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Coronation Eco Station Expansion

Business Case

City Operations | Waste Services

City of Edmonton

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Project Sponsor: Krista Berezowski, Director, Business Integration and Technical Services, Waste Services

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1.1	Andrew Waddell	Branch Report Writer, WS BMO, WS	Jan 22, 2025
1.1	Lena Aitken	General Supervisor, Operational Planning & Project Delivery, WS	Jan 22, 2025
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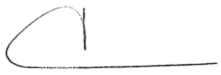
1.2	Chris Fowler, Director, Waste Collection Services, WS		2/12/25
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1. Executive Summary

1.1. Coronation Eco Station Expansion

Eco Stations are waste drop-off facilities owned and operated by the City of Edmonton Waste Services Utility allowing residents to safely dispose of Household Hazardous Waste (HHW), recyclables and bulky waste. One of Edmonton's four Eco Stations, the Coronation Eco Station, primarily serves west and northwest Edmonton. It is the smallest, only non-modernized Eco Station in Edmonton. The existing Coronation site footprint limits operational and service levels which result in inconsistent and lower standards of service delivery levels compared to the other Eco Stations. Furthermore, the current state of Coronation is not able to meet anticipated future demands.

To address these issues, Development Design for the expansion of the Coronation Eco Station was prepared. This design is analyzed in this business case in full detail and compared against the status quo of not executing this expansion.

The findings from the analyses presented in this business case confirms that expanding the existing Coronation Eco Station provides a worthwhile investment and value to improve services compared to the status quo of not expanding the current site. It aligns with the City's sustainability goals and strategic direction, and it serves to address all current service operational constraints and issues identified with the current Coronation Eco Station, which will improve service to residents, reduce vehicle lineups and wait times, enhance worker safety, increase operational capacity, and fulfill administrative requirements.

It is recommended that this initiative proceeds to the next project phase, the Deliver phase, and that the Deliver phase budget of $13.5 million is approved. Upon approval, project delivery of the Deliver phase will commence in 2025 with expected project completion in Q2 2027.

2. Profile Background

Eco Stations provide environmentally sound handling and disposal of Household Hazardous Waste (HHW), preventing this type of waste from entering the residential waste streams or sewer systems. They also provide residents with recycling and yard waste drop-off bins, Reuse Centre donation drop-off, and large and bulky item disposal. Waste Services owns and operates four Eco Stations, among which Coronation is the smallest and second-oldest facility, primarily serving west and northwest Edmonton. Strathcona Eco Station, the oldest Eco Station, was modernized in 2018 to meet demand and better serve customers. Ambleside and Kennedale Eco Stations, as the largest and newest Eco Stations, provide residents with additional services, including free compost and mulch pick-up.

The Coronation Eco Station operates on the Coronation Yard at 11440 143 Street NW. The site was converted from a transfer station to an Eco Station in 2000 with the addition of the HHW handling building at a 1.7 acre footprint, occupying approximately 35 percent of the Coronation

Yard. The remaining 65 per cent was owned and operated by EPCOR after the former Drainage Services utility was transferred to EPCOR in 2016. Despite being the smallest Eco Station, the number of users increased from 84,161 in 2021 to 101,294 users in 2024. On average, Coronation Eco Station received approximately 21 percent of total Eco Station users from 2021 to 2024, but this facility has not been sufficiently renovated or upgraded to accommodate future projected demand.

Table 1: *Comparison of City of Edmonton's Eco Stations.*

Facility	Area Serviced	Size (acres)	Year Opened	Last Renovated
Strathcona	South	1.8	1995	2018
Coronation	West	1.7	2000	Not renovated
Ambleside	Southwest	9.6	2009	Not renovated
Kennedale	Northeast	10.0	2015	Not renovated

In 2014, a business case to replace the existing Coronation Eco Station was approved in Northwest Eco Station - Profile 15-33-2011 (Appendix A). Subsequently, Council approved the profile for $19.8 million to secure the land for Waste Services and to fund detailed design and further analysis to relocate the facility to Mayfield. This land was purchased for $5.8 million in 2015.

During the approval process, it was explained that construction of a Mayfield Eco Station would be delayed until the impact of the new Kennedale Eco Station (opened in 2015) was fully assessed. Administration learned in 2021 that EPCOR was planning to sell their portion of land adjacent to the Coronation Eco Station. If the land were to be sold to a third-party, there was a risk of significant operational and access disruptions to Coronation Eco Station. In City Operations report CO00837 Eco Station Update, Waste Services received Council approval to purchase the adjacent land and consider how the purchase of this land could impact the Eco Station business case. In 2022, the remainder of the Coronation Yard owned by EPCOR became available for acquisition, and was purchased by the Waste Services Utility in 2023.

This opened the potential option to expand the Coronation site instead of constructing the Mayfield Eco Station, and Administration committed to conducting a review and analysis of three options:

1. maintain current operations at the Coronation Eco Station without change or improvement
2. expand and renovate the existing Coronation Eco Station site
3. decommission Coronation and build a new Mayfield Eco Station on land purchased by the Waste Services Utility in 2015.

A comprehensive Planning Report was then prepared and finalized on March 20, 2023, and it was presented as a study of the Coronation Eco Station reviewing its ability to continue serving Edmontonians into the future. The study compares the opportunities to maintain, modernize, and improve the current Coronation site (11440 143 St NW) versus building a new facility on a

greenfield site located in the Edmiston Industrial area, colloquially referred to as Mayfield (17803 114 Ave NW). A full and extensive analysis of both sites, including site, operational, sustainability and cost analyses, are described in detail along with several developed alternative concept designs.

This Planning Report provided the basis of the Options Analysis Business Case, submitted March 31, 2023, which analyzes these options in full detail. While both sites offered viable concept alternatives, the recommendation in the Options Analysis Business Case is to expand the Coronation Eco Station as opposed to developing the Mayfield site. A July 14, 2023 memo was shared to Council, which notified Council of Administration's decision and basis to accept this recommendation as well as inform Council of the intent to commence work to deliver the renovation and expansion of Coronation Eco Station.

Efforts were then placed on executing the Develop (Planning & Design) phase of this project by completing Development Design using the recommended Coronation Site Expansion concept presented in the March 20, 2023 planning report as the design basis. This has culminated in the Development Design Report for Coronation Eco Station Expansion finalized on Oct. 16, 2024. Project and financial information, analysis, and details presented in this business case are based on information provided by this report.

This business case provides an analysis of the expansion of the Coronation Eco Station based on the completed Development Design Report compared against the status quo.

2.1. Problem / Opportunity

Problem

Coronation Eco Station has not undergone major renovation since its initial construction. Due to constraints of the existing Coronation site footprint, service delivery levels are inadequate and inconsistent compared to the other larger Eco Stations, and the Coronation Eco Station is not able to meet anticipated future demands in its current state.

The number of staff working at Coronation vary seasonally. Up to 11 staff work in winter months, while up to 25 staff work during expanded summer hours to accommodate increased visitors. The following issues have been identified and contribute to operational concerns and service constraints:

1. Vehicle access and egress to Coronation is only accessible through a short common drivelane from 143 Street, leading to vehicle back-ups at peak hours and on busy days.
2. Incoming and outgoing traffic cross each other leading to safety risks, operational and public traffic pass each other with a small turning radius and limited visibility and turning radii for vehicles in the outdoor waste drop-off area.
3. The overall size of the site constrains the number of customers that can be served, and waste processing equipment that is used on-site is undersized for its purpose.
4. The facility has only one garage bay that is being used simultaneously for vehicle storage and maintenance, and storage of white goods (e.g. refrigerators, washing

machines and other large domestic appliances).
5. Due to the small waste drop-off area, the capacity to receive waste and accommodate additional drop-off bins is restricted.
6. HHW handling buildings are mostly used for waste storage due to lack of appropriate storage facilities on-site.
7. Due to the repurposed history of the building, drainage and road pavement improvements are required.
8. Insufficient administration area (e.g., congested restrooms and inadequate number of showers and lockers for employees).
9. Limited staff parking stalls due to historical sharing of the Coronation Yard site.

