategic plan; however, Pillar 4 is at the discretion and interpretation of Council. The IWMF aligns with the pillars of the Strategic Plan as outlined below:

Pillar 1: Build and Maintain Infrastructure that Meets the Ongoing Needs of the County's Residents and Businesses

WCC has extensive experience across North America having developed and operated 100+ landfills (operating eight sites across Canada, including two Class II landfills in Alberta).

- Locating the IWMF in Kneehill County contributes to ensuring that Kneehill County is prepared for future waste management needs.
- Kneehill County could potentially avoid costly expansion of the current landfill site.
- The IWMF will support the County's residents and businesses by offering enhanced recycling opportunities to residents (e.g. public transfer station).

Pillar 2: Build a Robust and Adaptable Economy

This includes economic diversification, zoning, and support for agriculture.

- The IWMF will support economic diversification as it will be taxed at an industrial rate which diversifies the tax base and takes the pressure off residential and agricultural ratepayers to fund county-wide improvements.
- Supporting the agricultural sector with responsible waste management by enhancing the recycling transfer of agricultural plastics. Additional engagement with the public in order to determine further community benefits is proposed.
- Kneehill County will receive a royalty for any "out of county" waste received.
- Based on similar facilities, WCC will contribute annually to the local area to support the IWMF.
- Road upgrades on County-owned roads and the provincial intersection save the ratepayer from incurring this kind of expense.

Pillar 3: Maximize Quality of Life for People Who Choose to Live in Kneehill County

This includes recreation, the County's uniqueness, its history, youth, and seniors.

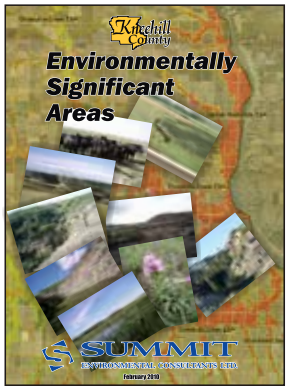
- WCC will develop a Community Enhancement Fund to support local area charities and youth programs.
- The Community Enhancement Fund is established to deliver local financial contributions and benefits to the community for decades. The use of the funds on specified projects will be determined in consultation with local residents, stakeholders, and IWMF management.

4.1.ii THE KNEEHILL COUNTY MUNICIPAL DEVELOPMENT PLAN (MDP)

The MDP is a statutory document that municipalities must develop and adopt as required by the Municipal Government Act. The MDP is intended to outline a framework for growth and change over time, and it helps ensure that a community is organized and grows in a way that benefits everyone who lives there. Key components include growth projections, economic development, municipal infrastructure, intermunicipal cooperation, and social and cultural development. The MDP is currently undergoing review and is intended to be completed by May 2024.

The current MDP (Bylaw 1829) contains direction with regard to upgrading roads leading to new developments, ensuring environmentally sensitive lands are protected, and ensuring commercial and industrial uses maintain high standards for visual appearance and integration with surrounding lands. All of these principles are respected and specific information as it relates to these objectives can found in this document.

4.1.iii THE KNEEHILL COUNTY ENVIRONMENTALLY SIGNIFICANT AREAS REPORT (FEBRUARY 2010)



The Kneehill County Environmentally Significant Areas (ESA) Report is a document that outlines the range of ESAs in Kneehill County and utilizes twelve criteria to assess the impact of potential land use and development initiatives on the natural environment. **Figure 13 – Kneehill County ESA and Soils** outlines the boundaries of identified ESAs in the area of the IWMF site. There are registered ESAs northeast of the site and southwest adjacent to the coulee; however, the IWMF boundary contains only a small portion of the ESA and this will be evaluated as part of the Biophysical Impact Assessment. The portion of the coulee owned by WCC is not identified as a provincial ESA.

4.1.iv THE KNEEHILL COUNTY LAND USE BYLAW (LUB)

The LUB is a document that outlines the range of land uses that reflect Kneehill County's Strategic Plan. In this instance, there is no land use district that addresses the unique requirements of the IWMF, as such, custom DC districts are proposed. The purpose of the proposed Districts is to provide for the development of the IWMF, which requires site-specific controls that are not outlined in a conventional land use district. A DC district is a useful tool in Alberta's land use planning system when dealing with unique or specialized development proposals that do not fit the standard land use districts currently in a municipality's land use bylaw. It allows municipal Council to tailor development standards and regulations to specific situations and objectives, ensuring that the proposed development aligns with municipal policies and community goals.

4.2 Non-Municipal Policy Alignment

The development and operation of an IWMF on the site will be subject to multiple non-municipal legislation approvals and permits. These are described below and largely fall within the domain of The Province of Alberta, specifically **AEPA**. Despite provincial regulations, it is still critical that the local authority establish the suitable land use to allow for the detailed studies to be completed and all provincial licenses and approvals to be obtained.

4.2.1 GOVERNMENT OF ALBERTA

The following legislation is applicable to the approval and operation of an IWMF in Alberta:

- The ***EPEA*** **,** included as **Appendix F,** and associated regulations outline construction, operation, and closure of a landfill (including waste storage for the purpose of transfer and the management of recyclables). Principal applicable regulations under the ***EPEA*** include the ***Activities Designation Regulation***, the ***Approvals and Registrations Procedure Regulation*** and the ***Waste Control Regulation***.

- Specific expectations of the Government of Alberta with regard to the development, operation, monitoring, closure, and post-closure of the landfill component of the IWMF are addressed in ***The Standards for Landfills in Alberta*** (***The Standards***), included as **Appendix E**. In addition, the ***Environmental Assessment Regulation*** provides rules, provisions, and stipulations to formally examine a project to determine what environmental, social, economic, and health implications could potentially occur.

- The ***Water Act,*** included as **Appendix G**, and associated regulations for the management and conservation of water resources, including the diversion of surface water and/or groundwater and the disturbance and replacement of wetlands.

- The ***Historical Resources Act*** and associated regulations for the designation and protection of historic resources, including paleontological, archaeological, historic or natural sites, structures or objects.

- The ***Municipal Government Act*** and associated regulations, particularly the ***Matters Related to Subdivision and Development Regulation***, which outlines setbacks between prescribed aspects of a waste management facility and a school, hospital, or residence.

- The ***Public Health Act*** and associated regulations prescribe setbacks between select aspects of a waste management facility and groundwater wells that supply water intended for human consumption.

- The ***Wildlife Act*** and associated regulations for protection of plants and wildlife species.

- The ***Weed Control Act*** and associated regulations for the prevention, control, and destruction of prescribed weeds.

Approvals through the provincial government and the regulatory approvals process can take a year or more to obtain. The provincial government requires that a significant monetary surety be posted by WCC for the development and operation of the landfill, as well as a detailed and prescribed procedure for approvals that requires public engagement.

The Province can issue approvals under the ***EPEA*** for a maximum period of ten years, and they require a description of public consultation and engagement activities undertaken in support of any application.

4.2.2 OVERVIEW OF REGULATORY PROCESS PURSUANT TO THE EPEA & WATER ACT

This section outlines the interrelationship of the Province of Alberta legislative requirements and approvals. The ***EPEA*** and ***Water Act*** approvals for the IWMF will be amongst the key regulatory authorizations regarding environmental performance of the project. Key features of regulatory process associated with ***EPEA*** and ***Water Act*** approvals are summarized as follows:

1. An application for the initial ***EPEA*** approval of the project is to be prepared in accordance with the Guide to Content for Industrial Approval Applications (Government of Alberta, 2014). This document specifically prescribes the content for approval applications for the primary and ancillary uses of a Class II landfill. This MSDP refers to ***The Standards for Landfills in Alberta*** (Government of Alberta, 2010) as the provincial benchmark for siting, design, construction, operation, monitoring, closure, and post-closure of landfills in Alberta.

2. An application for the initial ***Water Act*** approval of the IWMF is to be prepared in accordance with the Guide to Preparing a Complete Water Act Application for a License or an Approval (Government of Alberta, 2023).

3. Once AEPA confirms the ***EPEA*** application is complete, WCC will be required to advertise the application in local media as prescribed by applicable legislation.

4. Any parties who consider themselves to be directly affected by the proposed IWMF can file statements of concern with the designated AEPA Director, who will then determine whether the concern is valid within the jurisdiction of the applicable legislation. The AEPA Director may then invite the applicant to attempt to resolve the concern with the statement filer.

5. The AEPA Director may then undertake technical review of the application and determine whether the application is to be rejected, or an approval issued.

6. Prescribed aspects of the AEPA Director's decision may be appealed to the Environmental Appeals Board (the EAB) in accordance with that agencies mandate and with the ***EPEA***. The EAB may variously accept or reject appeals, invite parties to mediation, and/or hold a hearing, and may ultimately make a recommendation to the Minister of AEPA with regard to the approval issued by the Director. The Minister of AEPA may make an order to uphold or vary aspects of the approval issued by the Director.

7. An ***EPEA*** or ***Water Act*** approval may be issued for a maximum period of 10 years, after which the approval may be extended (under certain circumstances) or the process described above must be repeated for the approval to be renewed (which would be the typical process).

8. For the purpose of a landfill, an ***EPEA*** approval must maintained for at least 25 years after the final closure of the landfill. This 'post-closure' period is characterized by continued monitoring and maintenance by the approval holder, and the costs of closure and the post-closure care are to be financially secured by the approval applicant in favour of the Crown before the initial ***EPEA*** approval is issued.

WCC is preparing a formal Disclosure Plan which outlines key aspects of the proposed IWMF as they pertain to the ***EPEA*** and the ***Water Act***, and other provincial legislation. The purpose of the Disclosure Plan is to meet regulatory expectations as expressed in ***The Standards for Landfills in Alberta*** (Disclosure Plan), and to provide the AEPA Director with an overall regulatory context for the project. The Disclosure Plan will be submitted to the designated AEPA Director to outline WCC's intentions regarding provincial applications and authorizations. A copy of the Disclosure Plan will be provided to Kneehill County in the interest of regulatory transparency and to avoid overlaps between municipal and provincial regulatory processes.

4.2.3 THE STANDARDS FOR LANDFILLS IN ALBERTA

The Standards for Landfills in Alberta (***The Standards)***, included as **Appendix E,** is a public document prepared by the Government of Alberta which outlines expectations for development, operation, monitoring, closure, and post-closure of Class I, Class II, and Class III landfills in Alberta. The ***Landfill Standards*** are intended to provide public assurance regarding the protection of groundwater and surface water and the appropriate management of nuisances associated with landfill development and operation.

The Standards are a stringent environmental benchmark against which Alberta landfills can be measured. They establish a high level of environmental protection through the inclusion of provisions for engineered lining systems in addition to naturally protective geologic conditions (e.g., a composite lining system above a substantial thickness of low permeability clay soils for Class II landfills), and through requirements for environmental monitoring and management (e.g., removal of leachate, monitoring of groundwater and surface water). The Class II landfill requirements outlined in ***The Landfill Standards*** represent an appropriate benchmark for a landfill and would, therefore, be adopted as the technical foundation of a future ***EPEA*** approval application.

4.2.4 MUNICIPAL GOVERNMENT ACT

Section 17 of the ***Matters Related to Subdivision and Development Regulation (Matters Regulation***) prescribes setback distances between certain aspects of landfills and schools, hospitals, or residences. The ***Matters Regulation*** dictates setbacks from the working area of a landfill boundary and schools, hospitals, or residences. These setbacks constrain the municipal subdivision authority with regard to subdividing and developing land involving the prescribed land uses. These constraints will be expressly addressed in future applications to Kneehill County for subdivision and/or development of site. The ***Matters Regulation*** includes methods for setback relaxation provided the proper engineering assessments are undertaken in accordance with the ***Guideline For Setback Review*** published in May 2022 by AEPA. The results of screening assessments at this time indicate that these requirements are not expected to represent functional constraints on the primary and ancillary uses for a Class II landfill.

Figure 5 – Assessment of Setbacks to Coulee outlines the setbacks mandated by ***The Standards for Landfills*** and the ***Kneehill County Land Use Bylaw***. The minimum setbacks for a Class II landfill include a 30m setback from the waste footprint and property boundary in accordance with ***The Standards for Landfills in Alberta.*** The ***Kneehill County Land Use Bylaw*** requires a two to one (2:1) setback between a development and the brink of slope unless otherwise approved by the development authority. In every instance, the greater of these two setbacks will apply to the site. An ancillary use, such as a pond, surface water management installation, or berm may be included in the setback based on technical studies (e.g. geotechnical assessment).

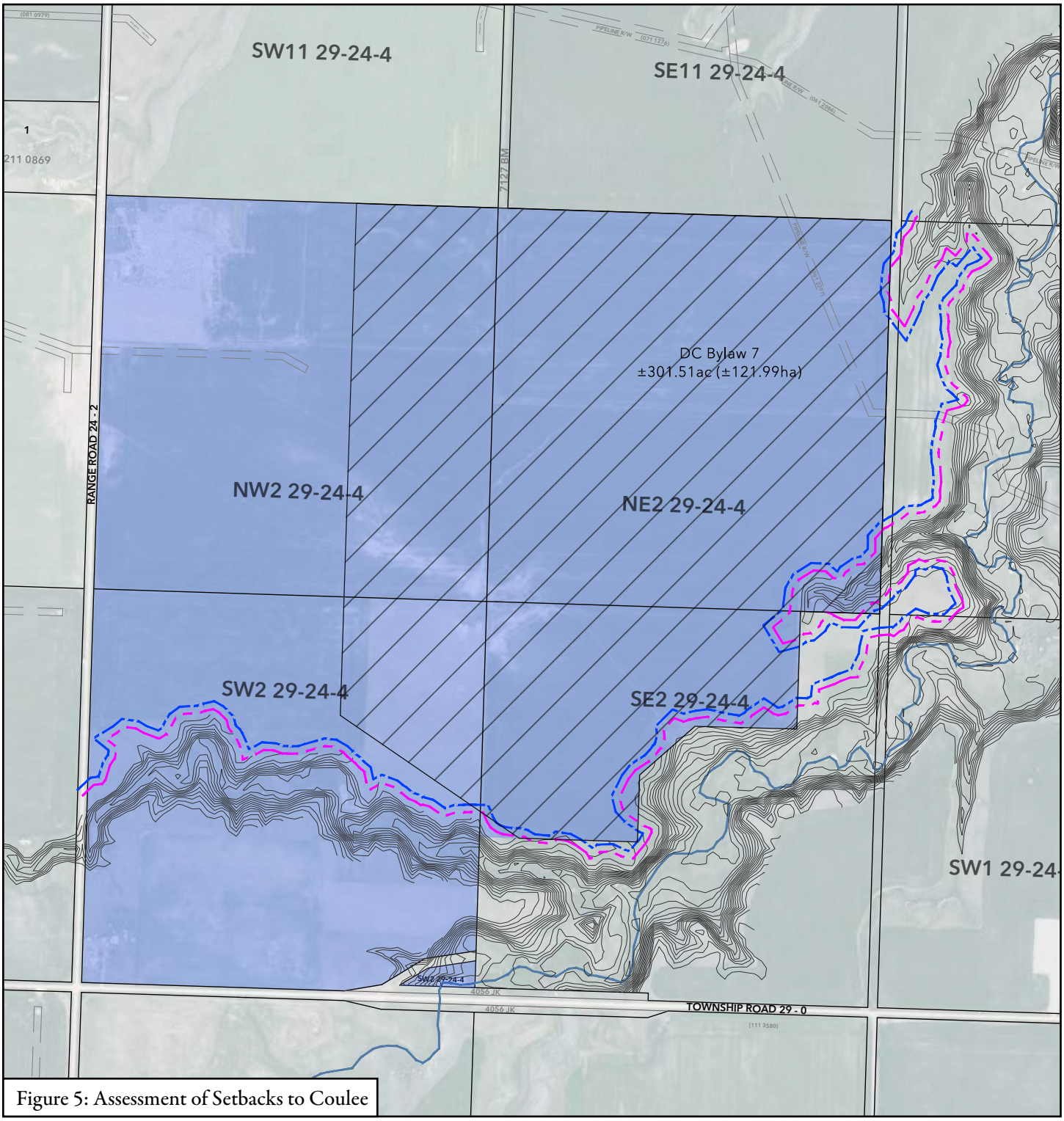


Figure 5: Assessment of Setbacks to Coulee

- IWMF Subject Lands
- 1.0m Contour Interval
- 30.0m Setback from Top of Slope from Coulee ***(Landfill Standards***)
- Combined setbacks as per the Kneehill LUB
- Landfilling general area (actual size to be determined through ***AEPA*** approvals process)

4.3 Land Use Redesignation: Agriculture & Local Rural Commercial to Direct Control 7 & 8

The IWMF site is owned currently by three private landowners as detailed in **Figure 7- Current Land Ownership** and as listed in **Table 1 - Current Land Ownership.** These landowners have agreed to participate in the land consolidation required to facilitate the IWMF project. As a result, the lands will be reorganized and swapped to allow for the IWMF to occupy +/- 536.86 acres. The +/-800.86 acres listed in **Tables 1 and 2** below reflects the entirety of the lands that will be reorganized. The +/- 536.86 acres is the resulting area to be owned by WCC and dedicated to the IWMF. To achieve the ultimate land assembly to be owned by WCC, for the IWMF project, there is a series of steps set out below:

1. Reorganize the IWMF site through land use redesignation and approval of this MSDP.
2. Close and purchase the undeveloped old Norquay road plan in this location.
3. Consolidate land and adjust property boundaries to ensure all parties achieve their anticipated land holdings and desired outcomes.

The post approvals land organization is outlined in **Figure 8 – Post Consolidation Land Assembly** and **Table 2 - Post Redesignation and Consolidation Table of Ownership.** In the post approvals environment, the land uses in place will be Agricultural District and Direct Control District 7 (DC7) and Direct Control District 8 (DC8). The Local Rural Commercial quarter section is revised and included as part of the DC7 and DC8 lands designed to support the IWMF. The Local Rural Commercial District (+\-160.00 acres) is removed from the NW 2-29-24-4 in its entirety as a result of this redesignation. The consolidation results in a density reduction overall, where the project currently includes ten separately titled pieces of land, it will result in larger parcels and reduced number of individual titles.