Opportunity

The remaining 65 percent of Coronation Yard has been purchased from EPCOR, creating an opportunity to partially use the land, facilities and other assets for expansion similar to the improvements made at the Strathcona Eco Station. This also provides an opportunity to redevelop the Coronation site and renovate the existing Coronation Eco Station. This will increase capacity, address operational issues, and improve services and service levels at the current site without the need to develop or build at a new location, which would have required a significantly larger capital investment.

Furthermore, this project provides the opportunity to positively contribute towards meeting sustainability, energy efficiency, and carbon emission goals established in the 25-year Waste Strategy and The City Plan.

2.2. Current Situation

Built in 2000 on a 1.7 acre footprint, the Coronation Eco Station is the smallest, second-oldest and only non-modernized Eco Station, primarily serving west and northwest Edmonton. It currently has a maximum of 25 staff working at this location. The facility is located between 114 and 115 Avenue and east of 143 Street. It is adjacent to the City's Road Maintenance Fleet Facility from the west and a scrap car recycling business from the south. A decommissioned railroad runs along the western boundary of the Eco Station and the Coronation Yard site.

Due to limited space in both the Eco Station buildings and the broader site area, the operational team is restricted from effectively managing the current demand for services. The number of available waste drop-off bins cannot be increased without creating additional issues for staff and visitors. Because fewer drop-off bins are available, more bin pickups are scheduled to compensate for the lack of capacity. This consequently results in relatively higher operating costs compared to Kennedale, Ambleside or Strathcona Eco Stations, which are larger or were more recently renovated to better accommodate the increased service delivery needs of residents and the needs of staff. These identified operational issues, outlined above in 2.1, ultimately hinder alignment with the sustainability goals established in the 25-year Waste Strategy and The City Plan.

3. Profile/Initiative Description

3.1. Initiative Description

Meeting the City's corporate outcomes, climate resilience goals and projected growth as laid out in The City Plan requires an appropriate investment in waste drop-off facilities. In section 2.1 of this business case, several operational limitations have been identified with the current Coronation Eco Station, which deters the City's waste reduction goals and limits the provision of adequate service and capacity to a growing population.

This renovation and site expansion project focuses on Coronation Eco Station, one of four existing facilities in the city. The main goals of this project are to reuse the existing complex and implement upgrades regarding site and building efficiency, safety, and interior programming. The overall design language will echo the aesthetics of the other updated Eco Stations, which will strengthen the identity and recognizability of the complexes.

3.2. Initiative Justification

Redevelopment and expansion of Coronation Eco Station will improve service delivery and allow Waste Services to provide consistent service levels similar to the other Eco Stations in the City, providing equitable levels of waste drop-off service to Edmontonians regardless of where they live.

This initiative serves to address all current service operational constraints and issues identified with the current Coronation Eco Station, which will improve service to residents, reduce vehicle lineups and wait times, enhance worker safety, and fulfill administrative requirements. Furthermore, it aligns with City sustainability goals, outlined in the 25-year Waste Strategy and The City Plan, and ultimately with the City's strategic direction as outlined in section 4.

3.3. Urgency of Need

The current operational and service issues cannot be resolved with the existing footprint. Until these issues are resolved, constraints on operations and service levels will continue, and consequently, service levels will continue to be below what is standard for other Eco Stations in the City. The implementation of this initiative will be the culmination of over ten years of planning, analysis, and assessment. The sooner the initiative is implemented, the sooner the benefits are realized from this initiative.

3.4. Anticipated Outcomes

Assuming that all project goals and objectives are met at the completion of the project, the anticipated outcomes include:

- improved vehicle access and egress to the site
- improved flow of site traffic and reduced safety risks associated with constrained vehicle movement and limited visibility
- improved site drainage, facilities, and other site infrastructure
- increased operational capacity for receiving, storing, transferring, and handling of waste materials
- increased operational efficiency due to increased operational space and improved facilities and infrastructure
- enhanced customer experience
- modernized and sufficient administrative and staff amenities & facilities
- extension of infrastructure asset life and utilization
- more climate-resilient infrastructure contributing to corporate greenhouse gas emission reduction targets

3.5. Scope

To execute this initiative, the current project scope for the delivery phase of the project upon approval of Project Development and Delivery Model Checkpoint 3 includes:

- Detailed design of Coronation Eco Station Expansion using the final Development Design report as the design basis.

- Design work scope includes:
  - Architectural
  - Engineering disciplines including, but not limited to: structural, mechanical, electrical, civil, geotechnical

- Project management scope includes:
  - Scope management
  - Schedule management
  - Cost management
  - Quality management
  - Risk management
  - Communication & stakeholder management
  - Procurement & contract management
  - Change management
  - Resource management
  - Health, safety & environmental management

- Delivery phase work includes:
  - Detailed cost estimate as the design progresses.
  - Detailed delivery phasing and schedule considering current operation at Coronation Eco Station and potential temporary operation interruption.
  - Project delivery and construction.
  - Project procurement of both engineering and construction services.
  - Attainment of all permits required for construction.

- Execution of a quality control program which includes, but is not limited to, regular inspections, verifications, reporting and testing to ensure specifications are met.
- Commissioning of all installed equipment.
- Project handover, including final acceptance certificate, warranty, operation and maintenance manual and project close-out.
- Warranty related issues.

3.6. Out of Scope

The following are **not** included in scope:

- Operations and maintenance (excluding warranty related items)
- Environmental Liabilities
- Any building and facility not included in the Development Design (e.g. north building)
- Commercial and industrial hazardous waste management
- New or amended permits from Alberta Environment and Protected Areas
- Condition and environmental liability of any former EPCOR facilities not included in the proposed expansion footprint

3.7. Critical Success Factors

The following list identifies items that contribute to the successful realization of the initiative, along with their respective success measures in accordance with the City of Edmonton's Project Development and Delivery Model.

Checkpoint 3 - Readiness Criteria and Handover Package	• Plan and Check Approval by Project Manager and Direct Supervisor • Approval by Project Sponsor
Checkpoint 4 - Detailed Design Drawings, Construction Estimate and Bid Documents	• Review and acceptance by Project team • Meets technical requirements as outlined in the Consultant Manual • Meets CoE Technical Standards and Drawing, Document, and Authentication Standards and APEGA practice standards • Project Sponsor approval
Constructability Review/Contractor	• RFP and Award of Services: Review and acceptance by Project team.

Procurement/Construction Contractor Agreements	• Note: A phased approach for the construction may be necessary.
Deficiency List	• Review and acceptance by Project team
Construction Completion Certificate/Final Acceptance Certificate	• Review and acceptance by Project team
Manuals and Operating Instructions	• Review and acceptance by Project team
Warranty	• Warranty terms and conditions specified; with review and acceptance by Project team • Review and acceptance by Project team
As-Built Record Drawings	• Meets technical requirements as outlined in the Consultant Manual • Meets CoE Technical Standards and Drawing, Document, and Authentication Standards and APEGA practice standards
Checkpoint 5 - Readiness Criteria and Handover Package	• Plan and Check Approval by Project Manager and Direct Supervisor • Approval by Project Sponsor

4. Strategic Alignment

This project is aligned with and in support of the following City of Edmonton policies shown in Table 2.

Table 2. *List of Project Aligned COE Policies.*

City of Edmonton Policy	Project Impact
The City Plan	Improving the condition of Eco Stations meets the Greener As We Grow Big City Move goal, meeting the needs of a growing population and the future environmental impact of two million Edmontonians. Effectively monitoring and efficiently collecting the volumes of waste dropped off at Eco Stations helps the City measure the success of The City Plan

	and whether its environmental targets are being met.
ConnectEdmonton	The Climate Resilience goal of ConnectEdmonton establishes the City's need to react to the challenges of climate change and preserve our environment. Responsible management of HHW, improving conditions of Waste Services facilities, and enhancing infrastructure climate resiliency help address this strategic goal.
Waste Services Utility Fiscal Policy C558C	Identifying cost-effective opportunities to improve the facility condition of Eco Stations can improve the delivery of services and user satisfaction. By doing so in a fiscally responsible manner, Waste Services provides value for ratepayers and preserves the long-term financial viability of the Utility.
City of Edmonton Environmental Policy C512	Providing affordable, accessible and equitable waste drop-off services in Edmonton helps stakeholders commit to the shared responsibility all residents, businesses and the City all have in managing waste. Responsibly managing HHW and environmental liabilities minimizes the long-term impact of waste generation and disposal and promotes intergenerational equality.
Climate Resilience Policy C627	Increasing waste diversion through drop-off services minimizes waste sent to landfill and associated greenhouse gas emissions. The GHG impact of renovating, improving, and enhancing the climate resiliency of City facilities and infrastructure is factored into the options analysis for this project and the City's overall emissions.
Infrastructure Asset Management Policy C598	Waste Services is appropriately managing the condition of its facilities and assessing the range of impacts its facilities have on relevant stakeholders. The challenges and opportunities of each alternative to meet the full lifecycle of each facility are thoughtfully considered.
25-year Waste Strategy	The 25-year Waste Strategy prioritizes waste reduction and diversion through program development and change. Providing Edmontonians with accessible, efficient drop-off services helps ensure waste is properly sorted, allowing the City to appropriately collect, process and divert waste from landfill.
Waste Reduction Roadmap '24	The Waste Reduction Roadmap is a work plan that identifies opportunities and actions to reduce waste at the source. The Roadmap advocated for provincial Extended Producer

	Responsibility (EPR) regulation and implementation, which was realized. The impacts of EPR will affect Eco Station operations, which should contribute to improved waste reduction and diversion.
Waste Services Climate Action Plan	The Waste Services Climate Action Plan identifies opportunities to reduce emissions in assets and infrastructure. Considering greener options such as, generating renewable energy at Coronation to power operations, will reduce dependence on carbon-intensive fuel sources.

5. Context Analysis

5.1. Eco Station Program

In 2025, the Eco Station program will be in its 30th year of operation. It has successfully attracted visitors to its services, seeing over nine million customers since the first Eco Station opened in 1995. With this continued success combined with the city's projected population growth, the Eco Stations are expected to see an increase in intake volume and service demand. As shown in Figure 1 below, a steady increase in Eco Station visitors has been recorded, accelerating in 2021 after the Edmonton Cart Rollout was introduced. Visits from customers have increased approximately 22 per cent from 2021 to 2024, reaching 473,978 in 2024.

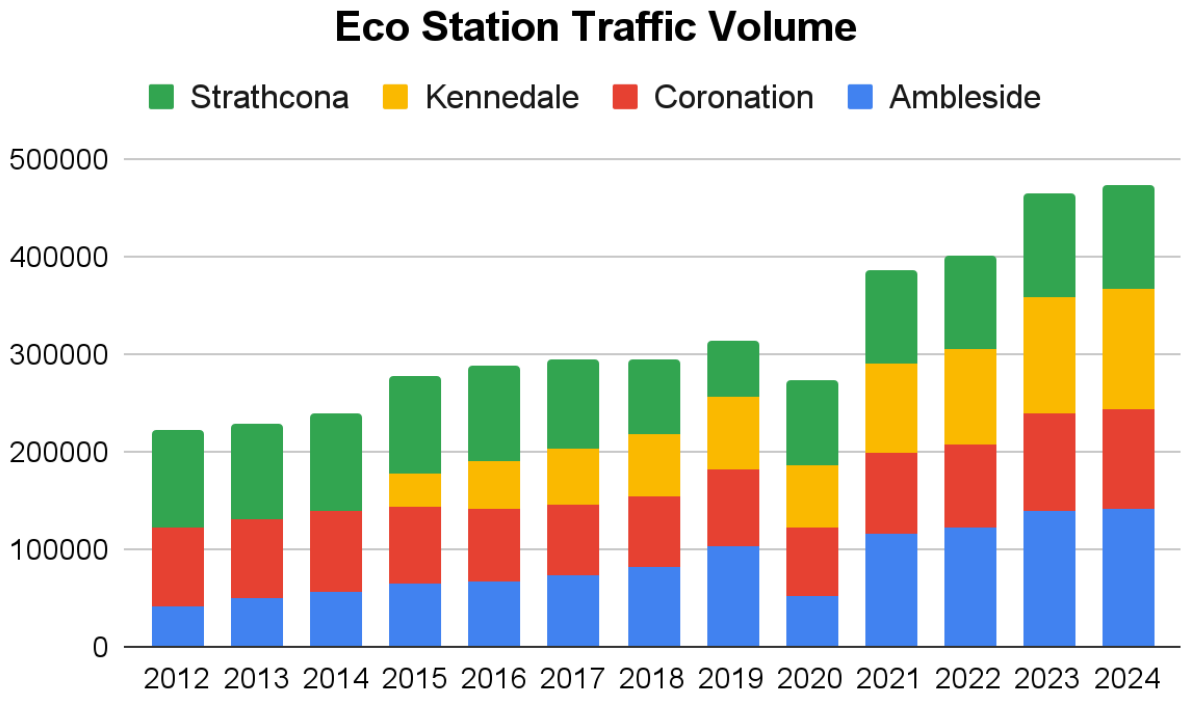

Figure 1. *Annual number of visitors to Eco Stations by vehicle count. Strathcona underwent renovations in 2018 and 2019, while Ambleside was used as a drive-through COVID-19 testing site for approximately four months in 2020.*

Previous studies in the Eco Station program indicate that smaller sites are able to facilitate up to 300 vehicles per day before negatively impacting service levels and safe operating conditions. In 2005 there were 20 days with over 300 cars; in 2013 there were 155 days. During summer Eco Station hours, Coronation now averages 350 cars per day. This increase has resulted in the following issues:

- lineups backing into public roadways (143 Street)
- unloading zones and staging areas consistently occupied during peak times
- safety issues because of congestion and customers unable to enter the site during peak times

5.2. Regulated Extended Producer Responsibility Systems[1]

Extended Producer Responsibility (EPR) shifts the physical and financial burden of collecting, sorting, processing and recycling waste to product producers and away from local governments and taxpayers.

Alberta's new EPR regulation will focus on two systems:

1. Single-use products, packaging and printed paper products (PPP)[2].
2. Hazardous and special products (HSP)[3]

Producers will be fully responsible (financially and operationally) for the collection and management of their designated products after consumer use. Producers will deliver collection services and be liable for achieving performance standards on their respective system, and are able to join or create producer responsibility organizations (PROs) to manage their materials. Producers will also be responsible for educating Albertans on the new systems. Producers are aware of their obligations and the transition to EPR[4].

The EPR regulation came into force on November 30, 2022. The Alberta Recycling Management Authority (ARMA) has been granted new oversight functions. Producers were required to provide verification of collection and management plans to ARMA by April 1, 2024. EPR systems for PPP and HSP will be operational by April 1, 2025.

Waste Services expects minor operational impact to the Eco Station program as a result of EPR implementation. Eco Stations currently collect, sort and dispose of recycling and HSP through the regulated utility program. Upon the City of Edmonton registering as an EPR-participating community, Waste Services has been negotiating with Producer Responsibility Organizations to establish contracts for services provided by the City for recycling and HSP at the Eco Stations.

[1] Information is adapted from the Government of Alberta's Regulated EPR Systems.
[2] Materials from the industrial, commercial and institutional sector are excluded.
[3] Hazardous and special products include batteries, corrosive products, corrosive product containers, flammable products, flammable product containers, pesticides, pesticide containers, toxic products, and toxic product containers limited to consumer sizes typically found in retail stores.
[4] Extended Producer Responsibility Information for Producers and Albertans.

These negotiations have progressed well and EPR compensation is expected to help offset the ongoing utility funding required to operate and maintain the Eco Stations.