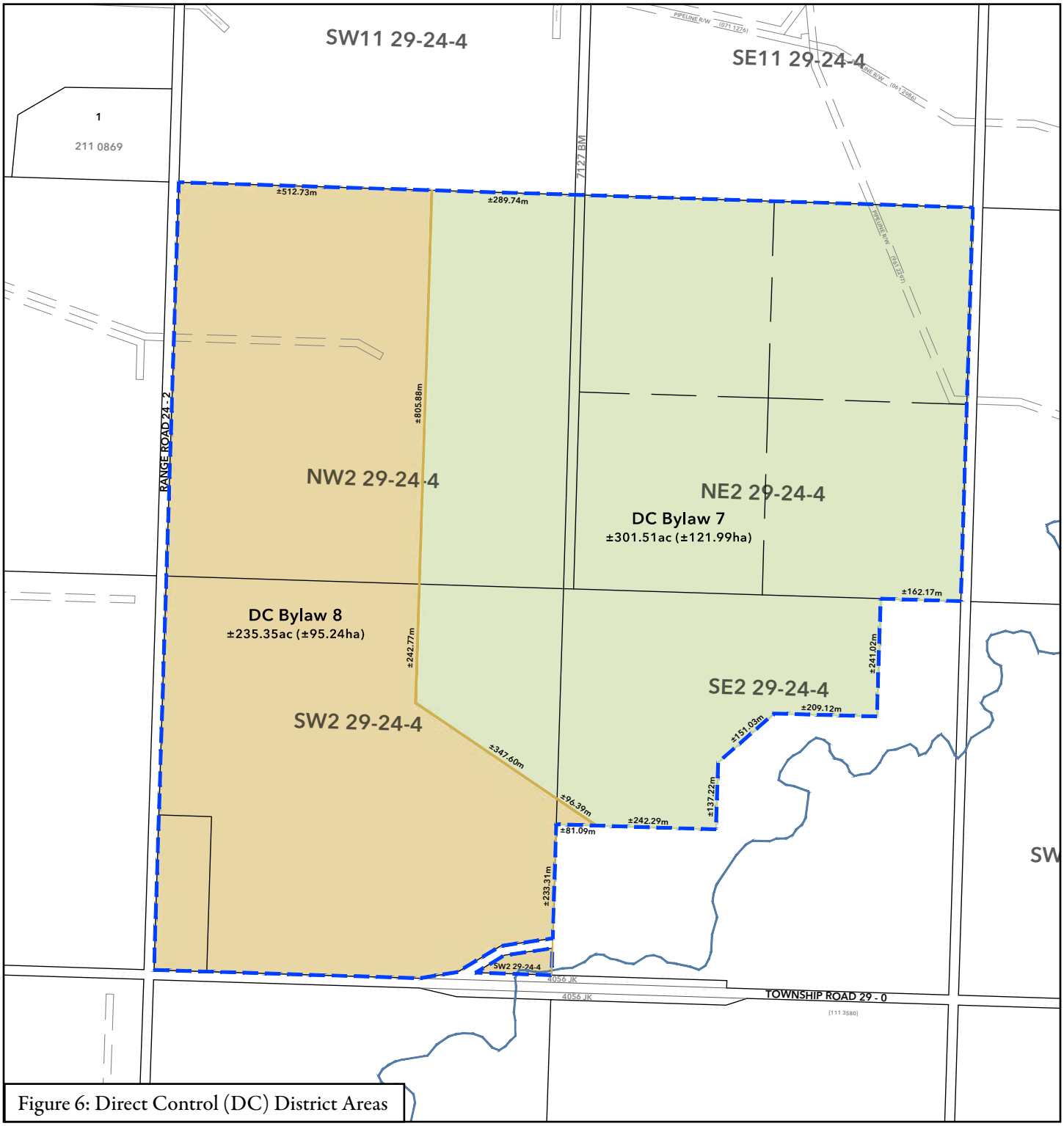


Figure 6: Direct Control (DC) District Areas

IWMF Subject Lands
DC 8 District Area
DC 7 District Area

Table 1: Current Land Ownership

Legal Description	Acreage (+\-) ac(ha)	Current Land Use Designation
NW 2-29-24-4	160.00 ac (64.70 ha)	LRC – Local Rural Commercial
SW 2-29-24-4	149.66 ac (60.571 ha)	A - Agriculture
SW 2-29-24-4 South 1040 feet of the west 350 feet of the SW quarter	8.4 ac (3.402 ha)	A - Agriculture
NE 2-29-24-4 The North West quarter of the North East quarter	38.03 ac (15.391 ha)	A - Agriculture
NE 2-29-24-4 The North East quarter of the North East quarter	40.03 ac (16.202 ha)	A - Agriculture
NE 2-29-24-4 The South West quarter of the North East quarter	38.03 ac (15.391 ha)	A - Agriculture
NE 2-29-24-4 The South East quarter of the North East quarter	40.03 ac (16.202 ha)	A - Agriculture
SW 1-29-24-4	160.0 ac (64.70 ha)	A - Agriculture
SE 2-29-24-4	158.68 ac (64.04 ha)	A - Agriculture
2-29-24-4 The Norquay Road Plan Plan 7127BM	8.0 ac (3.24 ha) (4.0 ac in N ½ 2 and 4.0 ac in S ½ 11)	No designation (to be closed, purchased and consolidated into adjacent titles)
Total	**800.86ac(324.83ha)**	

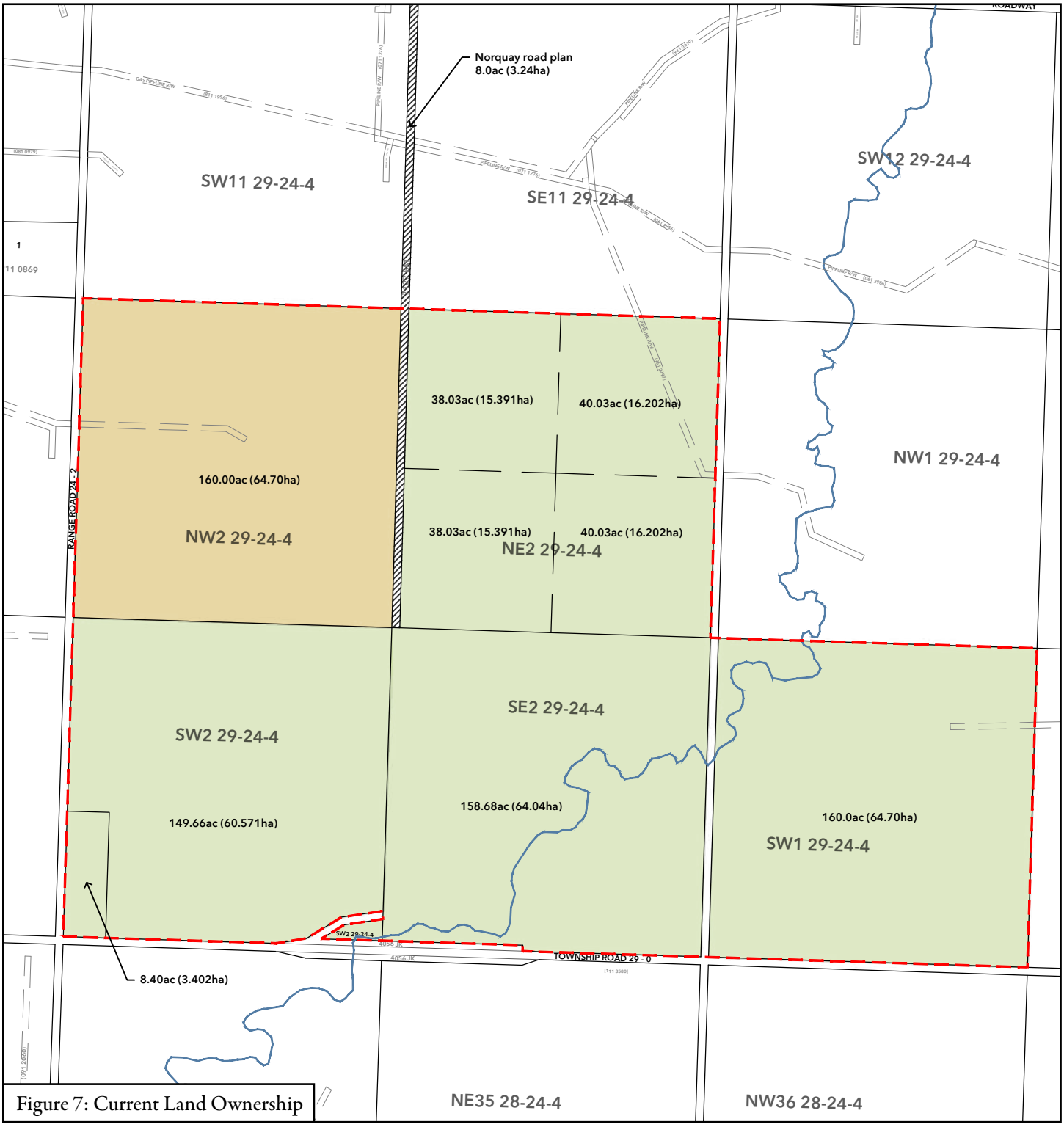


Figure 7: Current Land Ownership

- Affected Lands Boundary
- A - Agricultural
- LRC - Local Rural Commercial
- Norquay Road Plan Closure

Table 2: Post Redesignation & Consolidation Table of Ownership

Landowner	Legal Description	Acreage (+\-) ac(ha)	Proposed Land Use Designation
Waste Connections of Canada	NW 2, SW 2, NE 2, North portion of SE 2, Township 29, Range 24 W4M	536.86 ac (217.23ha) (includes 4.0 acres of the Norquay Road plan post closure and consolidation into NE 2)	DC7 District & DC 8 District
	South portion of SE 2-29-24-4	100.00 ac (40.468 ha)	A - Agriculture
	West half of SW 1-29-24-4	80.00 ac (32.37 ha	A - Agriculture
	East half of SW 1-29-24-4	80.00 ac (32.37 ha)	A - Agriculture
Various landowners	2-29-24-4 The Norquay Road Plan Plan 7127BM	4.0 ac (1.62 ha) in S ½ 11	No designation (to be closed, purchased and consolidated into adjacent titles)
Total	**800.86ac(324.83ha)**		

Notes: Two acres will be provided back to landowners to the north as part to the Norquay Road Plan closure.
An existing residence on the NW 2-29-24-4 (South 316m of the west 107m of the SW quarter) will be removed.
The business materials and equipment located partially on NW 2-29-24-4, which previously held a Rural Business Commercial designation, will be cleaned up and removed.

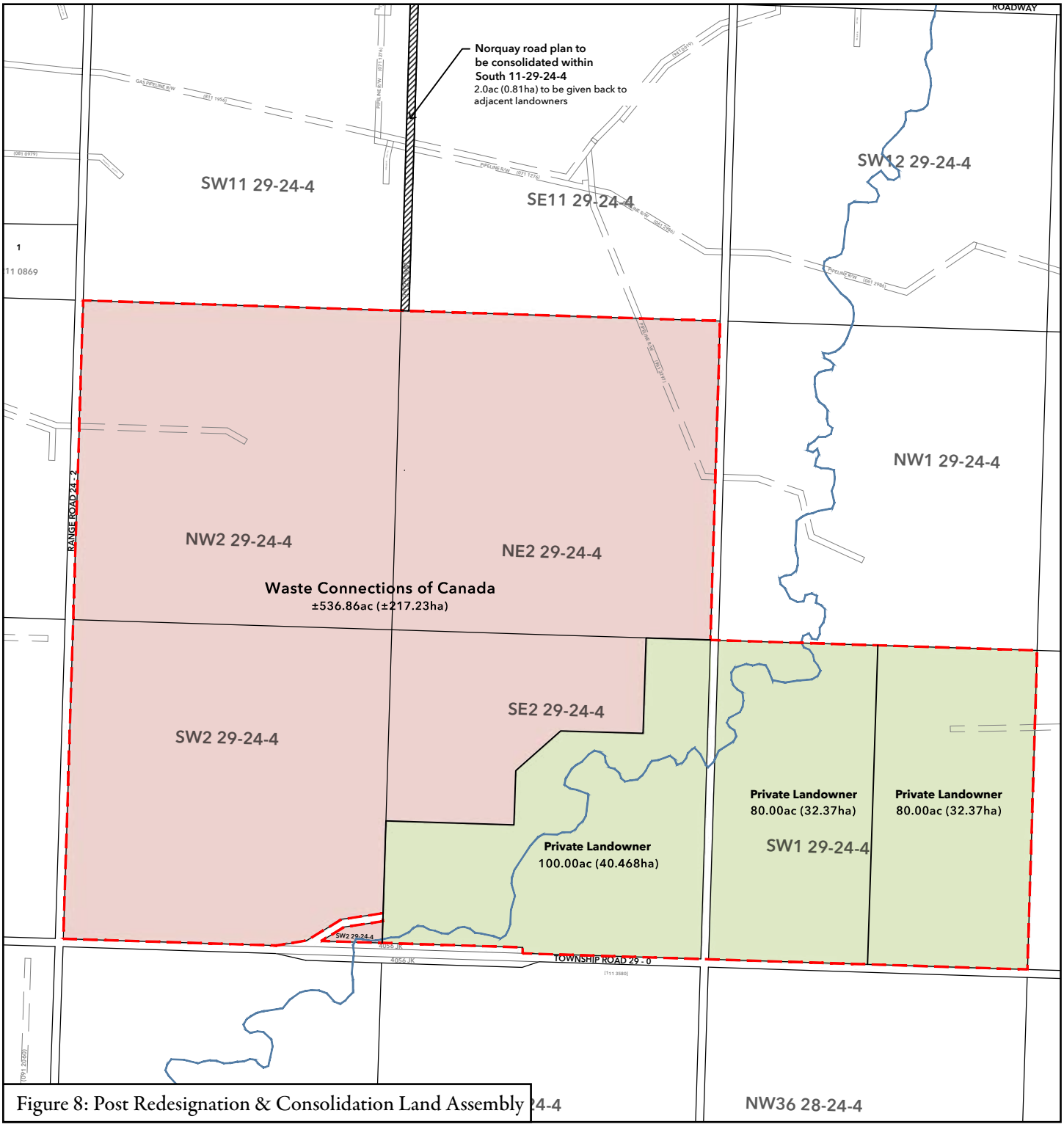


Figure 8: Post Redesignation & Consolidation Land Assembly

- Affected Lands Boundary
- A- Agricultural District
- DC7/DC8 District - land to be owned by WCC (+\-536.86acres)
- Norquay Road Plan Closure

5.0 Pre-Development Studies Overview

This section outlines at a high level the pre-development studies required to be undertaken as part of the approvals process. To date, WCC has undertaken preliminary investigations to ensure that the IWMF site can reasonably be expected to accommodate a use of this nature, including assessing both surface and sub-surface conditions to determine they are compatible with the development and operation of an IWMF. Upon approval of land use, these studies will be undertaken in further detail. The final reports detailing each pre-development study and outcomes, prepared by certified professionals, will be provided to Kneehill County. Summaries of the preliminary studies are included as appendices to this MSDP.

5.1 Preliminary Access Considerations

Operation of an IWMF at this location will require access to the IWMF site for both waste haul trucks and a variety of service vehicles including employees, deliveries, maintenance, etc. The vast majority of this traffic is expected to access the IWMF site from nearby Highway 21 via Township Road 29-0 as indicated on **Figure 9 - Transportation & Proposed Access.** This access route was proposed based on several considerations including proximity to the Provincial Highway 21 corridor, safety, sightlines at the intersection, and absence of any dwelling units or individual residences currently in place along Township Road 29-0 corridor.

Alberta Transportation will require a formal TIA be prepared to determine what type of intersection would be required and can be constructed in this location following Kneehill County land use approval. WCC will upgrade the current Highway 21 and Township Road 29-0 intersection based on the direction from the formal TIA. Based on the preliminary assessment undertaken, the updated intersection is anticipated to include appropriate acceleration/deceleration lanes and turning capacity, but not illumination or signalization. Historically, WCC traffic volumes at this location were characterized to include 30 to 40 vehicles during a typical day on Highway 21. This traffic, which represents a small percentage of the current total volume on Highway 21, will now go west on Township Road 29-0 to the IWMF site. Vehicular traffic will consist mainly of truck and trailer transportation vehicles. The formal TIA will dictate the requirements for upgrades and safety, and Alberta Transportation and Economic Corridors (ATEC) may require potential modifications to the intersection treatment. WCC commits to enter a Road Use Agreement with Kneehill County and prepare a TIA for Provincial Highway 21 per provincial requirements.