6. Alternatives

The recommended exterior and interior concept option was chosen based on operational analysis and has undergone development through the Development Design process, which is presented as the design basis for this alternative. Opportunities to reduce capital investment and save costs on Coronation Eco Station's expansion are included for consideration. A status quo alternative is included as a comparison.

Two alternatives are identified as:

- **Alternative 0: Status quo**
  - No expansion or major improvements.
  - Renewal only based on life cycle management and condition assessment.
  - Operational issues at Coronation Eco Station and strategies to mitigate them, including increased drop-off bin pickups and Big Bin Events, have been ongoing. As these are not sustainable long-term solutions for the facility itself, continued mitigation efforts are not considered to be a viable option.

- **Alternative 1: Expansion of the current Coronation Eco Station**.
  - Alternative concept designs for four exterior site options and two interior options were developed and analyzed.
  - Exterior site expansion into the space in the north parking area of the site and the spur railroad on the west edge, made available from acquisition of the site.
  - Interior design concept options include renovation of the currently vacated second floor of the existing building, and two garage bays (storage warehouse).
  - The resulting site area is 10,528 m^2 and the building area is 1,928 m^2.

Figures 2 and 3 depict the aerial view of the Coronation Eco Station site in 2023 prior to purchasing the EPCOR portion of the site (Figure 2) and after the purchase and amalgamation of the EPCOR area with the Coronation yard (Figure 3). Figure 4 shows the design layout for the proposed expanded Coronation Eco Station.

A high-level comparison of two preferred alternatives is provided in Table 3. The major advantages and disadvantages are shown in Table 4.

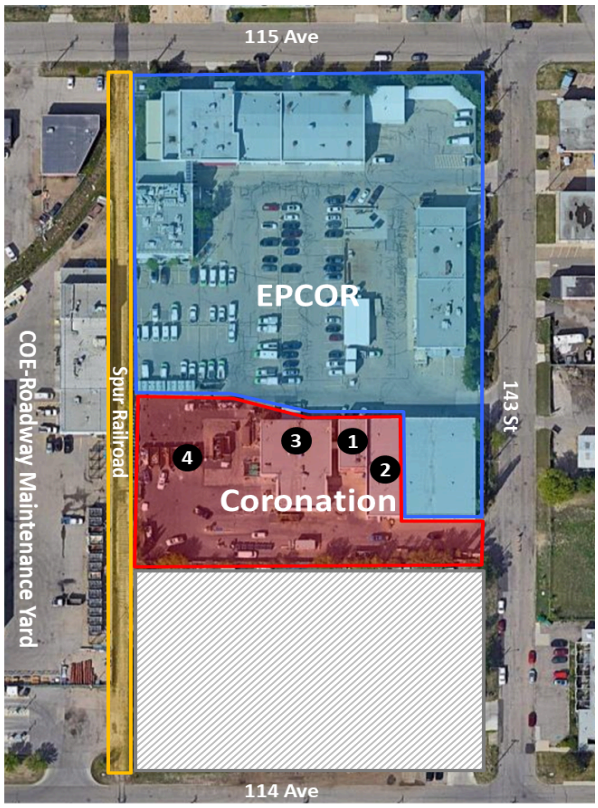

Figure 2: *Coronation Yard Site pre-amalgamation (1: Admin Building, 2: Garage Bay, 3: HHW Handling Building, 4: Drop-off Area).*

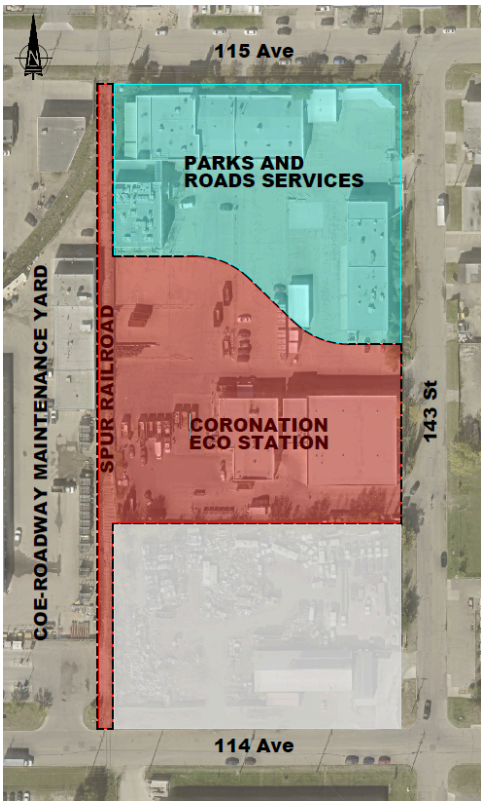

Figure 3: *Coronation Yard Site post-amalgamation.*

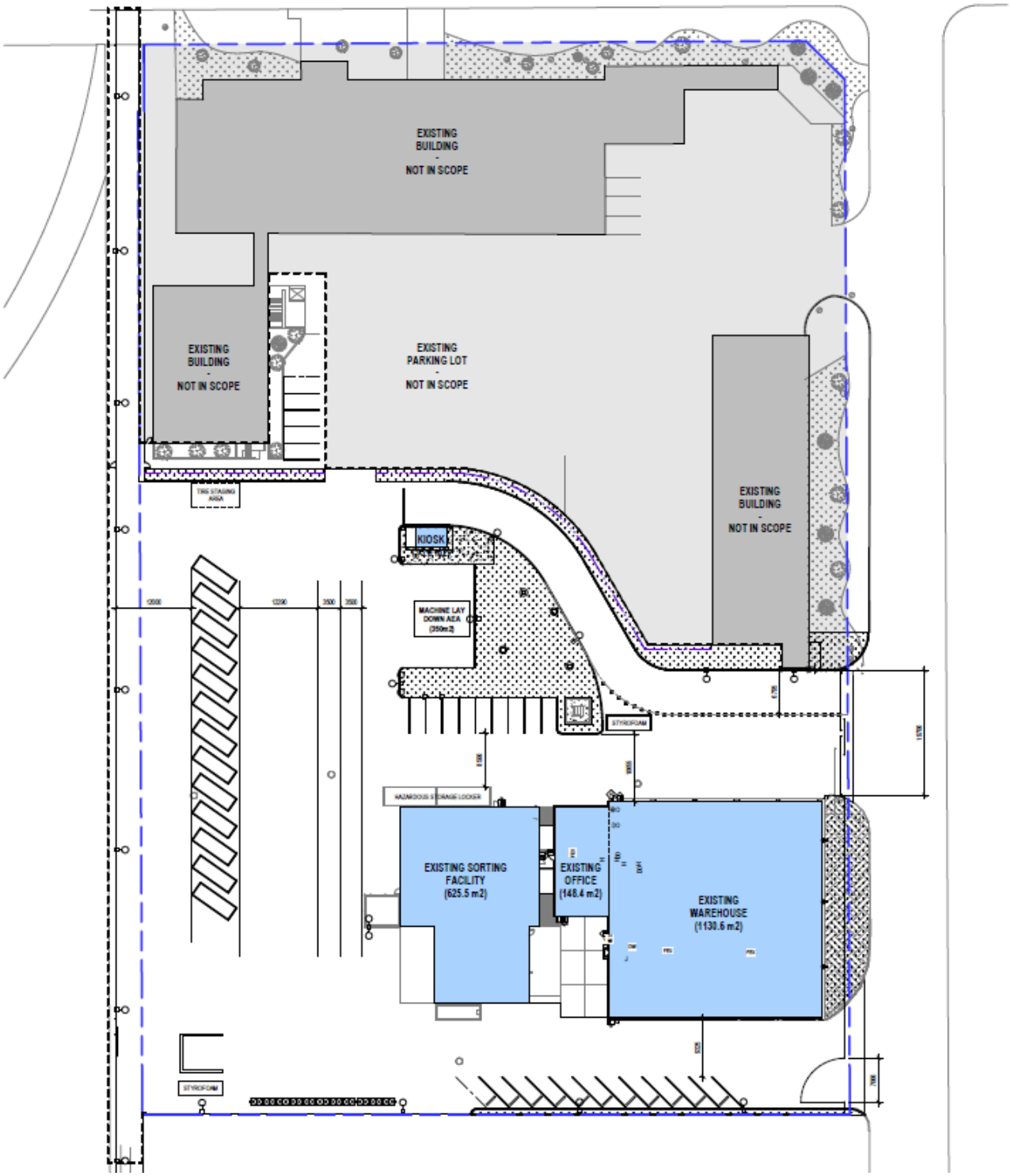

Figure 4. *Development Design layout of the expanded Coronation Eco Station.*

Table 3: *High-level Comparison of Current vs. Expanded Coronation Site.*

Site Features	Current Coronation Site	Expanded Coronation Site	Change from current site
Number of Large Bins	13	18	38%
Recycling Depot Bins	17	17	0%
Compost Distribution Area	No	Yes	Can be included
Reuse Centre (or Area)	No	No	No
Staff Parking Stalls	13	20	54%
Vehicle Lineup Capacity (m)	60	85	42%
Building Area (sq. m)	1,063	1,928	81%
Site Area (sq. m)	6,819	10,053	47%
Hardscape Area[1] (sq. m)	4,550	7,400	63%
Softscape Area[2] (sq. m)	130	981	655%

Notes:
1. Hardscape area: Buildings and paved area or other areas used for operational purposes.
2. Softscape area: Living horticulture on site including mulch, grasses, bushes and other plant life.

Table 4: *Summary of Advantages and Disadvantages of Alternatives.*

Option	Advantages	Disadvantages
Alternative 0: Status Quo	• no immediate capital costs • no operational disruption to Edmontonians • preserves existing service delivery	• service levels continue to be constrained below standard for other Eco Stations • does not address current high safety risks & challenges • does not address current operational and service issues • does not meet future capacity needs • does not strategically align with COE policies • greater likelihood of emergent capital costs to address existing facility deficiencies
Alternative 1: Coronation Expansion	• increased operational space resulting in safer and efficient operation • increased site and queuing capacity that will meet current and future area needs • reduced safety risk resulting from improved operational site and public visitor traffic flow • improved customer experience with shorter processing and wait times during peak hours • current facility is established in the community • majority of current facility deficiencies will be addressed • improves service levels to more comparable levels relative to other existing Eco Stations • extends lifecycle of facility • improved sustainability • less carbon embodied in buildings • strategically aligns with COE policies	• expansion is limited in the future, has some compromises on accessibility • environmental liability and risk associated with the existing Coronation building/site condition may lead to risks if selling or decommissioning existing Coronation Eco Station at end of life • operational and revenue disruption during site renovation

7. Organizational Change Impact

7.1. Stakeholder Impact

Table 5 summarizes the key stakeholders and the change impact of each alternative.

Table 5: *Organizational Change Impact.*

Impact & Description	Alternative 0 Status Quo	Alternative 1 Coronation Expansion
Stakeholder 1: City of Edmonton, Waste Services, Collection Services		
Impact 1: Negative short-term impacts on existing Eco Station Program (facility capacity and operation)	Low	Medium
Impact 2: Negative short-term impacts on revenue	Low	Medium
Impact 3: Positive impacts on Eco Station Program	Low	High
Impact 4: Positive impacts on long-term program revenue	Low	High
Impact 5: Negative long-term impact from operational & service constraints	High	Low
Impact 6: Negative long-term impacts from increased safety risks due to constrained space for operational activities	High	Low
Stakeholder 2: City Council (Internal)		
Impact 1: Review and provide direction and feedback	Low	Low
Stakeholder 3: City Residents (External)		
Impact 1: Negative short-term impact on public	Medium	Medium
Impact 2: Positive impact on improved site safety and reduced queuing and waiting time	Low	High
Stakeholder 4: Business and Operational: Environment & Protected Areas/ARMA (External)		
Impact 1: Impact from permitting and approval	Low	Low

8. Cost Benefits

8.1. Cost Analysis

Table 6 summarizes the preliminary financial analysis comparing the status quo to the site expansion alternative, based on a 40-year life cycle. Total Revenue and Total Operating and Maintenance Costs are calculated based on the change from the status quo.

Table 6: *Financial Comparison of Alternatives ($millions)*

Financial Summary	Alternative 0 - Status Quo	Capital Construction Only Alternative 1 - Coronation Expansion		Comments
	40-Y Analysis	40-Y Analysis	Net Change	
Capital Project Costs				
2023-2024 Land Purchase and Planning & Design (A)	($2.8)	($2.8)	$0	Sunk costs pre-approved under composite profiles (per Section 11.2)
2025-2026 Project Delivery (B)	$0	($13.5)	($13.5)	Proposed budget adjustment
Total Projected Capital (C=A+B)	**($2.8)**	**($16.3)**	**($13.5)**	
Cost Impacts				
2025-2026 Project Delivery (B)	0	($13.5)	($13.5)	Proposed budget adjustment per above
Total Revenues	$58.5	$59.4	$0.9	User fee revenue only
Total Operating and Maintenance Costs	($175.9)	($184.9)	($9.0)	Increase due to additional bin maintenance
Project Net Inflows (Outflows)	**($117.4)**	**($139.0)**	**($21.6)**	
Weighted Average Cost of Capital (WACC) Discount Rate	6.20%	6.20%	6.20%	

Net Present Value based on status quo	**($35.8)**	**($49.6)**	**($13.8)**	

The presented net present value calculations are for information only to show the impacts of the proposed capital budget adjustment compared to the status quo.

As highlighted in this business case, the expansion of the Coronation Eco Station is proposed to address current and future service level needs. Benefits of the expansion are further outlined in Section 3.4 Anticipated Outcomes.

It is important to note that Eco Stations are funded by utility rate revenues. The utility rate revenue required is effectively reduced by the user fees that are collected. The amount of user fees to be charged is a conscious decision as use of Eco Stations for disposal is highly price elastic. Historically, higher user fees being charged at the Eco Stations generally has led to more illegal dumping in and around the City. To maximize proper environmental outcomes, user fee pricing is set accordingly.

Financial Utility Rate Impact

In comparison to status quo, the estimated incremental utility rate impact of Alternative 1's Coronation Eco Station Expansion is outlined below:

Annual Incremental Net Impact ($Millions) 2026-2030 5 year average	
Debt Interest	$(0.65)
Amortization	$(0.30)
Operating & Maintenance	$(0.16)
Revenues	$0.01
Total	**$(1.10)**

Based on the 2025 Waste Services utility monthly rate of $43.95 for a 240L garbage cart, the Coronation Eco Station Expansion would result in a 0.55 per cent increase, or approximately $0.24 per month. For further analysis of the revenue requirement comparison for the alternatives, please refer to Appendix B.

8.2. Cost Assumptions

Alternative 1 - Expansion of Coronation Eco Station

- No incremental operational costs from status quo (except for additional bin maintenance) due to expansion mainly affecting outdoor areas
- No change in personnel
- The Eco Station site will be expanded for traffic flows and increased bin capacity, however, the existing building facility will remain the same square footage, and internal renovation will accommodate larger change rooms and amenities areas.
- Coronation Eco Station expenses will remain the same as the 2024 operating budget
- Additional five bins for larger footprint have been added to internal hauling costs
- Class 3 cost estimate accuracy (-15% to +20%). The Delivery phase funding adjustment of $13.5 million includes the +20 per cent variance.