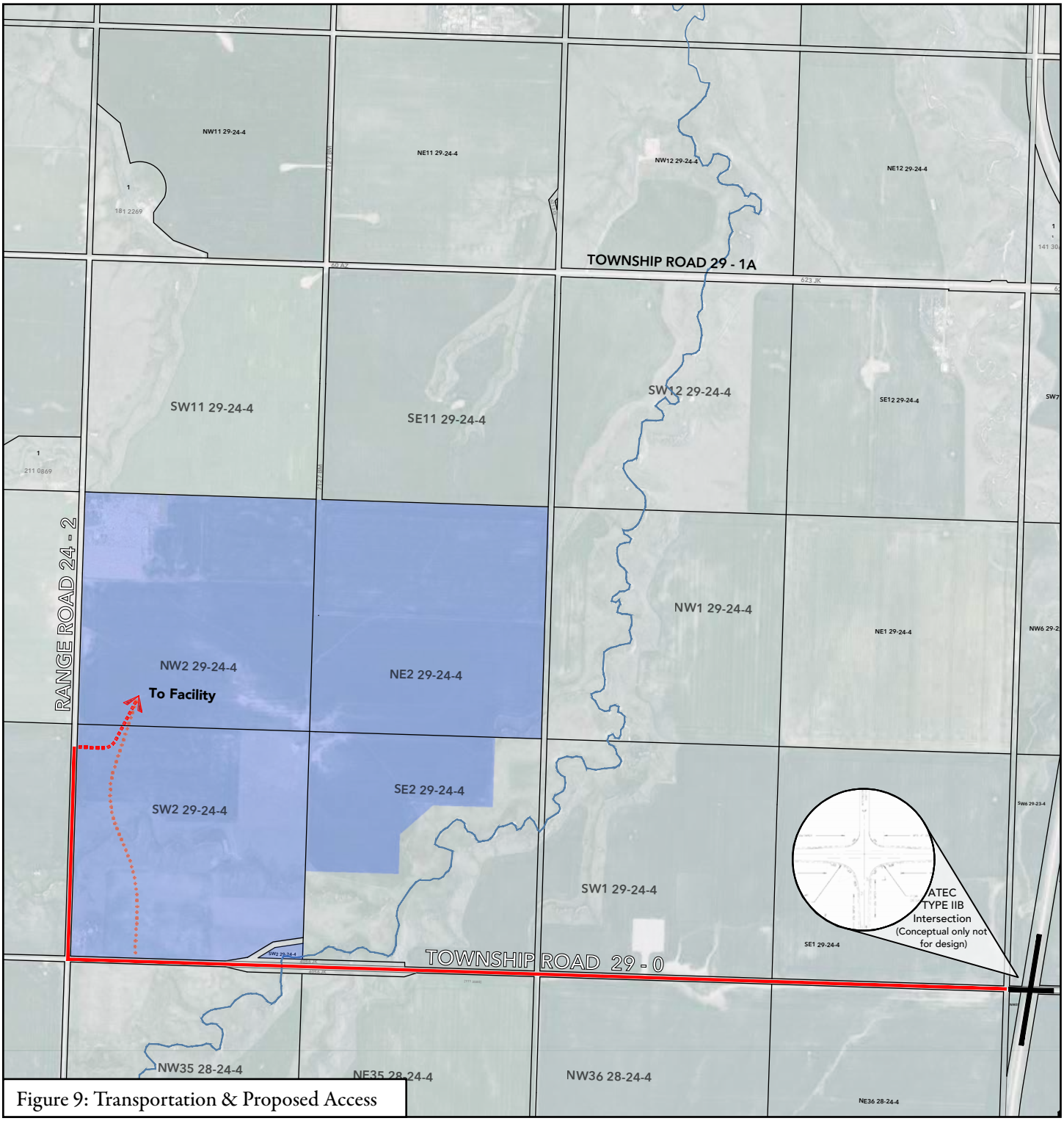


Figure 9: Transportation & Proposed Access

IWMF Subject Lands

Upgrade County Road to a non-road ban
Paved Condition to meet County expectation (60km/hr)

Proposed IWMF Site Access - option 1

Proposed IWMF Site Access - option 2

Preliminary traffic analysis has identified the following key traffic considerations with regard to the IWMF site access:

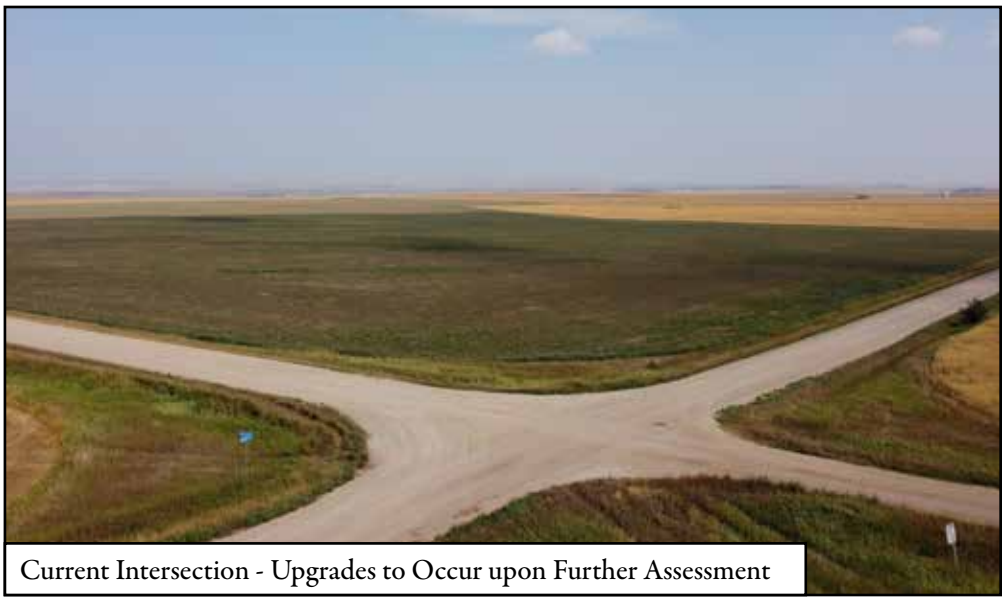
1. Commercial waste haul traffic will be directly controlled by WCC. This traffic has historically, and currently, travels northbound on Provincial Highway 21 from the WCC transfer station in Rocky View County to the WCC waste management facility in Paintearth County, Alberta.

2. Commercial waste haul traffic may be generated from time to time on a project basis in response to the needs of WCC's customers. An example of commercial waste haul traffic increases would be related to natural disasters (i.e. flood, fire, tornado). Traffic volumes in this category will vary by project.

3. In addition to commercial waste haul traffic, some public traffic is expected to and from the IWMF site to allow Kneehill County residents to take advantage of the public transfer station which will be incorporated into the new facility. This traffic is expected to comprise private light trucks and cars. The volumes of public traffic are expected to be low compared to commercial waste haul traffic.

4. Traffic volumes are expected to change over time in response to market conditions, area activities, population, and industry-wide shifts in waste management practice, and this change is not possible to predict. Adoption of a typical provincial background traffic growth as the region grows and changes is expected to be appropriate for the project. The future, formal TIA process will identify and control volumes and will determine the required intersection type.

WCC acknowledges that upgrades will be required at their cost to the following aspects of the route between Provincial Highway 21 and the IWMF site:



Current Intersection - Upgrades to Occur upon Further Assessment

1. Provincial Highway 21 / Township Road 29-0 intersection: This intersection is within the jurisdiction of ATEC. A preliminary TIA has indicated an intersection improvement and upgrade to a Type IIb will be required to accommodate the vehicle types and volumes of traffic expected at the IWMF. WCC will be required to obtain a Roadside Development Permit (RSDP) from ATEC to ensure that provincial requirements are met in the construction and design of the intersection improvement.

2. Affected portions of Township Road 29-0 and Range Road 24-2: These roads are within the jurisdiction of Kneehill County. WCC intends to upgrade the affected portions of Township Road 29-0 (and possibly Range Road 24-2) to a paved 9m wide top, and will obtain the necessary authorizations from Kneehill County to ensure that municipal requirements are met. The intention is that all upgrading will be undertaken within the current right-of-way and allowance for these roads. WCC also intends to request that these roads be subject to reduced speed limit, to 60 km/hr speed, to steward high levels of safety related to traffic movements to and from the IWMF site for all travelers. The intention of WCC is to ensure that there is space for vehicle stacking internal to the IWMF site, as such, there is to be no vehicle stacking on County roads at any time.

Formal engineered design, cost estimates, and surety will be required along with formal applications to ATEC and Kneehill County regarding access upgrading work. These submissions will be provided to Kneehill County after the successful redesignation of the project lands. In addition to upgrades to existing roads, WCC intends to request the closure of an undeveloped road plan identified as the Norquay Road Plan which is owned and controlled by The Province of Alberta (see **Figure 7: Current Land Ownership**). The road closure process will include a public hearing and a request to The Province to close this undeveloped road plan. Adjacent landowners will be provided the opportunity to include these residual road plan lands into their title at no additional cost to them. It is important to the overall security of the IWMF site and the consolidation of titles that this road plan be closed.

A summary of key findings related to traffic and access related to the project is presented in **Appendix D.4** of the MSDP.

5.2 Preliminary Geotechnical Investigation

WCC has completed a screening and preliminary site investigation of geotechnical conditions at the IWMF site in the context of the proposed project. Geotechnical requirements are considered in provincial legislation for landfill development, including the need to consider geotechnical conditions as part of the ***EPEA*** approval application to respond to siting and design requirements of the ***The Standards.*** The preliminary screening review indicated that the IWMF site is underlain by moraine and glaciolacustrine materials which are expected to meet geotechnical stability requirements of the landfill portion of the IWMF. Additional visual observation of the banks of the coulee during site reconnaissance identified no signs of slope instability.

Detailed and intensive geotechnical work will be undertaken following redesignation of the IWMF lands to confirm setbacks of future development from natural features of the IWMF site as appropriate, including the coulee and associated slopes. The preliminary geotechnical assessment is summarized in **Appendix D.1** of this MSDP.

5.3 Historic Resource Impact Assessment

Kneehill County has a rich history, with numerous historic and cultural resources, including archaeological sites, heritage buildings, and cultural landscapes. Conducting a Historic Resources Impact Assessment (HRIA) is essential to identify and protect these resources from damage or destruction during development projects. Alberta has legislation in place to protect heritage resources: the ***Historical Resources Act*** requires these assessments be conducted to the satisfaction of Alberta Arts, Culture and Status of Women (AACSW). Typically, the process involves undertaking a clearance request and seeking approval to construct or develop the IWMF site. AACSW may allow for the development to proceed in the absence of any known cultural resources, or they may ask for directed investigation if there is a high probability of cultural resources on the IWMF site. Typically, the development proponent holds the clearance document issued. The HRIA summary document is included as **Appendix D.2** of this MSDP.

5.4 Preliminary Surface Water Screening

The potential for the IWMF to affect the quality and/or quantity of surface water flows compared to pre-development conditions will be the subject of applications for authorizations under the ***EPEA*** and the ***Water Act***.

Provincial authorizations will require the project to:

1. Intercept surface water drainage from outside the landfill working area which would otherwise have entered the landfill working area, and direct that surface water around the facility such that it is returned to the natural surface water system. This water is referred to as 'run-on' in ***The Standards***;
2. Intercept surface water drainage from within the landfill working area whose quality could have been affected by facility activities, and retain that water on the IWMF site until testing shows that it meets established quality limits. This water is referred to as 'run-off' in ***The Standards***; and
3. Manage surface water at the IWMF site in ways which are shown to protect local surface water resources.

A detailed surface water study will be completed following redesignation of the IWMF site. The results of the study will be used as the basis for a comprehensive surface water management design for the facility. Proposed design assumptions, details, and performance outcomes will be provided to and discussed with provincial and municipal regulators prior to the submission of any requests for authorization. This will allow for incorporation of any site-specific considerations which may not be apparent to WCC from legislation or otherwise published regulatory guidance.

The surface water study will include consideration of the existing provincially licensed dam/reservoir within the coulee (within SW2-29-24-W4M, license 11436) as this is acknowledged to represent a site-specific surface water control measure whose effects should be evaluated in the context of the proposed land use. This feature was used by the previous landowner to water cattle. In addition, the surface water study will include consideration of shallow water near to the surface in the central area of Section 2-29-24-W4M, which is observable at the surface in proximity to an historic shot hole, and which was specifically considered during geologic and hydrogeologic screening work.

The overall objective of surface water management measures on the IWMF lands will be to protect the local environment from IWMF-related changes to the local surface water regime in accordance with applicable regulatory requirements. These aspects will be further evaluated following redesignation of the IWMF site and detailed studies will be included in the application to AEPA pursuant to the ***EPEA*** and the ***Water Act***.

A screening review of hydrologic aspects in the context of the IWMF was undertaken on behalf of WCC. Review of available published information was used to identify the regional hydrologic aspects at the IWMF site and the surrounding area. Additional surface water studies and stormwater management plans will be provided to Kneehill County. The preliminary surface water screening assessment is summarized in **Appendix D.3.**

Pre-development runoff rates will not be exceeded, and WCC will work closely with Kneehill County to monitor downstream flow rates. In addition, WCC acknowledges the requirements of the LUB and will work with Kneehill County at the development permit stage relative to:

1. Development near permanent water bodies and the setbacks required. Detailed studies will be conducted to determine the appropriate setbacks and inform development near these water bodies (Section 38 of the LUB); and
2. Confirmation that the development is not within any identified 1:100 year floodplain in accordance Section 39 of the LUB.

Potential effects will be the subject of further study and future requests for municipal authorization of mitigative measures in accordance with the requirements of Kneehill County.

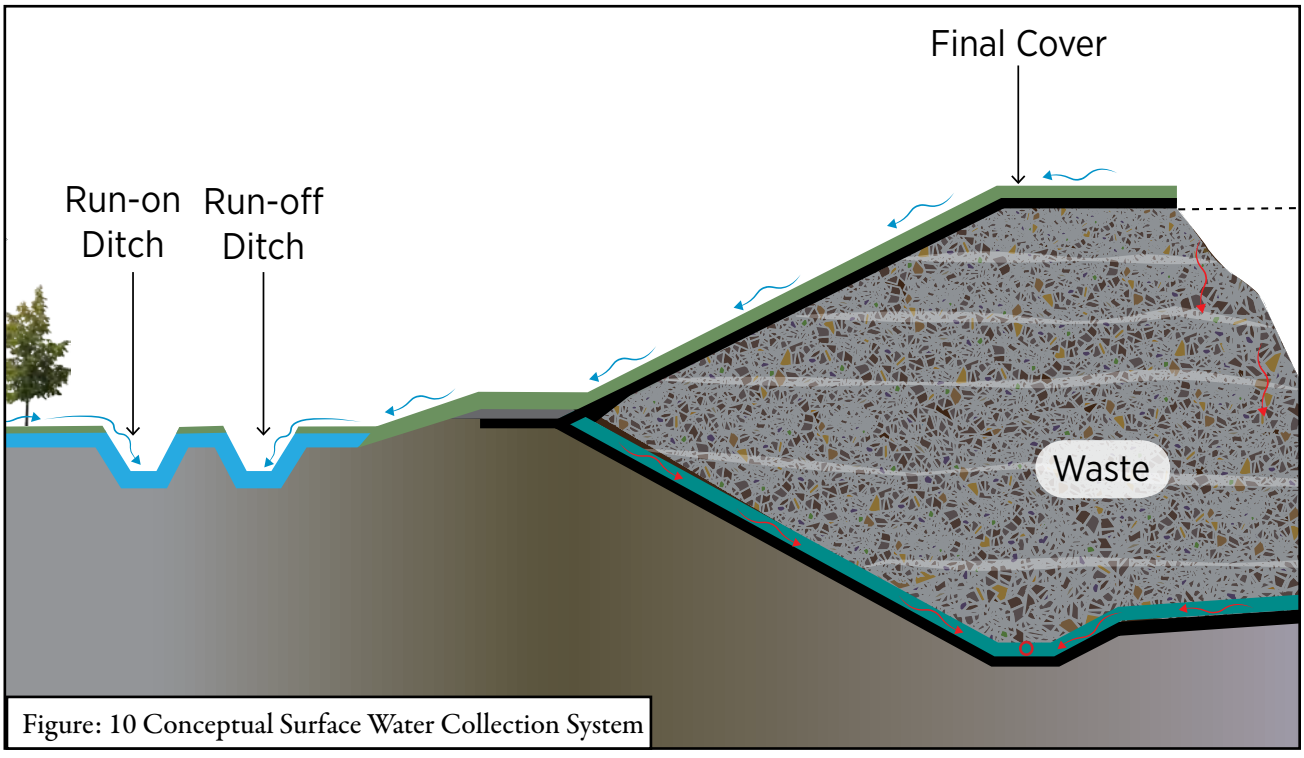


Figure: 10 Conceptual Surface Water Collection System

Surface Water Runoff

Leachate (collected by leachate system)

Figure 11: Abandoned Well Locations

Study Area Boundary

Well 0087045 Rec Certified - Marathon Canada Ltd.

Well 0141023 Rec Certified - Repsol Oil and Gas Canada Inc.

5.5 Abandoned Wells

Section 14(1) of the ***Matters Regulation*** requires that applications for development permit must include information provided by the Alberta Energy Regulator (AER) identifying the location or confirming the absence of any abandoned wells within the parcel on which a building is to be constructed. There are abandoned wells within the project area and they are identified on **Figure 11 - Abandoned Well Locations**. These wells have been properly abandoned and reclaimed according to the AER. Section 15(1) of the ***Matters Regulation*** suggests an application for development permit shall not be approved if it would result in the building site, or building, being located within the minimum setback requirements in respect of an abandoned well as set out in AER Directive 079. Directive 079 generally suggests that surface improvements be setback 5 metres around an abandoned well location.

5.6 Preliminary Biophysical Impact Assessment (BIA)

WCC has completed screening reviews of relevant published information regarding biophysical characteristics of the IWMF site to confirm whether there are any known critical aspects of the site which should be understood prior to redesignating the IWMF site.

The screening reviews included desktop studies and preliminary reconnaissance inspections of the IWMF site. An overview of these studies is presented in the appendices. These aspects will be further evaluated following redesignation of the IWMF site and detailed studies will be included in applications for authorizations, as required, to comply with applicable Government of Alberta legislation. In addition, WCC will include relevant aspects of these studies in support of an application for development permit in order to comply with applicable municipal legislation.

For example, with respect to the geotechnical conditions, WCC acknowledges that Section 48 of Kneehill County LUB requires a two-to-one (2:1) setback from the 'brink of slope' of a coulee unless varied by the Development Authority at development permit stage. WCC is committed to meeting the Kneehill LUB setback requirements, as these setbacks may remain or may increase through the AEPA review and approval process based on formal technical studies (e.g. geotechnical or environmental investigations). A summary of the preliminary BIA has been included in **Appendix D.5.**

5.6.1 ENVIRONMENTALLY SIGNIFICANT AREAS (ESA)

Several parks, protected areas, or areas of high conservation value can be found within Kneehill County, including Midland and Dinosaur Provincial Parks to the east, Tolman Badlands Heritage Rangeland to the northwest. The IWMF site is located adjacent to a municipally-designated ESA and includes a very small portion of the ESA in its post-consolidation land holdings boundary. The Kneehill County ESA Report identifies an ESA located directly adjacent to the east portions of the IWMF site. This section outlines the ESA criteria that resulted in the delineation of the area as an ESA, and the intention to respect that ESA area is provided. The IWMF will not interact with provincial parks or rangeland and does contain a small portion of the identified ESA. The interaction between the IWMF site and ESA will be evaluated in the formal BIA process by AEPA and Kneehill County. Potentially, surface water management may be required in this ESA; however, should any development be required in the ESA, detailed technical studies will be conducted to inform the process in a manner that respects the ESA and aligns with municipal and provincial regulations. Detailed consideration of the Kneehill Creek ESA is warranted given the context and scope of the IWMF project.

All IWMF activities will be on the lands subject to the DC Districts and outlined in **Table 2: Post Redesignation & Consolidation Table of Ownership** accordingly. The lands subject to the DC Districts, (to be utilized by WCC for all IWMF activities), include only a small portion of identified ESAs.

A preliminary screening review of the Kneehill Creek ESA, in the context of IWMF and its location, was undertaken on behalf of WCC. This work included review of the Kneehill County ESA Report and the criteria that were used to assign ESA values to regions within the County. The principal findings of the review are summarized as follows:

1. The ESA areas within Kneehill County were designated based on 12 criteria, the identified ESA areas adjacent to the IWMF site are designated as low value 4 ESA, which were reported to typically only meet one criterion and are highly disturbed by past grazing and cultivation.

2. In review of the Kneehill County ESA, low value ESA's typically only meet one criteria. Based on the analysis it is not clear which criteria applied to designate the ESA. However, it is believed to be the presence of slopes. The review also recognizes that The Province of Alberta does not consider this area as an ESA. The closest identified ESA, field site location #26, is removed from the project area and lies north and across Township Road 29-1A from the proposed IWMF location.

3. Review of the characteristics of the identified ESA adjacent to the IWMF site area indicated that the types of features that may have contributed to an ESA designation in the area include the presence of slopes, native grassland, riparian areas, and water bodies.