9. Resourcing

Table 7: *The resource impact during implementation of Coronation Expansion.*

Resource Impact during Implementation	Alternative 1 Coronation Expansion
Waste Services	Medium
Project Management & Maintenance	High
Financial & Corporate Services	Medium
Procurement	Medium

10. Key Risk(s) and Mitigation Strategy

A comprehensive risk register was developed for this initiative, in both the Concept stage and the Planning and Design stage. Risks (prior to the mitigation strategies) and their mitigation strategies are summarized below:

Table 8: *Summary of Major Risks and Mitigation Strategy.*

Event/Risk Factor	Risk Rating (Score)	Mitigation Strategy (Response)
Operational disruption from construction activity.	High	Mitigate - Closure to site for a set period is expected Waste Services. Construction schedule planning to occur between Waste Services and IIS to determine least disruptive schedule, which is closure during low winter period of service demand typically between October and March.
Design contains inadequate or non-compliance to design standards (i.e. Consultant Manual, COE policies).	Medium	Mitigate - Technical reviews conducted by IIS Engineering Services include check for compliance with design standards.
Negative public perception and public access is reduced due to renovation.	Medium	Mitigate - Planned construction closures will be communicated to the public in advance. Alternate locations for residents to drop off waste will be included in communications.
Unplanned additional costs incurred during renovation / construction due to discovery of asbestos and managing potentially contaminated soil from rail right-of-way.	Medium	Mitigate - Recommended plan provided by Environmental Engineering Services is to excavate top 0.5 m of rail right-of-way, treating and disposing of it as potentially contaminated soil. Hazmat investigation in progress with abatement recommendations and estimated cost to be determined. Info to be included as part of the contractor tender package.

11. Conclusion and Recommendations

11.1. Recommendations

The findings from the analyses presented in this business case confirms that expanding the existing Coronation Eco Station provides a worthwhile investment and value to improve services compared to the status quo of not expanding the current site.

Service levels, customer experience, and operational efficiency will increase to levels

comparable with the other Eco Stations in the City while safety risks will decrease. It aligns with the City's sustainability goals and strategic direction, and it serves to address all current service operational constraints and issues identified with the current Coronation Eco Station, which will improve service to residents, reduce vehicle lineups and wait times, enhance worker safety, and fulfill administrative requirements. These goals are accomplished at a total capital investment of $16.3 million, which includes costs already expended on the purchase of land at Coronation Yard and preliminary planning and design.

It is recommended that this full initiative is approved to proceed to the next project phase, the Delivery phase, and that the Delivery phase budget adjustment of $13.5 million is approved. If approved, Waste Services will bring forward the budget adjustment to transfer $13.5 million funding for Delivery at the May 2025 Spring Supplemental Capital Budget Adjustment (SCBA) for City Council approval. Once approved, historical actuals will be administratively transferred to the standalone profile to reflect the full $16.3 million project budget. As the existing budget will be transferred from approved profiles to fund the expansion, no net new capital budget will be requested, as outlined in the following section.

11.2. Capital Profile Funding Transfers

The new standalone profile for the Coronation Eco Station expansion will be funded by transfers from the following approved profiles:

Table 9: *List of Profile Support Funding*

Project Phase	Amount	Supported by Profile
Delivery Phase (Checkpoint #3-5)	$13.5 million	Funding will be transferred from 15-33-2011 Mayfield Eco Station to a standalone profile
2023 Land Purchase from EPCOR	$2.4 million	CM-81-2045 - Waste Services IIS Infrastructure Project Delivery
Develop Phase (Planning and Design, Checkpoint #1-3)	$0.4 million	CM-81-0005 - Waste Services IIS Planning & Design
Total Capital Profile	**$16.3 million**	

11.3. Project Responsibility and Accountability

Waste Services - Business Integration & Technical Services is the project sponsor and Waste Services - Collection Services is the project owner. Integrated Infrastructure Services is the Project Manager to complete the Deliver phase in accordance with all City of Edmonton

policies, with Collection Services and Business Integration & Technical Services providing project support. Project management documentation for this project provides the granular detail for the project team, roles, and responsibilities.

12. Implementation Strategy

Upon approval of this business case, the next implementation stages are as follows:

- Seek SCBA approval for funding transfer from 15-33-2011 Mayfield Eco Station to a standalone profile
- IIS Infrastructure Delivery responsible for project management and leading Delivery Phase of the Coronation Eco Station Expansion project under the newly created standalone profile following the established Project Development and Delivery Model
- IIS Facility Planning Design and Engineering Services and Waste Services to provide project support as needed

13. Review and Approval Process

This Business Case was drafted by the Program Manager/Lead Planning & Design Project Manager in Integrated Infrastructure Services - Facility Planning and Design together with Waste Services representatives (including but not limited to Waste Services Branch Manager's Office, Collection Services, Business Integration & Technical Services, Financial and Corporate Services).

This Business Case will be:

- Reviewed by key project team members
- Circulated for Director review and approval
- Submitted for Waste Services Branch Manager, IIS Branch Managers' review and approval

A Council Report will be:

- Presented to Utility Committee for recommendation to City Council for approval

If approved, a supplemental capital budget adjustment will be brought forward for City Council approval in May 2025 as described in Section 11.1.

14. Appendices

APPENDIX A

Financial Services and Utilities **Waste Management Utility**

Business Case

Northwest Eco Station - Profile 15-33-2011

Approvals	Name	Signature	Date
Branch Manager	Leo Girard		09/15/14
Director	Trent Tompkins		09/15/14

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Section 1

Executive Summary

The NW Eco Station Profile # 15-33-2011 provides funding for the construction of an Eco Station in northwest Edmonton to replace the existing Coronation Eco Station.

The completion of this Eco Station supports Waste Management Policy C527, Environmental Policy C512, The Way We Green, The Way We Live, Waste Management Strategic Plan Update 2008, and Waste Management Utility 2015-2018 Business Plan.

There are currently three Eco Stations in operation, with the Kennedale Eco Station expected to be operational in early 2015. The four stations are located as follows:

1. Strathcona Eco Station (South Edmonton) – opened 1995
2. Coronation Eco Station (West Edmonton) – opened 2000
3. Ambleside Eco Station (SW Edmonton) – opened 2009
4. Kennedale Eco Station (NE Edmonton) – opening 2015

Eco Stations provide a drop-off point for residents to safely dispose of household hazardous waste (HHW), recyclables and bulky wastes. HHW that cannot be reused or recycled is sent to Swan Hills Waste Treatment Centre for disposal and general refuse that cannot be reused or recycled is sent to landfill. Reasonable and easy access to an appropriate disposal facility helps to reduce the potential for illegal dumping and helps residents manage their HHW responsibly. Responsible management of HHW helps to keep it out of the garbage stream and maintain compost quality, and protects sanitary and storm sewer water quality.

Given the age of the Coronation Eco Station and the traffic congestion, particularly in the summer months, expansion to the existing site or a new site is required to effectively serve the public.

Alternatives identified in this Business Case include:

Alternative 1: Approve NW Eco
Alternative 2: Renovate or expand on existing site
Alternative 3: Extended hours at existing sites

Following a comprehensive analysis of the options, Alternative 1, approve NW Eco Station is recommended. The opportunity to secure a site that can accommodate Eco Station operations and manage public demand while meeting regulatory compliance is key to improving service levels. With Kennedale Eco Station soon to open it will be prudent to assess the impact on Coronation and determine if construction of the NW Eco Station could be delayed, but the acquisition of an operating site should be completed within the current planning period to mitigate the risk of cost escalation to the Utility.

Section 2

Background

Problem / Opportunity

Operations at the Coronation Eco Station are congested, leading to long wait times and traffic lineups. With increasing population and service demands, redevelopment on a larger site, along with the relocation to the northwest quadrant of the City on a site currently held by Land Enterprise, would offer enhanced services to north and northwest residents. This capital profile seeks to secure the land for Waste Management and funding to facilitate detailed design and further analysis of the program at Coronation.

Current Situation

The Eco Station Program is a second generation program, progressing from the annual 3-day Toxic Round-up Events to permanent drop-off facilities open throughout the year. The program has evolved to capture not only HHW, but also recyclables and bulky waste generated by households. Much of the material received is reused or recycled. HHW materials that cannot be reused or recycled are sent to Swan Hills Waste Treatment Centre for disposal and general refuse that cannot be reused or recycled is sent to landfill.