4. The ESA report indicates that the management goal for ESA's of lower significance (such as those identified adjacent to the IWMF) is to limit disturbance, or improve conditions within the ESA. Examples of improving conditions would be weed management, riparian fencing to mitigate cattle disturbances, and buffers.

A summary of the biophysical screening in the context of the IWMF site is presented in **Appendix D.5. Figure 13 - Kneehill County ESA and Soils** outlines some of the above-noted considerations that followed from the preliminary review. These aspects will be further evaluated following redesignation of the IWMF lands and further detailed studies will be included in applications for authorizations pursuant to provincial requirements. In addition, WCC will work with Kneehill County at the development permit stage to meet municipal requirements (if any) which have not been addressed under provincial legislation.

Existing Onsite Coulee

5.6.2 SOILS AGRISID / CLI

A review of the provincial soil class ratings was undertaken utilizing the AGRISID mapping tool. The IWMF site contains three separately identified land suitability rating areas. These soil lenses are detailed in **Figure 12 - Government of Alberta Provincial ESA Map**, and this information has been combined into a comprehensive map representing the overlap in ESA and soil areas represented in **Figure 13 – Kneehill County ESA and Soils**.

The NE2 quarter section consists of polygon 11545 which supports a land suitability rating of 2AH(10) suggesting that 100% of the entire polygon consists of CLI class 2 soils supporting slight limitations to agriculture. The A indicates inadequate moisture for optimal growth and the H indicates inadequate heat units for optimal growth.

The NE2 consists of polygon 28125 which supports a land suitability rating of 3M(10) suggesting that 100% of the entire polygon consists of CLI class 3 soils supporting moderate limitations to agriculture with the M indicating crops are adversely affected by lack of water due to inherent soil conditions.

The south half section 2, which is characterized by a coulee, includes a third polygon identified as 5372 which supports a land suitability rating of 3M(10) suggesting that 100% of the entire polygon consists of CLI class 3 soils supporting moderate limitations to agriculture with the M indicating crops are adversely affected by lack of water due to inherent soil conditions. It is difficult to suggest farming could occur in this polygon given it consists of slopes and coulee terrain.

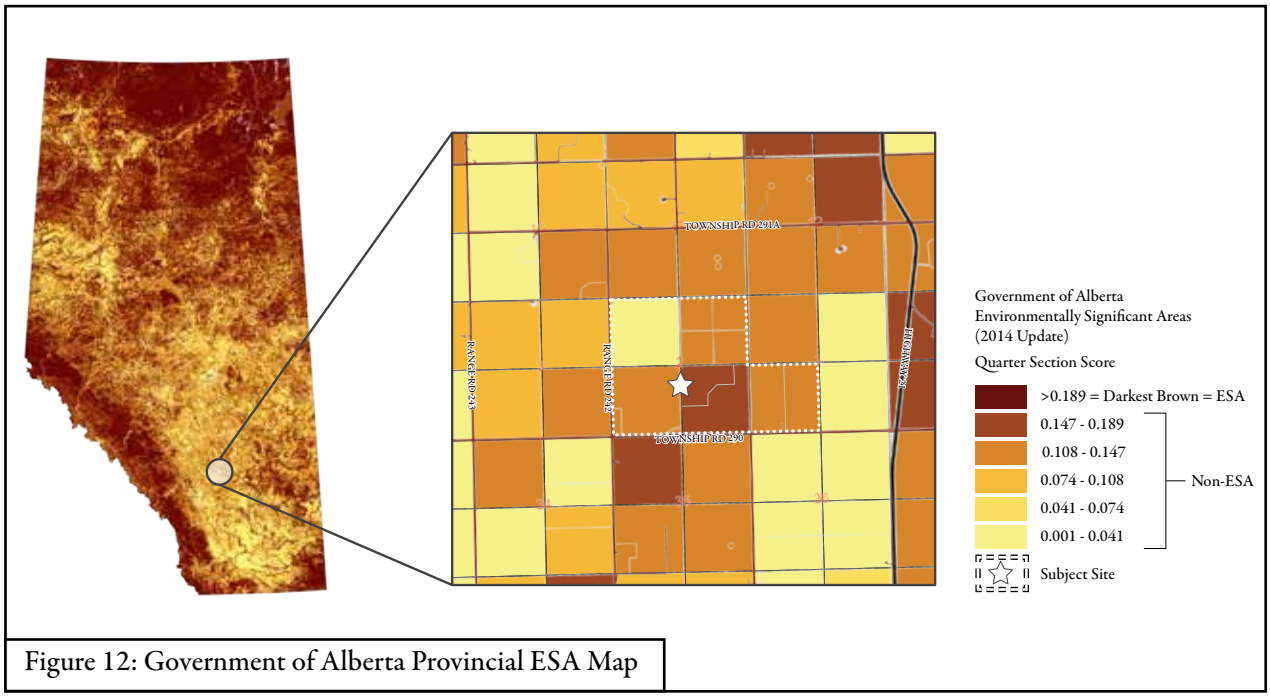


Figure 12: Government of Alberta Provincial ESA Map

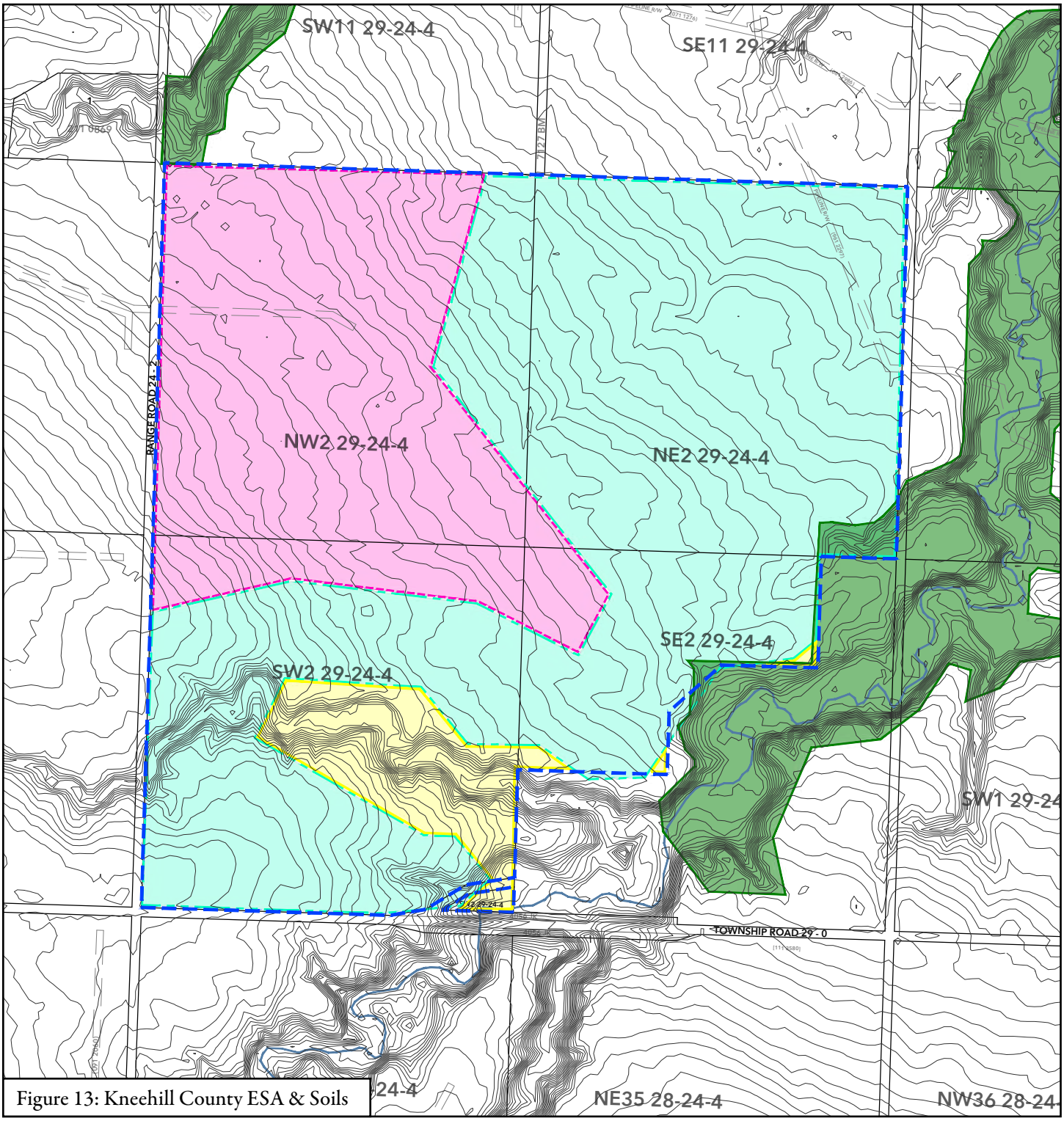


Figure 13: Kneehill County ESA & Soils

5.6.3 GROUNDWATER

WCC acknowledges that the IWMF project must not impose unreasonable burdens on existing groundwater wells and groundwater users. ***The Standards***, and associated testing and construction practices, include requirements to protect groundwater aquifers from any source contamination. WCC is required to develop a long-term environmental monitoring program which will include the installation of various groundwater monitoring wells to monitor groundwater quality, ensuring that groundwater sources are not impacted by landfill activities. A Groundwater Monitoring Program will be implemented according to section 5.2 of ***The Standards*** (outlined below).

Figure 14: Conceptual Groundwater Monitoring System demonstrates a typical system that could be utilized to monitor groundwater.

According to Section 5.2 of ***The Standards*** (**Appendix E**):

a. The person responsible for a landfill shall develop the Groundwater Monitoring Program to include, at minimum, all of the following:
   i. Background groundwater quality for each well;
      a. Existing landfills or landfill cells may establish background levels of landfill operations by:
         i. Using historic data; or
         ii. Obtaining groundwater samples form monitoring wells established in nearby areas not affected by landfill activity;

   ii. establish groundwater quality control limits for each naturally occurring parameter.

   iii. a detailed program for groundwater sample collection frequency and analysis, that includes, at a minimum all of the following:
      a. retrieval of representative samples from the groundwater monitoring system at a frequency as set out in Table 5.1, or as otherwise authorized in writing by the Director; and
      b. laboratory analysis of the samples for parameters as described in Table 5.2; and

   iv. a Groundwater Contingency Plan.

b. The groundwater monitoring Program for Class II landfill that receives wastes other than municipal solid wastes shall include additional parameters than those specified in Table 5.2 as specified in writing by the Director based on specific conditions.

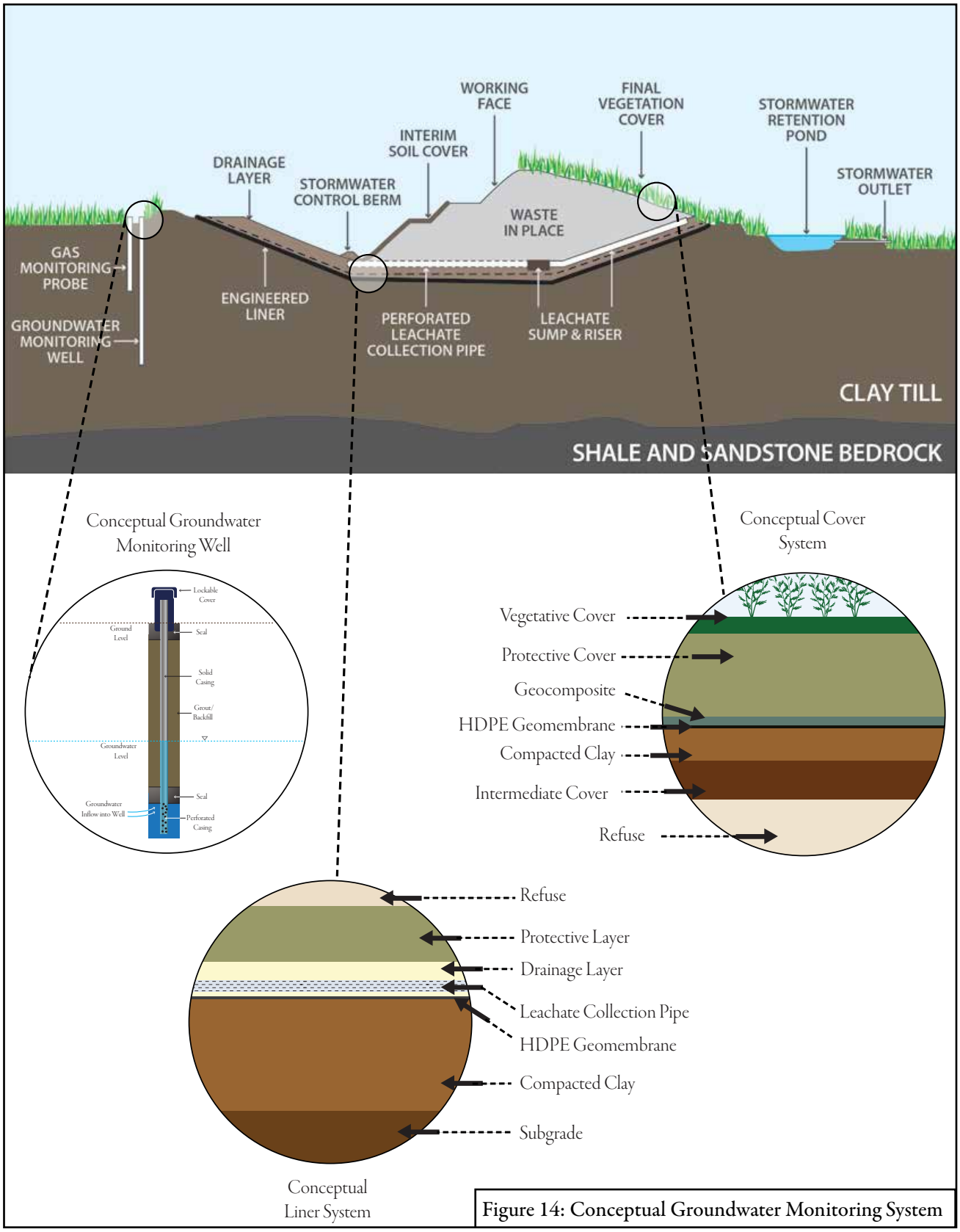


Figure 14: Conceptual Groundwater Monitoring System

6.0 Preliminary Servicing Requirements

This section outlines the servicing and utility requirements for an IWMF.

Table 3: Utility Requirements

Utility	Detail
Water	• A potable water supply is required for normal consumption by IWMF staff and use in building facilities (e.g. toilets, showers, etc.) • Potable water supply is to be sourced by connection to the County's water supply line that is within the Range Road 24-2 right of way along the west side of the IWMF site.
Wastewater	• Wastewater will be generated by routine uses including toilets, sinks, and drains. • Wastewater will be managed by a conventional field and tile septic system designed in accordance with applicable provincial legislation.
Power	• Electrical power supply will be required to support on-site buildings and site operations (e.g. telemetry, pumps). • Electrical power is expected to be sourced from existing service providers. WCC will work with third-party service providers as appropriate to arrange servicing.
Gas	• The IWMF site may require natural gas/propane for daily needs including heat. • Portable tanks are proposed to be used as needed. • Arrangements with appropriate third-party service providers are to be completed as required.
Internet/Phone/Other	• WCC will utilize a third-party internet/phone provider.

Detailed utility needs may change over the life cycle of an IWMF, and the initial and progressive utility needs will be explored as part of work that will follow land use redesignation. WCC will work with Kneehill County at the development permit stage to evaluate the utility needs and availability to mitigate impacts to existing capacity.

7.0 Operations

The Class II landfill is the principal (permitted) use under the DC 7 District. Ancillary and supported uses (discretionary) are intended for the IWMF as well, and are outlined in both the DC 7 and DC8 Districts. The following section outlines, at a high level, the typical operational aspects of the principal landfill use. A DC land use designation allows the municipality to work with the operator and ensure local oversight of IWMF operations for the duration of the project.

7.1 Landfill Operations

A Class II landfill is designed to receive and manage solid waste (in accordance with provincial legislation). These landfills are regulated by the provincial government to ensure that waste disposal is conducted in an environmentally responsible manner. The following is an overview of how a Class II landfill is established, operated, and closed:

1. **Site Selection and Design:**
    a. Before establishing a landfill, thorough site assessments are conducted to ensure that the location meets regulatory requirements.
    b. Engineers design the landfill in accordance with provincial regulatory requirements, taking into account geology / hydrogeology, topography, proximity to infrastructure / environment features, waste composition and climate, and operating practices.

2. **Permitting:**
    a. The landfill must obtain necessary permits from Kneehill County and the Province of Alberta. This process involves demonstrating compliance with environmental and safety standards. It also requires that the municipal land use approvals be in place prior to AEPA considering the subsequent studies and submissions as formal.

3. **Waste Acceptance:**
    a. Class II landfills accept non-hazardous solid waste, which includes household garbage, construction debris, agricultural waste, IC&I waste, and other materials.
    b. All waste material that enters the IWMF site is screened for acceptability, weighed, and recorded.

4. Waste Separation and Compaction:
    a. Upon arrival, waste materials are typically separated by type (i.e. waste or recyclable/ recoverable material). For example, agricultural plastics, metal, wood, concrete, and other recyclable materials can be diverted from landfilling and directed to an appropriate area for temporary storage, processing, and transfer.
    b. The non-hazardous waste that enters the IWMF site will be directed to the appropriate area inside the Class II facility for disposal. The waste material is offloaded, spread, and compacted using heavy machinery. A small working area is maintained during landfilling.
    c. The waste is covered with a layer of soil or approved alternative daily cover material at the end of each working day; this is to reduce windblown litter, potential odour, and vermin. This is done in accordance with the requirements of ***The Standards***.

5. Progressive Development
    a. Landfills are constructed progressively over a series of construction phases. Landfill development (i.e. the disposal cell construction size) depends on the anticipated annual waste tonnage to be received and to ensure sufficient disposal capacity is available. This approach allows sufficient time to design and construct any future landfill cells, and typically results in cell development occurring every other year.

6. Leachate Management:
    a. Waste decomposition within the landfill, and precipitation that comes into contact with waste material generates leachate, a liquid that may contain contaminants. Class II landfills are engineered to include systems to contain, collect, and manage leachate, and control the effect on groundwater and surface water. These leachate management systems are required to meet environmental standards and are designed in accordance with ***The Standards***.

7. Surface Water Management:
    a. Surface water run-on that would otherwise flow into the landfill area is typically directed around the development without being retained. Surface water run-off generated from developed areas of the landfill including those under intermediate or final cover is typically directed to retention ponds and tested prior to release to the downstream environment. Controlled surface water releases would typically need to meet quality requirements and flow rate requirements and may require special outfall infrastructure to suit the setting of a retention pond. Surface water management infrastructure and operation would be in accordance with provincial requirements. Water which has been in contact with waste and whose quality may have been affected will be managed as leachate and will be handled separately from surface water run-on and surface water run-off.

8. Landfill Gas Management:
    a. Landfill gas is generated through decomposition of waste and is comprised of methane, carbon dioxide and trace gases. Landfill gas is typically managed through venting and/or active recovery systems. Gases that are collected through active recovery systems may be destroyed (e.g. flared) or upgraded for use. Landfill gas management would typically take place in accordance with provincial requirements.

9. Monitoring Systems:
    a. Systems will be developed to monitor groundwater, surface water, leachate and landfill gas to ensure the engineering controls are functioning as intended. The collection and interpretation of information from these monitoring systems will take place throughout the operating and post-closure life of the landfill in accordance with provincial requirements.

10. Internal roads:
    a. Internal roads will be needed to provide vehicle/equipment access to landfill infrastructure on the site. Internal access roads would typically be developed as needed to meet operational requirements. An on-site road may be needed to cross the coulee in the south central portion of the site, and if this is the case it would be developed in accordance with provincial and municipal requirements.

11. Stockpile management:
    a. Stockpiles will be needed throughout the operating life of the landfill to manage stripped / excavated materials. These stockpiles would typically be developed and used as needed to meet operational requirements, and would be managed in accordance with provincial and municipal requirements.

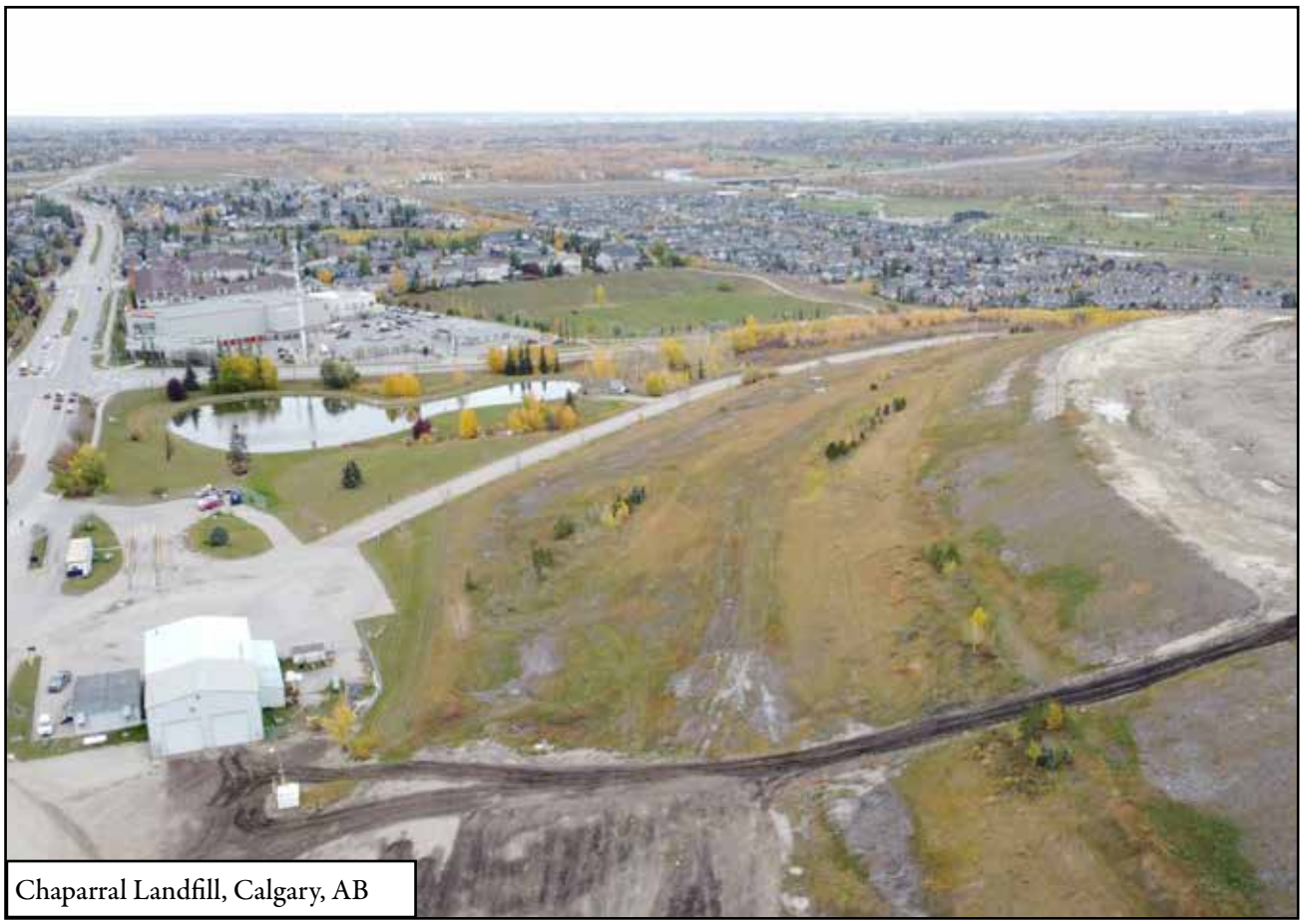
12. Signs and site security:
    a. Signs detailing the waste types accepted and prohibited, along with the details related to responsible party for the site will be posted in accordance with provincial and municipal requirements. A fence for wildlife management may be constructed in accordance with provincial and municipal requirements.

13. Final Cover:
    a. Once a landfill cell reaches its capacity and final grades, it is closed and covered with a designed final cover system consisting of a series of soil layers. This final cover helps control water infiltration to reduce leachate generation, mitigate landfill gas emissions, and promote vegetation growth to control erosion.

14. Post-Closure Monitoring:
    a. After closure, Class II landfills are monitored for a minimum of 25 years to ensure that environmental standards are maintained. This includes monitoring groundwater quality, gas emissions, and surface water runoff.

Throughout these processes, ongoing regulatory compliance, environmental monitoring, and community engagement are crucial aspects to ensure the responsible operation of a Class II landfill. WCC endeavours to ensure that “proper operation and management” means protecting the environment, controlling the impact to the public, and adhering to responsible waste disposal practices.

Some landfills capture biogas (landfill gas) from the waste mound for destruction or to update the gas to pipeline-quality natural gas for use in homes and businesses. It is important to note, WCC is not proposing to operate a Renewable Natural Gas Plant or Alternative Energy System at this location. Should that be a consideration in the future, this type of use would be subject to separate permitting process (both municipal and provincial) and a public hearing in order to add “Biogas Reuse” or ”Alternative Energy Systems” as a defined use to the DC 7 District. **Figure 15: Typical Landfill Operations** provides a visual overview of typical onsite operations at a Class II landfill.



Chaparral Landfill, Calgary, AB

Figure 15: Typical Landfill Operations

1. Truck Entering IWMF Site
2. Weigh Station
3. Landfill Cell Construction
4. On-Site Operations
5 & 6. On-site Haul Truck
7. On-site Equipment

7.2 Typical Operating Standards

Table 4 – Typical Operating Standards outlines typical landfill operating standards that can be expected as part of the IWMF within Kneehill County. The approvals process in the provincial domain will include aspects related to monitoring, leachate collection, and overall operations; as such, this table is considered to be typical of WCC's typical operations and may vary depending upon the detailed review by AEPA. The development permit for this use within Kneehill County will initially mirror the AEPA approved use, and this table may be refined at the development permit stage at the discretion of Kneehill County. WCC will work with Kneehill County at the development permit stage regarding any measures needed to achieve the municipal development permit. **Figure 16 – Progressive Landfill Development,** outlines the typical site infrastructure associated with IWMF operations.

Table 4: Typical Operating Standards

Operations Item	Typical Operations at other WCC Sites
Typical Hours of Operation	Monday to Friday, ½ day Saturday, Closed Sunday. Internal Operations: 5:00 am to 7:00 pm. Receipt of waste hours: 6:00 am to 6:00 pm
Typical Primary (permitted) Site Infrastructure	Class II landfill meeting the requirements of ***The Standards for Landfills in Alberta*** (Government of Alberta, 2010). • stormwater management infrastructure (e.g., ponds, ditches, swales, etc.) • leachate management infrastructure (e.g., pump stations, ponds, etc.) • landfill gas management Infrastructure (e.g., collection and flaring systems) • weigh scale(s) to allow weighing of incoming and outgoing vehicles. • administration building(s) • equipment maintenance building(s) • general storage building(s) for equipment and materials • site security (i.e., gates and perimeter fencing) • landfill access and maintenance roads
Typical Ancillary (discretionary) Site Infrastructure	Public drop-off / transfer station (i.e. area dedicated for use by residents or small contractors for collection of potentially divertible materials). Environmental monitoring Infrastructure (e.g. groundwater monitoring wells).

Standard	Operating Criteria
Typical IWMF Development	Typical development of an IWMF will include such things as: • landfill footprint, daily cover stockpile, long-term cover/stockpile, storm pond, scale/shop/administration building, transfer station, and entrance and interior roads. The timing of progressive landfill development (i.e., cell construction size and construction phasing) depends on the anticipated annual waste disposal tonnage to be received to ensure sufficient disposal capacity is available. This approach allows sufficient time to design and construct any future landfill cells, and typically results in cell development every other year. For example, estimated first cell size constructed in year 1 (approx. 20 acres); then cell development occurs every other year, with cells constructed in years 3, 5, 7 etc. (approx. 20 acres each). A further benefit of progressive landfill development is the continued use of the proposed IWMF land for agricultural activities (e.g. planting and grazing), and eliminating the unnecessary disturbance of vegetated areas. The proposed location of stockpile and burrow areas will be provided to the Kneehill County at the development permit stage.
Typical Permanent Labour Positions	It is estimated that the IWMF will employ approximately 30 people on a full-time and seasonal basis and could consist of the following positions: **Site managers:** Landfill manager, operations supervisor, equipment and maintenance manager. **Equipment operators:** Dozers, waste compactors, dump trucks, excavators, loaders, grader, water trucks **Support staff:** Lead hand, heavy equipment mechanic, scale house attendant, accounting personnel, general labourer.
Typical Third-Party Support	Engineering Support Services: • environmental compliance monitoring • regulatory reporting • engineering design services (i.e., landfill design, roads, etc.) • surveying (i.e., design and construction,compliance, etc.) General construction contractors (i.e., cell construction, buildings, etc.) and materials suppliers (e.g., geosynthetic liner materials, lumber, concrete, asphalt sand, gravel, etc.) Electrical / Mechanical construction and maintenance services Office cleaning services Bird control specialists
Typical vehicles associated with use	Truck and trailer, landfill tipper, dozer, compactor, dump truck, excavator, grader, water truck, dirt/gravel trucks & pup trailer, staff vehicles.

Standard	Operating Criteria
Typical Auxiliary Supplies & Services	Fuel and lubricant supply, equipment parts and tires (for the yellow iron that stays on the IWMF site), landscaping needs (e.g. perimeter, screening, grassing), office supplies, food and beverage supplies, construction material supply (e.g. sand, gravel, etc.), road maintenance services, welding supplies, weigh scale maintenance, and vehicle support services.
Typical Parking & Stacking Requirement	Estimated Parking: 20-40 staff/visitor parking spaces. Maintenance equipment and heavy equipment remains on site and parked in equipment maintenance structures or designated locations. Estimate 30 – 40 waste haul trucks/day from WCC's transfer station. The local community will have the opportunity to utilize the IWMF for uses such as the transfer station for local residents and waste disposal for commercial clients; however, public interaction with the landfill operations will be restricted for safety purposes; *The number of private contracts may vary over time which will affect truck traffic volumes. **Special events will temporarily increase site traffic and volumes. For example special contaminated soils projects, emergency situations and response (i.e. unexpected weather events etc).
Typical Site Lighting	Dark sky compliance: properly shielded exterior light fixtures with no directed uplighting and no high mast lighting. Light towers are used at the working face during winter periods to ensure safety of staff and site users during low-light hours, but will be dark sky compliant.
Typical Site Signage	The proposed IWMF will include a sign at the site entrance as required by ***The Standards***. Additional signage will be provided throughout the facility to direct visitors, waste haulers, and deliveries, and provide additional information to ensure the safe use of the IWMF site. Should any sign be large enough to require a development permit, a separate submission will be provided to Kneehill County.
Typical Landscaping, Screening and Grading	Landscaping is a requirement of an IWMF, both to screen and protect the use and to screen the use from neighbouring locations. **Figure 18 - Landscaping & Screening Example** is a conceptual depiction of screening methods and locations; however, this will be provided in detail at the development permit stage to Kneehill County. Miscellaneous environmental controls (e.g., litter control fencing, screening berms, etc.) will be required as part of the AEPA approval process.
Typical Construction Management Plan	Typically, as part of the conditions of development permit approval, a Construction Management Plan is required to be submitted. This includes an overview of communications, facility operations, and management contacts, as well as avenues for the public to provide comments to the operator should any aspect of construction be concerning to them during preliminary construction of the IWMF. This includes hours of construction and mitigation of construction noise, dust, and debris.
Typical Emergency Response Plan	WCC acknowledges that the project must not impose unreasonable burdens on existing municipal emergency response capabilities. An Emergency Response Plan (ERP) will be required to be submitted to Kneehill County at the development permit stage. The typical contents and intent of an ERP are outlined in **Appendix C.** In addition, the project will be subject to requirements under the ***EPEA*** for emergency response specific to waste management activities.