- 1995 - first Eco Station opened at 99 Street and 51 Avenue (Strathcona)
- 2000 - second Eco Station opened at 143 Street and 114 Avenue (Coronation)
- 2009 - third Eco Station opened in at 14710 Ellerslie Road SW (Ambleside)
- 2015 – Opening of Kennedale Eco Station to serve northeast Edmonton
- 2020 – proposed opening of NW Eco Station

Eco Stations preserve and sustain our environment by providing environmentally sound handling and disposal of HHW. HHW is kept from entering compost, landfills and sewer systems. An average of 5,655 tonnes of HHW is handled annually and sorted into 55 different material streams.

Revenues are generated from tipping fees for disposal of garbage. Tipping fees are not applied to recyclables and HHW. Tipping fees are not set to recover the full cost of the Eco Station Program but rather to encourage the proper disposal of HHW and to reduce littering by facilitating the proper disposal of large waste items at reasonable cost.

The Coronation Eco Station operates on a shared site with Drainage Design and Construction at 143 Street and 114 Avenue owned by Corporate Properties. The site was converted from a transfer station to an Eco Station in 2000 with the addition of the HHW handling building. The site averages 80,000 users per year delivering waste and recyclables while operating within a 1.7 acre footprint.

Operations at the current site are congested, leading to long wait times in the summer and traffic lineups which negatively impact neighbouring businesses and City operations. The current site does not have the space to

offer a Reuse Area, where household items that are still in good condition may be dropped off for reuse by other residents. In addition, space at the site is limited and does not allow for two lane access to more effectively service customers, as implemented at Kennedale and Ambleside.

Section 3

Profile Description

Initiative Description

The construction of an Eco Station in northwest Edmonton to replace the existing Coronation Eco Station will meet the demand for drop-off services for HHW, recycling and bulky waste in the expanding north and northwest areas of the City. This business case establishes the need to expand the current Coronation Eco Station and/or relocate the facility. This preliminary report contains rough estimates for the project based on experience gained through the Ambleside and Kennedale Eco Stations, with funding request in the current 2015-2018 capital budget to secure the land acquisition and provide for detailed design of the facility.

Scope

Timeframe: 2015 to 2020 for planning, land acquisition (if required), design, and construction

Department/Organization: Waste Management Utility

Function: Eco Stations provide a comprehensive drop-off service for household hazardous waste, recycling, bulky waste, and a reuse area with two-lane access.

Technology: N/A

Cost Forecast:

ACTIVITY	ESTIMATED COST ($'000S)
Preliminary Design including Land	$ 6,000
Detailed Design and Construction	13,700
% for Art	100
Total Project Budget	**$19,800**

Out of Scope

- Commercial and industrial hazardous waste
- Decommissioning of the existing Coronation Eco Station

Section 4

Profile Justification

Initiative Justifications

Continued growth in Eco Station use and residential growth in the City exceed the capacity of the Eco Station program. An expanded NW Eco Station will improve service delivery to residents, reduce wait times, enhance worker safety and provide additional services not available at the current Coronation location.

Anticipated Outcomes

Outcome/Deliverable	Estimated Completion
Maintain a high level of customer service	98% satisfaction rating
Manage HHW and bulky item disposal	Increase users by 5% annually as an indicator for appropriate disposal of household hazardous wastes
Recover 30-40% of direct operating costs	After 2 years of operations

Urgency of Need:

The Kennedale Eco Station will open in 2015 to serve the northeast area of the City and is anticipated to temporarily relieve some of the pressure at the Strathcona and Coronation Eco Stations, providing the time necessary for review and study. While both of these Eco Stations require attention, an opportunity to move the solution for the Coronation Eco Station ahead is currently available.

The development of the NW Eco Station is contingent upon securing an appropriate site that meets all regulatory and municipal planning requirements. The City of Edmonton currently has a property that appears to meet all current requirements and is projected to be surplus. Securing this property for the Waste Management Utility allows the Utility to time the actual construction with customer demand over the next few years. In accordance with the City's policy regarding land transfer pricing between the City and Utilities, it is apparent that purchase of the land at this time would limit the risk of future price escalation for the Utility.

Critical Success Factors:

Approval in principle for this capital project by the Utility Committee and City Council will facilitate the land requirement pending further planning and construction. Included in this proposed plan is the payment for the land at fair market value over a four-year period. The City of Edmonton Land Enterprises would have to agree to this payment structure as identified.

Section 5

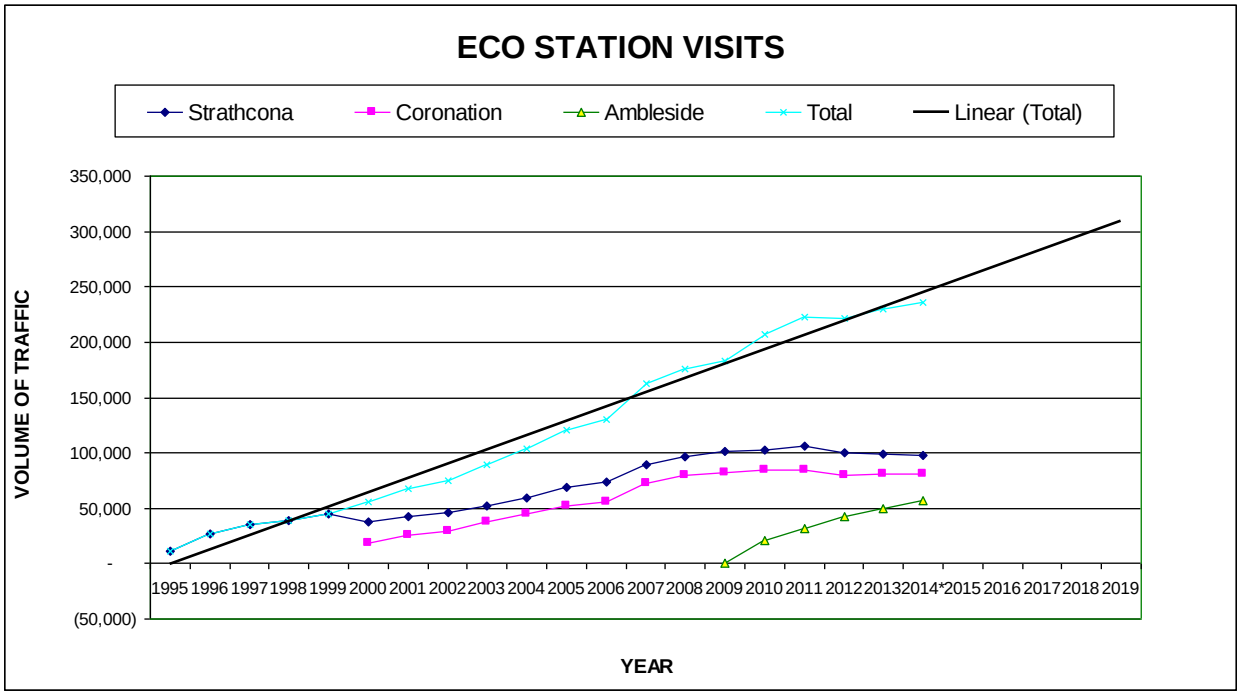
Strategic Alignment

Goal from Business Plan	Level of Impact	Explanation (if required)
City of Edmonton Waste Management Policy C527	High	Four main Corporate Outcomes addressed by the delivery of the NW Eco Station profile are: 1. Edmonton strives to be a leader in environmental advocacy, stewardship, preservation, and conservation. 2. Divert 90% of the residential waste stream from landfill. 3. Divert commercial, institutional, construction and demolition wastes for reuses and recycling. 4. Provide an affordable waste management system.
The Way We Green (Approved by City Council July 2011)	High	**Goal**: Edmonton generates zero waste. **Objective 8.1** The amount of waste generated by Edmontonians on a per capita basis is continually decreasing. **STRATEGIC ACTIONS:** The City of Edmonton: 8.1.1 Uses incentives, education and partnerships to increase Edmontonians' participation in waste reduction through grasscycling, composting, reuse and consumption habits. 8.1.3 Uses incentive, education and partnerships to increase the non-residential sector's participation in waste reduction.
The Way We Green (Approved by City Council July 2011)	High	**Goal**: Edmonton generates zero waste. **Objective 8.2** Edmonton's residential and non-residential waste is diverted from landfill. **STRATEGIC ACTIONS:** The City of Edmonton: 8.2.1 Establishes, implements, and maintains a Solid Waste Management Strategy aimed at diverting residential and non-residential waste from landfill and reducing the amount of waste that is produced by Edmontonians. 8.2.4 Provides collection and processing services to businesses to influence the private sector waste companies to recycle more non-residential waste.