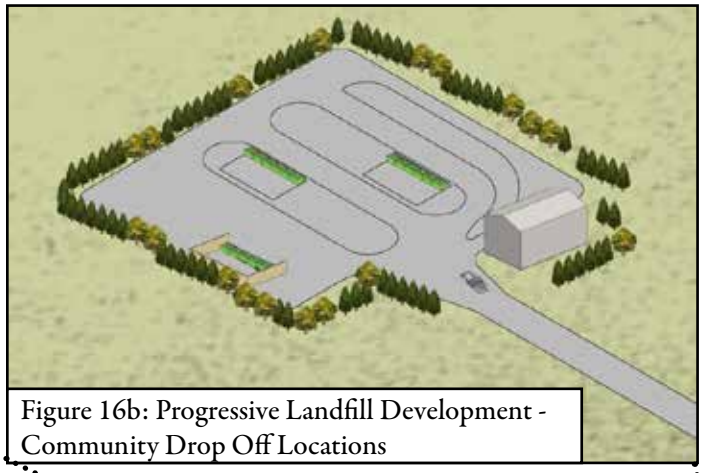


Figure 16b: Progressive Landfill Development - Community Drop Off Locations

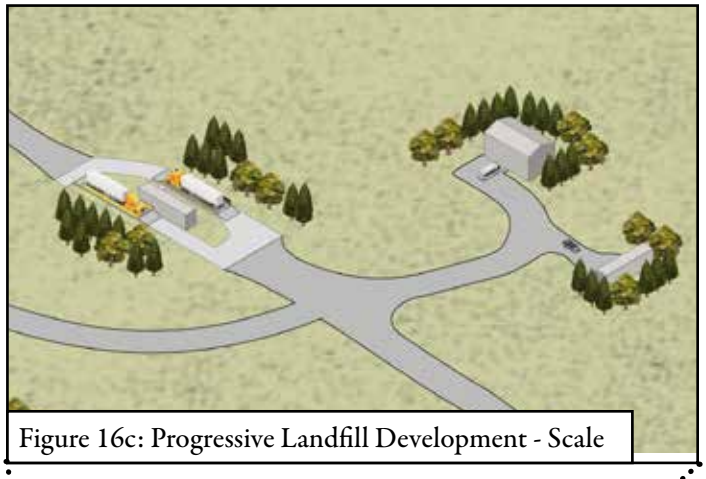


Figure 16c: Progressive Landfill Development - Scale

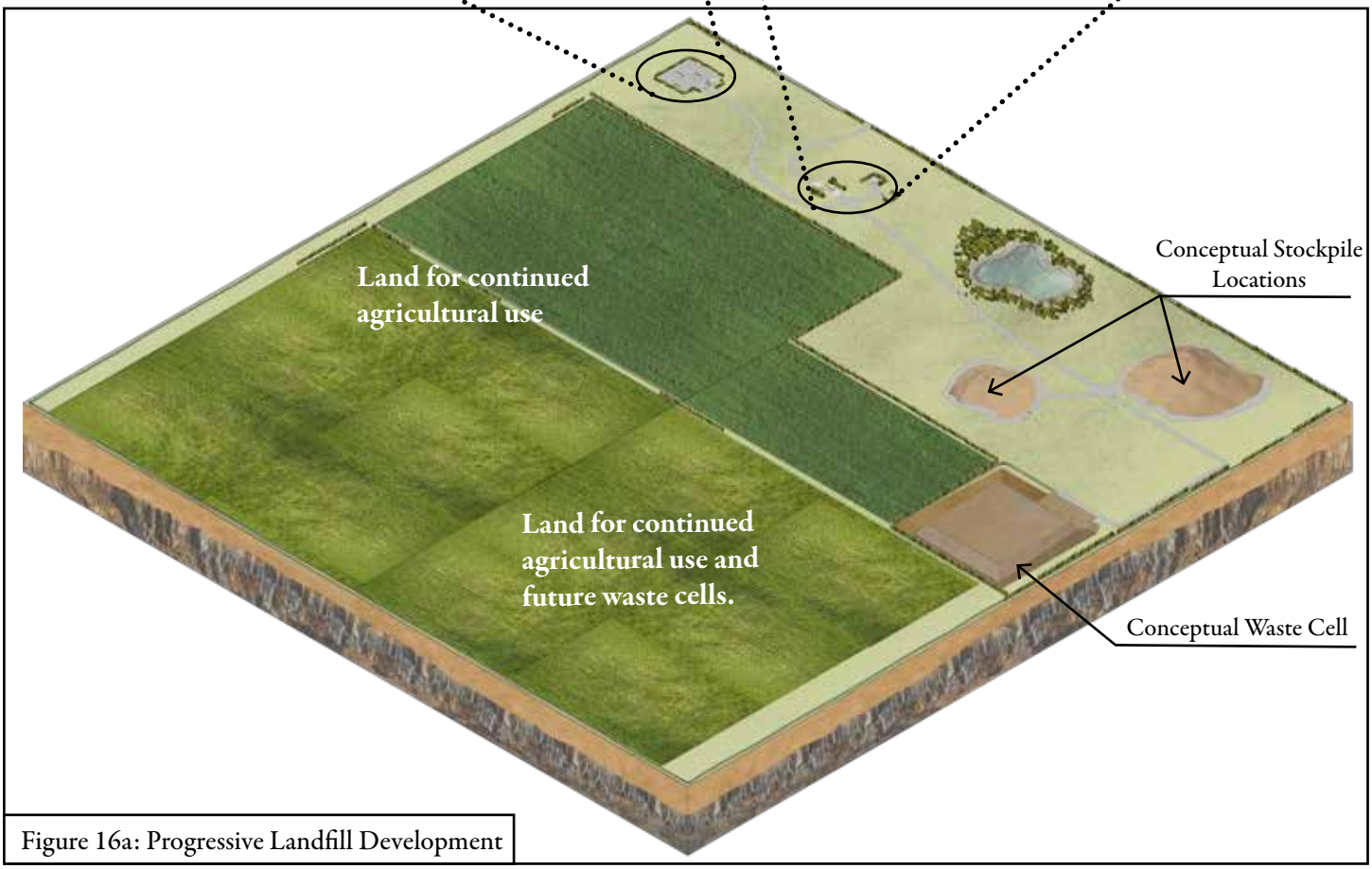
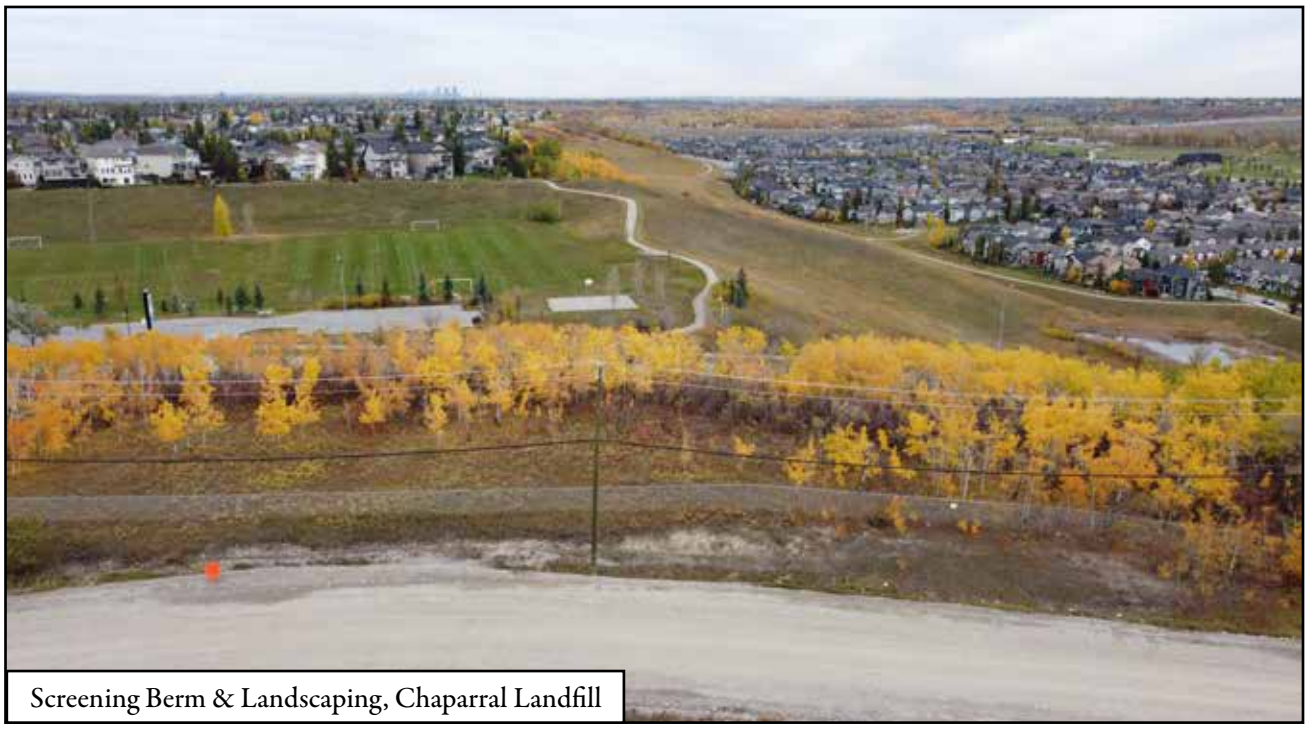


Figure 16a: Progressive Landfill Development

8.0 Potential & Anticipated Offsite Impacts

WCC acknowledges that the IWMF has the potential to create nuisances as part of its operation. The project will be subject to requirements under ***EPEA*** for nuisance management. This section is intended to provide an overview of those aspects that are routinely managed at waste management facilities. Potential impact sources and examples of mitigation measures are presented in **Table 5 – Potential Offsite Impacts and Mitigation Measures. Figure 17 - Mitigation Techniques** identifies some of the techniques, such as predatory birds and mobile fences, utilized in nuisance management.

Where appropriate, following redesignation of the IWMF site, potential nuisance aspects will be subject to baseline studies and assessment to document existing conditions and to evaluate the potential effect(s) related to the IWMF. A detailed plan to manage nuisance and wildlife will be prepared as part of the ***EPEA*** approval application. WCC will work with Kneehill County at the development permit stage regarding aspects of nuisance management that may require additional provisions or controls.



Screening Berm & Landscaping, Chaparral Landfill

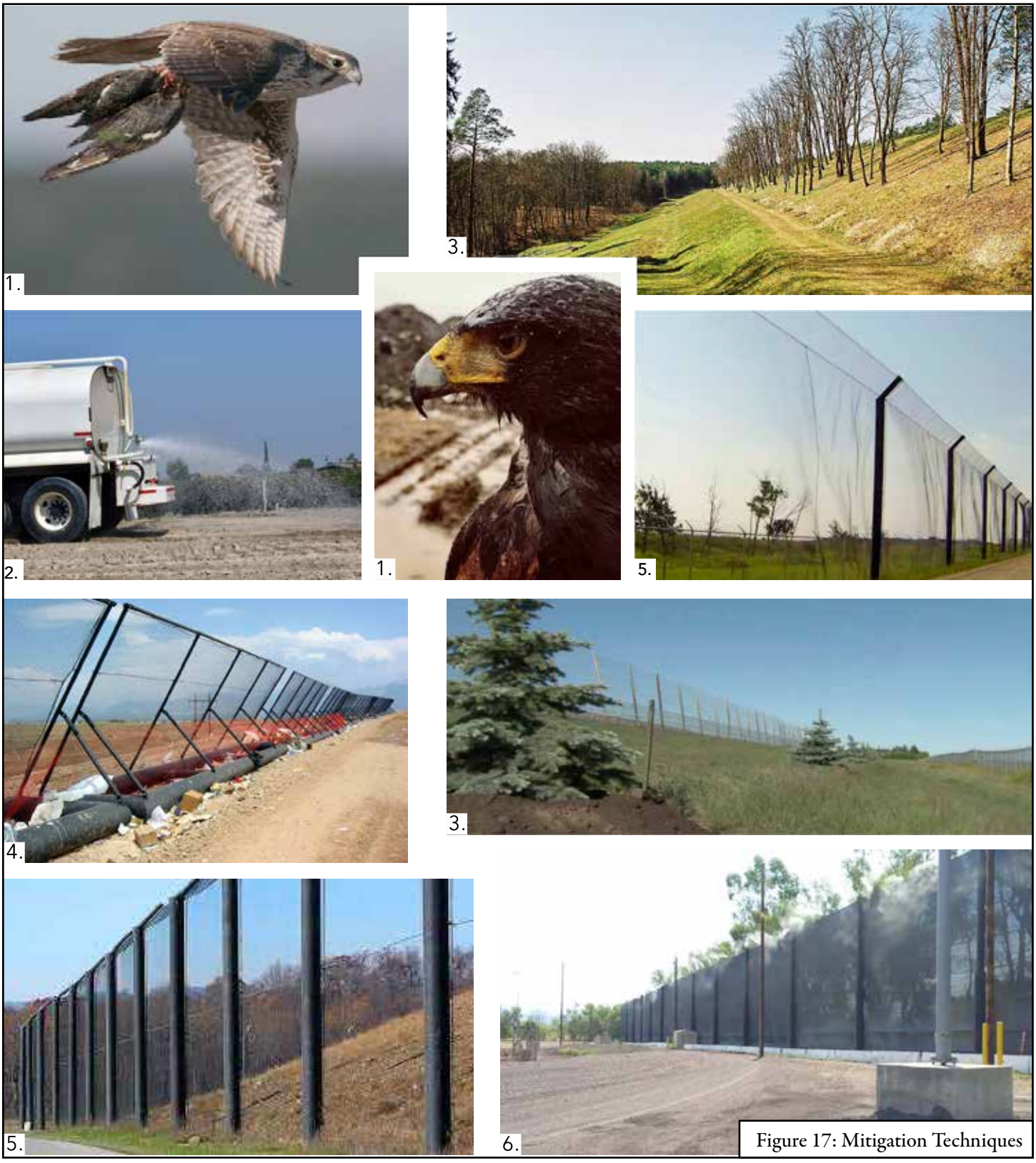


Figure 17: Mitigation Techniques

1. Falconry
2. Water Truck Dust Mitigating
3. Landscape Berming/Screening
4. Mobile Fencing
4. Stationary Fencing
5. Visual Screening
6. Groundwater Monitoring

Table 5: Potential Offsite Impacts & Mitigation Measures

Potential Offsite Impacts and Source	Example Control Measures
Dust Typical dust sources may include on-site roads, site soil stockpiles and wastes.	• vegetate or cover soil stockpiles to avoid loss of soils through wind erosion; • spray on-site roads with water and/or other dust suppressants to avoid fine material from becoming airborne; • enforce low speed limit to avoid dust generation by on-site traffic; • apply non-dust generating cover (e.g. woodchips) onto landfill working face to mitigate dust generation; • temporarily relocate waste disposal areas to a more sheltered area of the landfill; • apply cover material more frequently; and • temporarily pause activities that are generating dust until conditions improve.
Litter and wind-blown debris Typical sources may include wind events, during active disposal, and haul vehicles.	• adoption of good operating practices including compacting waste at the working face and diligent placement of operational cover materials; • use of portable fences at the working area to reduce wind-blown litter leaving the working area; • use of operational and perimeter fences to control off-site migration of wind-blown litter; • collection of wind-blown litter from on and off-site areas; and • temporarily pause receipt of select waste during high wind events.
Odour Typical sources of odour may include disposal of odorous wastes, from decomposition of wastes in the landfill, from leachate, or from landfill gas. Many communities have adopted organics diversion policies/ programs to reduce the amount of organic material in the waste stream which help in the reduction of odour & gas generation.	• adoption of good operating practices such as maintaining a small daily waste disposal working area; • application of daily cover material to ensure waste materials are not exposed; • where applicable, adoption and effective operation of landfill gas recovery systems; and • use of odour suppression systems.

Potential Offsite Impacts and Source	Example Control Measures
Noise Typical sources of noise may include site vehicles, site operation equipment, construction equipment, pumps, generators, or building fans.	• use of screening vegetation to reduce sound travel; • limit operations to the approved hours of operation; and • installation of low decibel reverse alarm in on-site equipment.
Light Typical sources of light may include building lights, construction lights, equipment lights, and lighting to illuminate the working area during darker periods of the day / year.	• use of screening vegetation to reduce direct views of illumination; and • adoption of 'dark' hours during which lights would not routinely be used.
Birds / Wildlife Waste management activities can be an attractant for birds and wildlife.	• adoption of good operating practices including routine application of operational cover; • adoption of AEPA guidance related to managing waste management facilities for wildlife including use of a perimeter fence; • use of bird-scare measures (e.g. noise, trained falconer) with appropriate permits.
Weeds Typical sources for weeds may include disturbed areas or areas newly seeded.	• weeds will be managed in accordance with the ***Weed Control Act***; • seeding of disturbed areas and maintenance of the IWMF site to ensure proper establishment of vegetation; • removal of noxious weeds through mowing or other means; and • if needed, consult with a local vegetation specialist for recommendations related to weeds.
Construction Construction activities have the potential to amplify the risk or severity of certain nuisances (e.g. dust, light, noise).	• ensure specifications are written to require contractors to follow nuisance management controls and best practices.

Figure 18a: Landscaping & Screening Example (Calgary, AB)

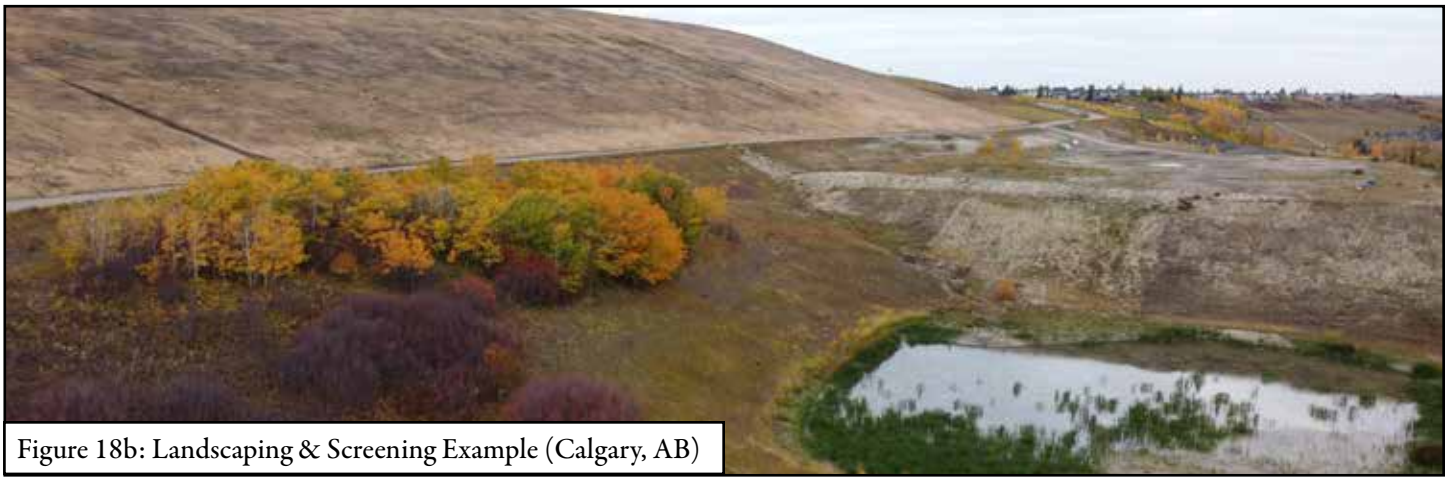


Figure 18b: Landscaping & Screening Example (Calgary, AB)

Figure 18c: Landscaping & Screening Example (Calgary, AB)

Figure 18d: Landscaping & Screening Example (Calgary,AB)

8.1 Visual Impact

WCC acknowledges that the IWMF, particularly the landfill, will create a permanent change to the local landscape and that this change has visual implications to the area. This section is intended to provide an overview of visual impact considerations including sightlines, landscaping, screening and visibility, and progressive development and reclamation approach.

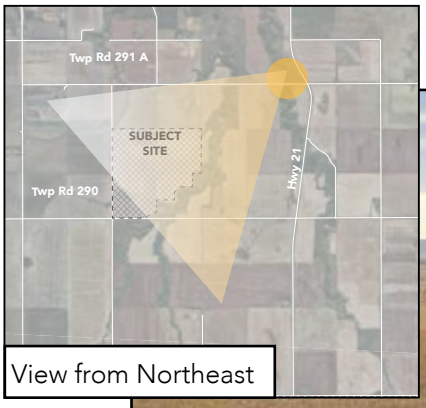
While the extent of the waste disposal footprint and the final height and slopes of the landfill will be based on AEPA approvals, a preliminary assessment of viewsheds has been undertaken for this report. A potential final landform was modeled using characteristics typical of landfills in Alberta. **Figure 18a-d - Landscape & Screening Example** demonstrates effective landscaping and screening at an existing, operational WCC landfill.

Figure 19a-d: Viewshed Analysis demonstrate four different views of the IWMF to determine the implications on sightlines at 50% and 100% buildout of the landfill. The landfill slopes used in the model match the requirements of ***The Standards*** (**Appendix E**), and include continuous grades to promote the drainage of surface water. A landform, similar to that modeled, would, in practice, be developed progressively over many decades, with the waste footprint being incrementally constructed, filled, and capped over the operating life of the project.

Terrain screening tools were used to identify the extent to which topography and/or existing vegetation would block sightlines to the model landform. The conceptual viewscape model also assesses the extent to which constructed earth berms and/or planted tree screens would block lines of sight between the model landform and key locations such as homes, highways, and publicly accessible areas for recreational enjoyment.

Figure 19a: Viewshed Location 1

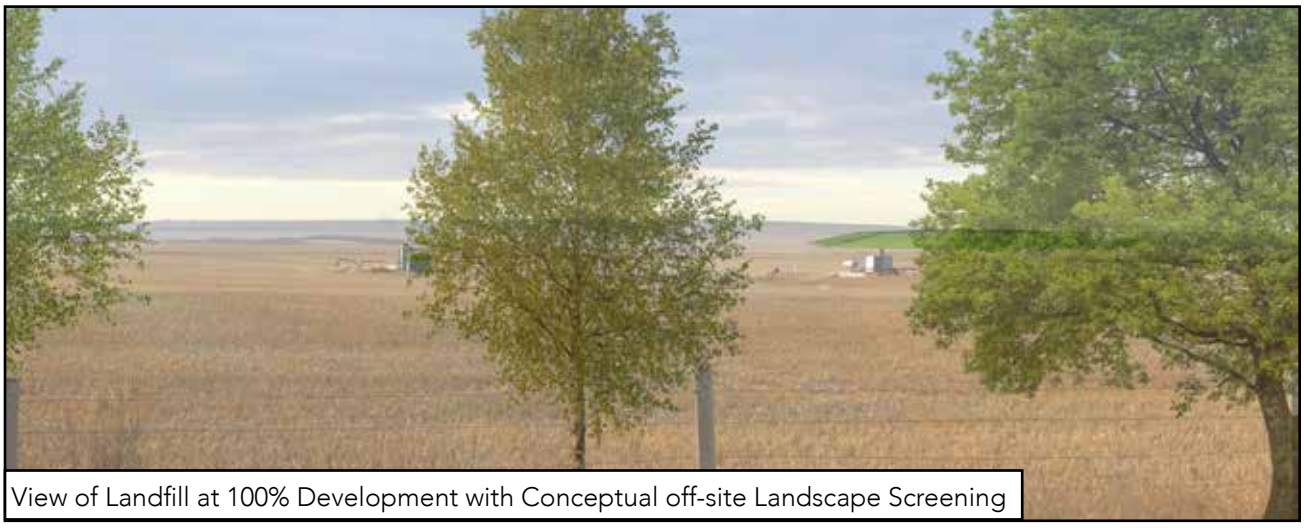
Figure 19b: Viewshed Location 2



View from Northeast

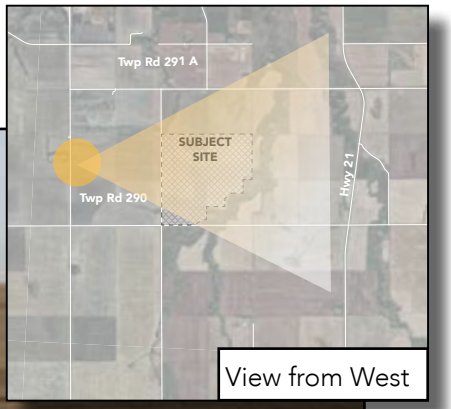
View of Landfill at 50% Development

View of Landfill at 100% Development



View of Landfill at 100% Development with Conceptual off-site Landscape Screening

Figure 19c: Viewshed Location 3



View of Landfill at 50% Development


View of Landfill at 100% Development


View of Landfill at 100% Development with Conceptual Off-site Landscape Screening

Figure 19d: Viewshed Location 4

View of Landfill at 50% Development

View of Landfill at 100% Development

9.0 End-of-Operation Consideration

WCC's IWMF can provide Kneehill County and its rate-payers a facility to transition their waste disposal needs to. The IWMF will operate for decades until such time that the final capping and closure of the landfill portion is required. In this MSDP, it is suggested that a 'passive agriculture' use is intended for the IWMF site after the end of the post-closure period. This end-use will be included in a post-closure development permit process. Should post-closure alternatives arise for the IWMF site that make sense for this IWMF and Kneehill County, WCC will be required to apply for a land use redesignation to suit the proposed use(s), which requires a public hearing, and that a separate development permit application be made.

Chaparral Landfill (Calgary, AB)

10.0 Summary of Community Engagement

To date, a number of meetings have occurred with area landowners, stakeholders, and those involved in the land purchase and consolidation required to facilitate the IWMF. Immediately following the first reading of the DC Bylaws at Kneehill County Council, the community engagement program was formally launched. The goal of the engagement and communications program is to provide information about the IWMF project to the community, receive feedback, respond to questions from the community, and integrate the feedback into the application where possible. In order to ensure that a broad range and number of stakeholders and landowners are engaged, the following community engagement tactics will be utilized:

1. **Project Website: www.WCCengage.com**
   A project website will provide interested parties information to familiarize themselves with the proposal. The website is not anticipated to be a primary source of information for the community. However, the project website will include project information and updates, and will invite feedback through a contact form that will be received by a dedicated project team member. The website was launched after first reading and will remain active through the remainder of the regulatory process at a minimum.

2. **Community Newsletter Advertorial**
   Following first reading, an invitation to a public open house will be published for two consecutive weeks of the Three Hills Capital newspaper.

3. **Community Mailout/ Informational Brochure**
   Distributing mailouts and informational brochures is an effective way to reach a targeted geographical area or interest group. This method allows for the sharing of key messaging, project information, FAQs, and updates. The community mailout will be timed to coincide with Kneehill County communications to the public pertaining to the public hearing and will be sent out immediately after first reading. The community mailout will include details about the open house, website, FAQs, the public hearing, and the informational brochure. The mailing radius for the mail out was determined in conjunction with Kneehill County and represents the typical advertising and notice radius for a use like this.

4. **Open House**
   An open house is hosted by the project team and provides opportunity for discussion among community members and mark project milestones. The first open house was hosted shortly after first reading such that community members had time to learn about the project and provide the team with feedback well in advance of the public hearing. The open house was drop-in format with a presentation component, information boards, feedback forms, and take-away pamphlets.

5. **Targeted Stakeholder Conversations**
   Meetings with project stakeholders and community groups are an integral part of the planning and application process. Both one-on-one meetings or small groups were accommodated. An informational brochure was used to guide the conversation and was left behind for the stakeholders to review at their leisure and to provide follow-up comments.

7. **Council Engagement**
   Ensuring that members of Kneehill County Council receive the most up-to-date information about the application is critical to the project. While it is not appropriate to engage with Council following first reading, the project team ensured Council was provided the same information shared with the community at the open house.

9. **Dedicated Phone and Email**
   Providing a direct line of communication between the community and the project team is an important mechanism to gather as much feedback on the project as possible. A dedicated team member is available to answer phone calls and emails and to coordinate responses to feedback.

10.1 What We Heard Report

Following the primary engagement activities, such as the open house and the targeted stakeholder conversations, the project team will prepare a What We Heard Report which summarizes all the engagement completed and feedback received as well as the project team's responses to feedback. This report will be provided to Kneehill County Administration and Council as part of the public hearing submission.

11.0 Conclusion

WCC is seeking approval for the land use redesignation of the IWMF site to the proposed DC Districts, and is concurrently submitting a detailed MSDP. The redesignation and MSDP aim to create the planning framework to support an IWMF while providing Kneehill County with a detailed overview of the proposed uses and process.

The IWMF site is proposed to be redesignated from Local Rural Commercial and Agriculture to two separate DC Districts: DC7 to guide the primary (landfill) uses and DC 8 to guide ancillary uses involved in the operations of waste management facilities. The proposed DC Bylaws address the unique requirements of the primary and ancillary uses, provide some flexibility to adapt over time, and encourage innovation as technology advances. The proposed DC Bylaws also address areas of public interest by balancing the interests of local area landowners, the community, and WCC while ensuring the IWMF meets the stringent regulatory standards.

It is WCC's intent to be fully transparent with Kneehill County as to the requirements of the IWMF while adhering to the AEPA approvals process and potential standards and operating considerations that may be required for the use. WCC's process requires that land use approvals be in place to start the provincial application and consultation process. As such, this MSDP, in conjunction with the site-specific DC Districts, are intended to provide as much information as possible to Kneehill County and its residents. Some appendices in this report are placeholders, tied to the AEPA approval process, that will be provided in full to Kneehill County.

The proposed IWMF infrastructure aligns with the stated expectations of Kneehill County's Strategic Plan and contributes to preparing Kneehill County for continued sustainable growth and development. WCC is committed to ongoing communication and engagement throughout the approvals, operation, and eventual closure of this IWMF to the benefit of all Kneehill County residents.

Glossary of Acronyms

ACRONYM	COMPLETE TERMS
A	Agricultural District
ac	acres
AACSW	Alberta Arts, Culture and Status of Women
AER	Alberta Energy Regulator
AEPA	Alberta Environment and Protected Areas
ATEC	Alberta Transportation and Economic Corridors
BIA	Biophysical Impact Assessment
DC	Direct Control
EPEA	Environmental Protection and Enhancement Act
ESA	Environmental Site Assessment
ha	Hectare
HRIA	Historic Resource Impact Assessment
IC&I	Industrial, Commercial, and Institutional
IWMF	Integrated Waste Management Facility
MSDP	Master Site Development Plan
LRC	Local Rural Commercial
RSDP	Road Side Development Permit
TIA	Transportation Impact Assessment
WCC	Waste Connections of Canada Inc.

Appendix A Direct Control 7 Bylaw

BYLAW NO 1895

TITLE OF BYLAW FROM AGRICULTURE DISTRICT TO DIRECT CONTROL DISTRICT 7

A BYLAW OF KNEEHILL COUNTY, IN THE PROVINCE OF ALBERTA, TO AMEND

LAND USE BYLAW 1808

WHEREAS, pursuant to the Municipal Government Act, Chapter M-26, Revised Statutes of Alberta 2000, as amended, a Municipal Council has authority to govern and to pass bylaws respecting the municipality;

WHEREAS, it is deemed necessary and expedient to amend Bylaw No. 1808 in the manner hereinafter.

NOW THEREFORE, the Council of Kneehill County, in the Province of Alberta, duly assembled, and under the powers conferred upon it by the Municipal Government Act, RSA 2000, Chapter M-26, and amendment thereto, enacts as follows:

1. INTRODUCTION

THAT in PART XIV – LAND USE MAPS, the relevant 301.51± acres (121.99± ha) of NE 2-29-24-W4 and a portion of the NW 2-29-24-W4, SE 2-29-24-W4, and the SW 2-29-24-W4 as shown on the sketch below are to be redesignated from A – Agriculture District to DC7 – Direct Control District 7.

2. SEVERABILITY

(1) If a portion of this bylaw is found by a court of competent jurisdiction to be invalid, the invalid portion will be voided, and the rest of the bylaw remains valid and effective.

3. EFFECTIVE DATE

(1) This bylaw together with the attached "Appendix A" comes into effect upon third reading of this bylaw.

READ a first time on this 26th day of March, 2024.

PUBLIC HEARING on this _____ day of _____, 2024

READ a second time on this _____ day of _____, 2024.

READ a third time and final time of this _____ day of _____, 2024.

Reeve

Kenneth King

Chief Administrative Officer

Mike Haugen

Date Bylaw Signed

Bylaw 1895 Appendix "A"

DC7 – Specific Direct Control District

DC7 Location:

The overall site is ± 536.86 acres (± 217.23 ha) and situated in Section 2-29-24-W4M north of Township Road 29-0 and east of Range Road 24-2. This DC7 District is comprised of ± 301.51 acres (± 121.99 ha) of the overall site located as shown in Schedule "A".

Purpose:

To accommodate a Privately Operated Integrated Waste Management Facility (IWMF), which supports the principal use of a non-hazardous Class II Landfill and its Landfill Critical Infrastructure as approved by Alberta Environment and Protected Areas (AEPA), guided by a Master Site Development Plan (MSDP) which describes aspects of site preparation, operation, and closure. This District additionally allows for the collection, storage, transfer and/or treatment of recyclables and waste, and processing of materials, and the continuation of current agricultural uses.

(1) Permitted Uses

(a) Agriculture, Extensive
(b) Landfill Critical Infrastructure
(c) Privately Operated Integrated Waste Management Facility
(d) Stripping, Filling, Excavation, Extraction and Grading

(2) Discretionary Uses

(a) Accessory Buildings
(b) Ancillary Waste Management Operations
(c) Office (accessory to the principal use)
(d) Recycling Collection Point for IWMF
(e) Signs not exempted under the Land Use Bylaw (as amended or replaced from time to time)
(f) Waste Management Facility, Minor

(3) Regulation

None of the listed Permitted or Discretionary Uses shall be approved except in compliance with the Matters Related to Subdivision and Development Regulation as may be amended or replaced from time to time.

(4) Development and Subdivision Authority

The Municipal Planning Commission shall review development proposals within a direct control district and provide comments and recommendations that will be forwarded to Council for a decision.

Subdivision applications in a direct control district shall be referred to Council for review and recommendation as part of the Subdivision Authority's decision-making process.

(5) Application for Development Permit

In addition to the requirements in Section 16(1) of this Land Use Bylaw the Development Authority or Council may require additional information deemed reasonable and necessary to evaluate the application, which may include the following:

(a) A Master Site Development Plan that provides a comprehensive framework for the development of an Integrated Waste Management Facility;
(b) Description of any limitations on the proposed development (e.g. known hazards or environmental concerns) and why the applicant intends the proposed land uses to be located as shown and why those locations enable land use planning that is compatible with the applicable statutory plans and on-site and adjacent land uses, including road infrastructure;
(c) Biophysical Impact Assessment (BIA);
(d) Local road access route and detailed engineering for design upgrades;
(e) Transportation Impact Assessment (TIA);
(f) Description of on-site storm drainage facilities and overland drainage routes for major storm events and the proposed methods of handling surface drainage in relation to impacts to adjacent lands and road infrastructure;
(g) Water supply and demand assessment;
(h) Comprehensive site plan;
(i) Guidelines for environmental reclamation and protection;
(j) Documentation outlining the requirements of Alberta Transportation and their satisfaction of any work done to meet their requirements;
(k) Contour information with an interval of a maximum two (2) meters superimposed over the plan;
(l) Confirmation of conformity with the existing Environmental Protection and Enhancement Act (EPEA) approval or license;
(m) Limitations and environmental concerns of the proposed development;
(n) Detailed site plan including setback or buffer distances between on-site and off-site developments;
(o) Availability or provisions of necessary site servicing and utilities;
(p) Additional provincial regulatory approvals required;
(q) Anticipated traffic/road implications; and
(r) Any other information that the Development Authority or Council considers necessary or prudent to evaluate the application.

Notwithstanding the foregoing, the Development Authority or Council may consider an application and Council may render a decision without any or all of the above information if, in its opinion, a decision on the application can reasonably be made without such information.

(6) Conditions of Permitted Use Development

Upon receipt of a completed application for a permitted use in this District, Council shall consider the permitted use in conjunction with all required provincial permits, licenses, and approvals, as may be further described in the MSDP, and shall approve, with or without the following conditions:

(a) All development standards and regulations within this District, not subject to provincial approvals, shall be at the discretion of Council, as may be further described in the MSDP. The development must comply with the approved MSDP.

(b) All development is to be undertaken in accordance with applicable federal and provincial requirements.

(c) All uses shall adhere to the standards set out in the latest editions of the Alberta Code of Practice for Landfills, Standards for Landfills in Alberta, and Alberta Code of Practice for Land Treatment of Soil Containing Hydrocarbons.

(d) All site structures and buildings are to adhere to the Safety Codes Act.

(e) All above ground and underground storage tanks, along with associated piping, are to adhere to the Safety Codes Act and the Petroleum Tank Management Association of Alberta.

(f) Processing, storage, and disposal of any waste not provided for under an approval or license issued by Alberta Environment and Protected Areas (AEPA) is prohibited within this District.

(g) All development in this District is subject to the development permit procedures and regulations stated in Sections 16(1), 18(1), 21 and 45 of this Land Use Bylaw.

(h) Any other standards and design requirements specified by the Development Authority or Council as may be further described in a MSDP.

(i) Monitoring to be conducted in accordance with federal and/or provincial requirements.

(j) Site reclamation to be conducted in accordance with applicable federal and provincial permits and approvals, regulations and standards and the County shall be notified upon completion of the reclamation and a copy of the reclamation certificate, as required by the Province of Alberta, shall be provided to the County. Subsequent use of the land will require a new development permit.

(k) The applicant to enter into an agreement with the County for the purposes described in Sections 648, 650, 651 or 655 of the Municipal Government Act as required, including, without limitation, the provision of security and the payment of fees or levies.

(7) Conditions of Discretionary Use Development

Upon receipt of a completed application for a discretionary use in this District, Council may approve the application for a discretionary use and, if approved, may impose, at its discretion, conditions set out in Section 6 of this District, and any further conditions that Council may deem appropriate to address relevant planning matters, including but not limited to:

(a) Location and maximum size (square footage) of facilities to be constructed;
(b) Development setbacks to side and rear property lines, adjacent to a municipal road, to an Environmentally Significant Area and from the brink of slope;
(c) Hours of operation;

(d) Noise;
(e) Buffering;
(f) Lighting;
(g) Outdoor storage;
(h) Parking requirements;
(i) Screening of facilities;
(j) Submission of applicable federal and provincial approvals and licenses; and
(k) Reclamation details as required by the EPEA.

(8) Development Standards

All development standards and regulations within this District, not subject to provincial approvals, shall be at the discretion of Council, as may be further described in the MSDP. The development must comply with the approved MSDP.

DEFINITIONS

"Ancillary Waste Management Operations" - means uses ancillary to IWMF operations and includes for example: agricultural plastics management, wood and pallet chipping/ processing, container storage, material transfer, recycling/diversion, public drop off, or other uses as deemed appropriate by Council through the development permit process.

"Class II Landfill" – means a landfill for the disposal of waste, not including hazardous waste, or as otherwise defined in the Waste Control Regulation.

"Landfill Critical Infrastructure" - means equipment, installations, devices, and structures without which the Class II Landfill could not be constructed and operated in accordance with applicable provincial laws and regulations. This includes fences; on-site roads and vehicle parking; weigh scale and scale house; equipment storage and maintenance building(s); utilities; material stockpiles; storage of materials related to landfill construction, maintenance and infrastructure; infrastructure for the management and monitoring of leachate (including but not limited to ponds, tanks, conveyance systems, pump stations, wells); infrastructure for the management and monitoring of landfill gas (including but not limited to landfill gas collection and destruction systems, conveyance systems, pump stations, condensate systems, wells); infrastructure for the management and monitoring of groundwater (including but not limited to trenches, pumping systems, wells); infrastructure for the management and monitoring of surface water (including but not limited to ponds, swales, ditches, culverts and flow control structures); and infrastructure for the management and control of nuisances (litter fences, odour mitigation systems).

"Master Site Development Plan" or "MSDP" - means a comprehensive development plan that may be required for large-scale or complex development projects. Such plans are often used to streamline the approval process for developments that involve multiple phases or have significant environmental, infrastructure or duration of tenure considerations. The specific requirements, application procedures, criteria and contents for an MSDP are determined by Kneehill County.

"Office (accessory to the principal use)" - means a specific building or rooms within a building providing for the day-to-day business operation of a facility or principal use on a parcel and may include kitchen and washroom facilities for staff use.

Bylaw 1895 Appendix "A"

"Privately Operated Integrated Waste Management Facility (IWMF)" - means a privately owned and operated non-hazardous Class II Landfill and includes the collection, transportation, processing, recycling, treatment, and disposal of various types of waste generated by businesses, industries, commercial operations, and residential communities. These facilities are responsible for managing and handling waste materials in an environmentally responsible manner and in compliance with provincial and municipal legislation and approvals.

"Recyclables" - means a substance or mixture of substances that is intended to be recycled, or as otherwise defined in the Waste Control Regulation.

"Recycling Collection Point for IMWF" - means, in the context of an IWMF, the specific area where recycling (the process of collecting, sorting, processing, and transforming waste materials into new products or raw materials) occurs. The primary goal of recycling within such a facility is to divert reusable materials from the waste stream, thereby reducing the amount of waste sent to landfills and promoting environmental sustainability.

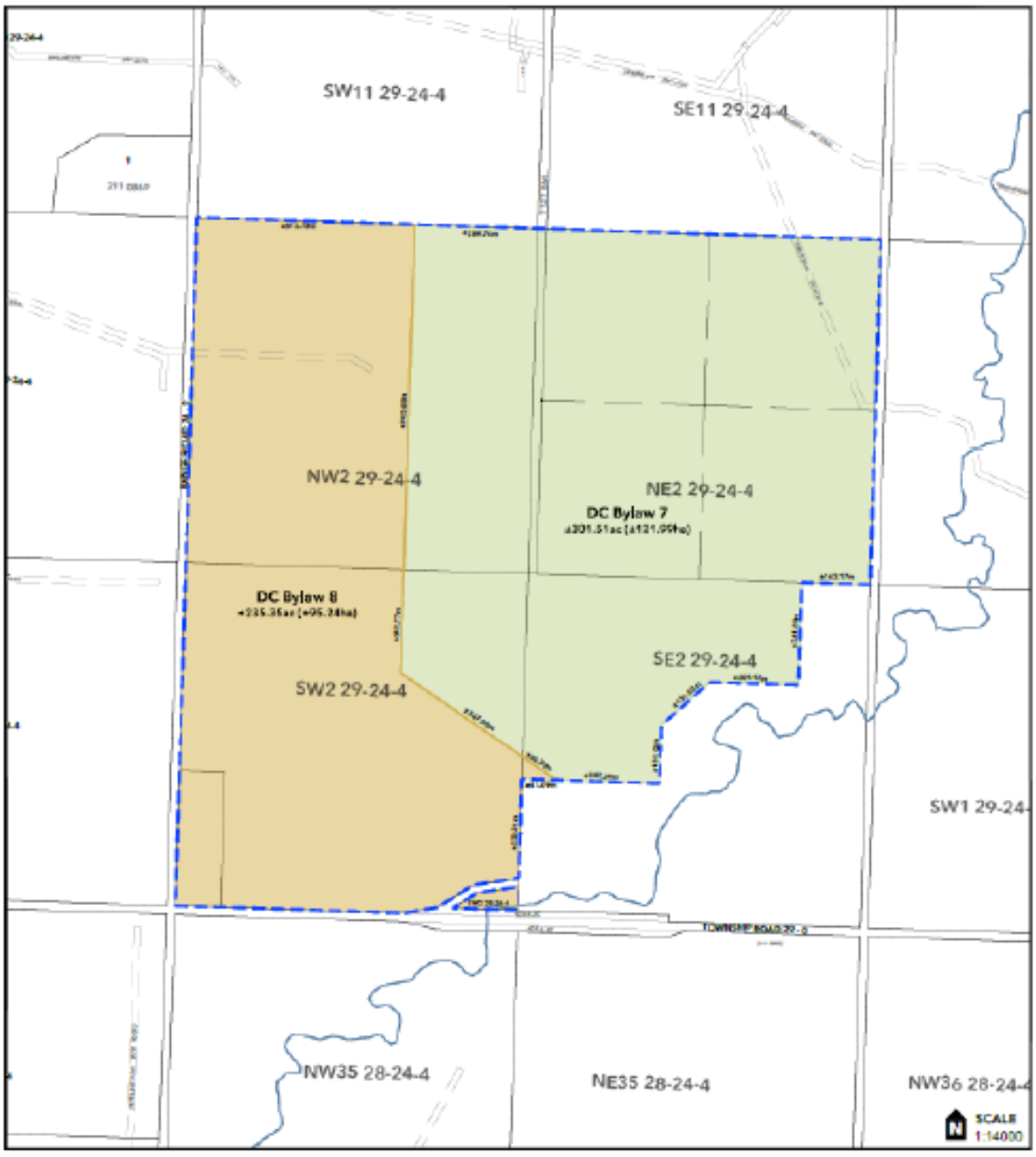
"Stripping, Filling, Excavation, Extraction and Grading" - means to move, take away or remove earth in strips, layers or cells, in accordance the Land Use Bylaw except where approved by AEPA as a permitted use.

"Treatment" - means to apply any method, technique, or process, including, without limitation, neutralization and stabilization, that is designed to change the physical, chemical or biological character of a substance.

"Waste" - means any solid material or product that is intended to be treated or disposed of or that is intended to be stored and then treated or disposed of, but does not include recyclables, or as otherwise defined in the Activities Designation Regulation.

Schedule "A"

DC7 District Location ± 301.51 acres (± 121.99ha)



IWMF Subject Lands
DC 8 District Area
DC 7 District Area

Bylaw 1895

Appendix B Direct Control 8 - Bylaw

BYLAW NO 1896

TITLE OF BYLAW FROM AGRICULTURE DISTRICT TO DIRECT CONTROL DISTRICT 8

A BYLAW OF KNEEHILL COUNTY, IN THE PROVINCE OF ALBERTA, TO AMEND

LAND USE BYLAW 1808

WHEREAS, pursuant to the Municipal Government Act, Chapter M-26, Revised Statutes of Alberta 2000, as amended, a Municipal Council has authority to govern and to pass bylaws respecting the municipality;

WHEREAS, it is deemed necessary and expedient to amend Bylaw No. 1808 in the manner hereinafter.

NOW THEREFORE, the Council of Kneehill County, in the Province of Alberta, duly assembled, and under the powers conferred upon it by the Municipal Government Act, RSA 2000, Chapter M-26, and amendment thereto, enacts as follows:

1. INTRODUCTION

THAT in PART XIV – LAND USE MAPS, the relevant 235.35± acres (95.24± ha) of a portion of the NW 2-29-24-W4, and the SW 2-29-24-W4 as shown on the sketch below are to be redesignated from A – Agriculture District and LRC – Local Rural Commercial District to DC8 – Direct Control District 8.

2. SEVERABILITY

(1) If a portion of this bylaw is found by a court of competent jurisdiction to be invalid, the invalid portion will be voided, and the rest of the bylaw remains valid and effective.

3. EFFECTIVE DATE

(1) This bylaw together with the attached "Appendix A" comes into effect upon third reading of this bylaw.

READ a first time on this 26th day of March, 2024.

PUBLIC HEARING on this _____ day of _____, 2024

READ a second time on this _____ day of _____, 2024.

READ a third time and final time of this _____ day of _____, 2024.

_____

Reeve

Kenneth King

_____

Chief Administrative Officer

Mike Haugen

_____

Date Bylaw Signed

Bylaw 1896 Appendix "A"

DC8 – Specific Direct Control District

DC8 Location:

The overall site is ± 536.86 acres (± 217.23 ha) and it is situated in Section 2-29-24-W4M north of Township Road 29-0 and east of Range Road 24-2. This DC8 District is comprised of ± 235.35 acres (± 95.24 ha) of the overall site located as shown in Schedule "A".

Purpose:

To accommodate a Privately Operated Integrated Waste Management Facility (IWMF) inclusive of ancillary and supporting uses for a non-hazardous Class II Landfill and its Landfill Critical Infrastructure as approved by Alberta Environment and Protected Areas (AEPA), guided by a Master Site Development Plan (MSDP) which describes aspects of site preparation, operation, and closure. This District additionally allows for the collection, storage, transfer and/or treatment of recyclables and waste, and processing of materials, and the continuation of current agricultural uses.

(1) Permitted Uses

(a) Agriculture, Extensive
(b) Accessory Buildings
(c) Landfill Critical Infrastructure
(d) Office (accessory to the principal use)
(e) Stripping, Filling, Excavation, Extraction and Grading

(2) Discretionary Uses

(a) Ancillary Waste Management Operations
(b) Privately Operated Integrated Waste Management Facility
(c) Recycling Collection Point for IWMF
(d) Signs not exempted under the Land Use Bylaw (as amended or replaced from time to time)
(e) Waste Management Facility, Minor

(3) Regulation

None of the listed Permitted or Discretionary Uses shall be approved except in compliance with the Matters Related to Subdivision and Development Regulation, as may be amended or replaced from time to time.

(4) Development and Subdivision Authority

The Municipal Planning Commission shall review development proposals within a direct control district and provide comments and recommendations that will be forwarded to Council for a decision.

Subdivision applications in a direct control district shall be referred to Council for review and recommendation as part of the Subdivision Authority's decision-making process.

(5) Application requirements for Development Permit

In addition to the requirements in Section 16(1) of this Land Use Bylaw, the Development Authority or Council may require additional information deemed reasonable and necessary to evaluate the application, which may include the following:

(a) A Master Site Development Plan that provides a comprehensive framework for the development of an Integrated Waste Management Facility;
(b) Description of any limitations on the proposed development (e.g. known hazards or environmental concerns) and why the applicant intends the proposed land uses to be located as shown and why those locations enable land use planning that is compatible with the applicable statutory plans and on-site and adjacent land uses, including road infrastructure;
(c) Biophysical Impact Assessment (BIA);
(d) Local road access route and detailed engineering for design upgrades;
(e) Transportation Impact Assessment (TIA);
(f) Description of on-site storm drainage facilities and overland drainage routes for major storm events and the proposed methods of handling surface drainage in relation to impacts to adjacent lands and road infrastructure;
(g) Water supply and demand assessment;
(h) Comprehensive site plan;
(i) Guidelines for environmental reclamation and protection;
(j) Documentation outlining the requirements of Alberta Transportation and their satisfaction of any work done to meet their requirements;
(k) Contour information with an interval of a maximum two (2) meters superimposed over the plan;
(l) Confirmation of conformity with the existing Environmental Protection and Enhancement Act (EPEA) approval or license;
(m) Limitations and environmental concerns of the proposed development;
(n) Detailed site plan including setback or buffer distances between on-site and off-site developments;
(o) Availability or provisions of necessary site servicing and utilities;
(p) Additional provincial regulatory approvals required;
(q) Anticipated traffic/road implications; and
(r) Any other information that the Development Authority or Council considers necessary or prudent.

Notwithstanding the foregoing, the Development Authority or Council may consider an application and Council may render a decision without any or all of the above information if, in its opinion, a decision on the application can reasonably be made without such information.

(6) Conditions for Permitted Use Development

Upon receipt of a completed application for a permitted use in this District, Council shall consider the permitted use in conjunction with all required provincial permits, licenses, and approvals as

may be further described in the MSDP, and shall approve, with or without the following conditions:

(a) All development standards and regulations within this District, not subject to provincial approvals, shall be at the discretion of Council, as may be further described in the MSDP. The development must comply with the approved MSDP.

(b) All development is to be undertaken in accordance with applicable federal and provincial requirements.

(c) All uses shall adhere to the standards set out in the latest editions of the Alberta Code of Practice for Landfills, Standards for Landfills in Alberta, and Alberta Code of Practice for Land Treatment of Soil Containing Hydrocarbons.

(d) All site structures and buildings are to adhere to the Safety Codes Act.

(e) All above ground and underground storage tanks, along with associated piping, are to adhere to the Safety Codes Act and the Petroleum Tank Management Association of Alberta.

(f) Processing, storage, and disposal of any waste not provided for under an approval or license issued by Alberta Environment and Protected Areas (AEPA) is prohibited within this District.

(g) All development in this District is subject to the development permit procedures and regulations stated in Sections 16(1), 18(1), 21 and 45 of this Land Use Bylaw.

(h) Any other standards and design requirements specified by the Development Authority or Council as may be further described in a MSDP.

(i) Monitoring to be conducted in accordance with federal and/or provincial requirements.

(j) Site reclamation to be conducted in accordance with applicable federal and provincial permits and approvals, regulations and standards and the County shall be notified upon completion of the reclamation and a copy of the reclamation certificate, as required by the Province of Alberta, shall be provided to the County. Subsequent use of the land will require a new development permit.

(k) The applicant to enter into an agreement with the County for the purposes described in Sections 648, 650, 651 or 655 of the Municipal Government Act as required, including, without limitation, the provision of security and the payment of fees or levies.

(7) Conditions of Discretionary Use Development

Upon receipt of a completed application for a discretionary use in this District, Council may approve the application for a discretionary use and, if approved, may impose, at its discretion, conditions set out in Section 6 of this District, and any further conditions that Council may deem appropriate to address relevant planning matters, including but not limited to:

(a) Location and maximum size of facilities to be constructed;

(b) Development setbacks to side and rear property lines, adjacent to a municipal road, to an Environmentally Significant Area and from the brink of slope;
(c) Hours of operation;
(d) Noise;
(e) Buffering;
(f) Lighting;
(g) Outdoor storage;
(h) Parking requirements;
(i) Screening of facilities;
(j) Submission of federal and provincial approvals and licenses; and
(k) Reclamation details as required by the EPEA.

(8) Development Standards

All development standards and regulations within this District, not subject to provincial approvals, shall be at the discretion of Council, as may be further described in the MSDP. The development must comply with the approved MSDP.

DEFINITIONS

"Ancillary Waste Management Operations" - means uses ancillary to IWMF operations that are ancillary and includes for example: agricultural plastics management, wood and pallet chipping/ processing, container storage, material transfer, recycling/diversion, public drop off, or other uses as deemed appropriate by Council through the development permit process.

"Class II Landfill" – means a landfill for the disposal of waste, not including hazardous waste, or as otherwise defined in the Waste Control Regulation.

"Landfill Critical Infrastructure" - means equipment, installations, devices, and structures without which the Class II Landfill could not be constructed and operated in accordance with applicable provincial laws and regulations. This includes fences; on-site roads and vehicle parking; weigh scale and scale house; equipment storage and maintenance building(s); utilities; material stockpiles; storage of materials related to landfill construction, maintenance and infrastructure; infrastructure for the management and monitoring of leachate (including but not limited to ponds, tanks, conveyance systems, pump stations, wells); infrastructure for the management and monitoring of landfill gas (including but not limited to landfill gas collection and destruction systems, conveyance systems, pump stations, condensate systems, wells); infrastructure for the management and monitoring of groundwater (including but not limited to trenches, pumping systems, wells); infrastructure for the management and monitoring of surface water (including but not limited to ponds, swales, ditches, culverts and flow control structures); and infrastructure for the management and control of nuisances (litter fences, odour mitigation systems).

"Master Site Development Plan" or "(MSDP)" - means a comprehensive development plan that may be required for large-scale or complex development projects. Such plans are often used to streamline the approval process for developments that involve multiple phases or have significant environmental, infrastructure or duration of tenure considerations. The specific requirements, application procedures, criteria and contents for an MSDP are determined by Kneehill County.

Bylaw 1896 Appendix "A"

"Office (accessory to the principal use)" - means a specific building or rooms within a building providing for the day-to-day business operation of a facility or principal use on a parcel and may include kitchen and washroom facilities for staff use.

"Privately Operated Integrated Waste Management Facility (IWMF)" - means a privately owned and operated non-hazardous Class II Landfill and includes the collection, transportation, processing, recycling, treatment, and disposal of various types of waste generated by businesses, industries, commercial operations, and residential communities. These facilities are responsible for managing and handling waste materials in an environmentally responsible manner and in compliance with provincial and municipal legislation and approvals.

"Recyclables" - means a substance or mixture of substances that is intended to be recycled, or as otherwise defined in the Waste Control Regulation.

"Recycling Collection Point for IMWF" - means, in the context of an IWMF, the specific area where recycling (the process of collecting, sorting, processing, and transforming waste materials into new products or raw materials) occurs. The primary goal of recycling within such a facility is to divert reusable materials from the waste stream, thereby reducing the amount of waste sent to landfills and promoting environmental sustainability.

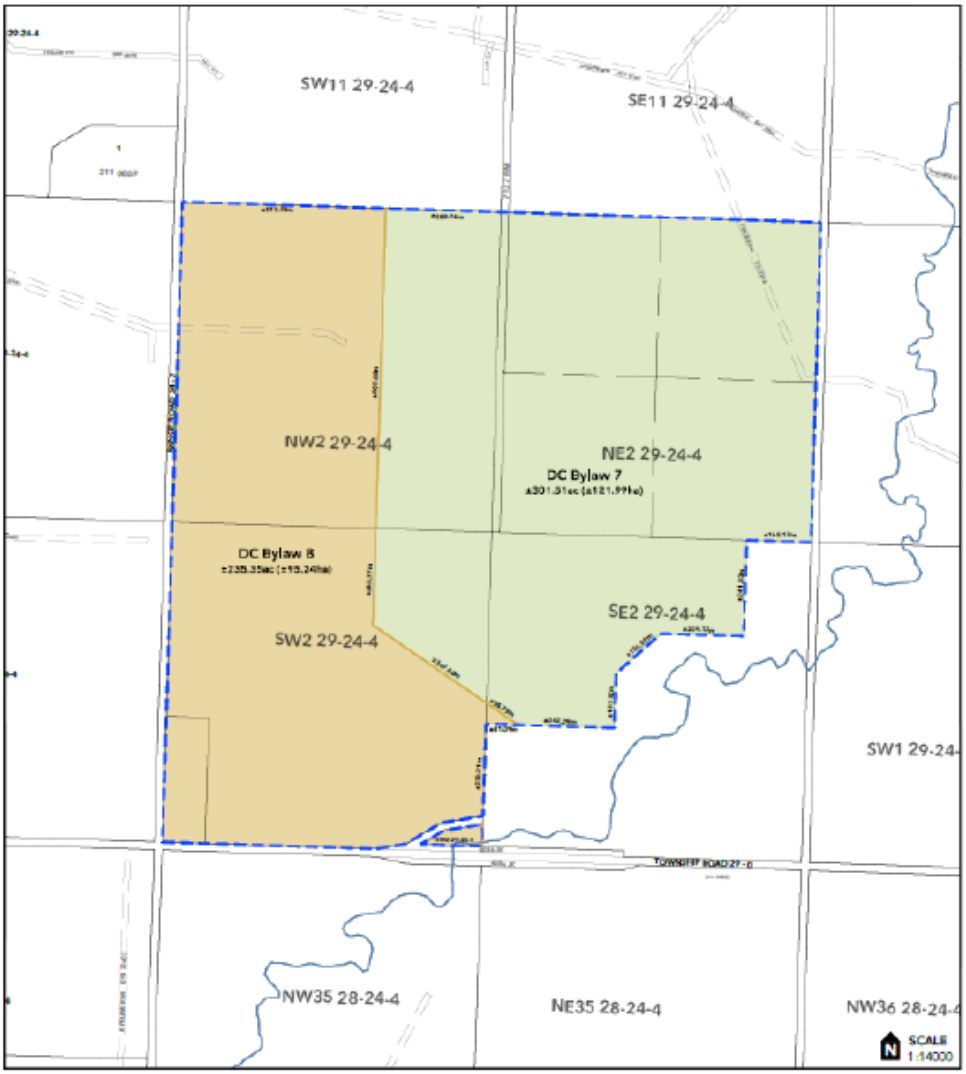
"Stripping, Filling, Excavation, Extraction and Grading" - means to move, take away or remove earth in strips, layers or cells in accordance with Section 72 of this Land Use Bylaw except where approved by AEPA as a permitted use.

"Treatment" – means to apply any method, technique, or process, including, without limitation, neutralization and stabilization, that is designed to change the physical, chemical or biological character of a substance.

"Waste" - means any solid material or product that is intended to be treated or disposed of or that is intended to be stored and then treated or disposed of, but does not include recyclables, or as otherwise defined in the Activities Designation Regulation.

Schedule "A"

DC8 District Location ± 235.35 acres (± 95.24 ha)



IWMF Subject Lands
DC 8 District Area
DC 7 District Area