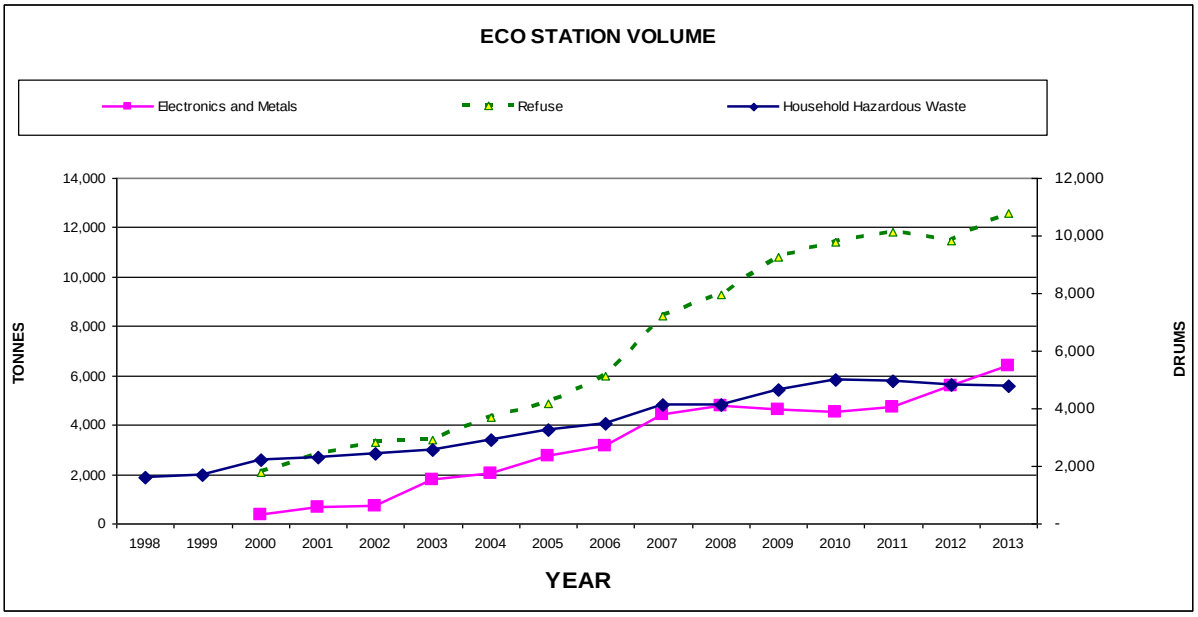
Goal from Business Plan	Level of Impact	Explanation (if required)
Waste Management Utility 2015 - 2018 Business Plan	High	**Strategic Goal**: 2. Process waste to recover resources and increase diversion rates for both residential and non-residential waste. 5. Engage the citizens of Edmonton and facilitate their full participation in waste reduction, reuse and recycling.
The Way We Live (Approved by City Council 2010)	Medium	**Goal 6**: Edmonton is a sustainable city **Objective 6.2** The City of Edmonton is an environmentally sustainable society. **STRATEGIC POLICY DIRECTIONS**: The City of Edmonton 6.2.4 Builds on the City's leadership role in environmental best practices.
City of Edmonton Environmental Policy C512	Low	The City of Edmonton, through its planning, decision-making processes, and leadership, will promote the development of an environmentally sustainable community that functions in harmony with the natural environment. The City of Edmonton will exercise environmental stewardship of its operations, products and services, based on its commitment to: (a) prevent pollution, (b) continually improve its environmental performance by setting and reviewing environmental objectives and targets, and (c) meet or exceed applicable environmental legal requirements and other requirements to which it subscribes.
Waste Management Utility Fiscal Policy C558	High	The Utility is to be operated in a manner that balances the desire to provide the best service at the lowest cost (public utility) while employing private sector approaches to encourage innovation and using a cost structure that sends the proper price signal to the customers(private utility).

Section 6 Context Analysis / Environmental Scan

The Eco Station program is unique in its operation and service model. Traffic has grown significantly, reaching two million customers (since 1995) in 2013. With this success has come increased volume and demand for services.



The customer growth forecast is based on a linear growth pattern, although the City is currently experiencing a faster growth rate. The next graph breaks down the material volume received through the Eco Station Program.



The traffic volume graph demonstrates that the Strathcona (1.8 acres) and Coronation (1.7 acres) Eco Stations have been operating beyond capacity for several years. Customer visits to these Eco Stations have increased from 55,782 in 2000 to 180,000 in 2013 and levelled off since, as the physical capacities of these sites are reached. Previous studies in the Eco Station program indicate that smaller sites are able to facilitate up to 300 vehicles per day before negatively impacting service levels and safe operating conditions. In 2005 there were 20 days with over 300 cars; in 2013 there were 155 days. The period from May through November now averages 350 cars per day. This increase has resulted in the following issues:

- customer visits increase from an average 15 minutes to 35 minutes
- lineups backing into public roadways
- unloading zones and staging areas consistently occupied during peak times
- safety issues because of congestion and customers unable to enter site during peak times

To improve safety and customer service, the following have been implemented:

- restructuring and increasing operational hours during peak periods
- increasing on-site labour resources to address additional volume and materials
- revising site layout to maximize disposal area
- requesting contractors to provide after-hours services
- redirecting traffic to Ambleside Eco Station or the EWMC.

The Ambleside (9.6 acres) and Kennedale (10.0 acres) Eco Stations reflect the current model of service delivery that optimizes convenience and safety, and promotes waste diversion through the Reuse Area. The increased operating area provides:

- improved vehicle movement and more efficient operations in a safer environment for both customers and staff
- two entrance kiosks to relieve congestion during peak time, with the ability to line up to 25 vehicles on-site
- the ability to handle increased maximum vehicle size of up to 3 tonnes and trailers
- a reuse area for household and larger items
- an unloading area that allows for more bins and a greater variety of material separation to reduce processing and disposal costs (yard waste/construction and demolition material/refuse).
- space to process appliances with freon and fluorescent bulbs to reduce contract costs and generate revenue
- integrated operations with other City services to provide one stop service
- staging areas for other section operations such as multi-family containers
- ability to operate specialized waste handling equipment to maximize roll-off load weight and reduce hauling contract expenses.

The Waste Management Utility attempted to purchase adjacent property to the Coronation site in 2011; however, after negotiations and a phase 1 environmental assessment it was rejected because the property would require significant remediation and represented an unknown liability to the City.

Section 7 Alternatives

Option Description	Advantages	Disadvantages	Further Consideration
1. Approve NW Eco Station relocation.	Enhanced services and improved operating conditions for staff and residents	Additional capital expense versus existing operation	Yes
2. Renovate existing Coronation site	Does not require land purchase, current location is well recognized, albeit congested	Does not address existing or future traffic and space issues	Yes
3. Increase operating hours to accommodate user demand	Utilizes existing infrastructure, reduced capital requirement	Increases operating costs, does not address site issues or negative traffic impacts	Partially implemented but does not address operating space
4. Do nothing	Maintain current operating and capital expense	Negatively impacts customer service and safe operations. Potentially increased disposal of hazardous waste mixed with household wastes	No, actions are required to improve current operating conditions
5. Increase Big Bin Events to manage materials	No additional capital required, local services	Cannot accept HHW, limited locations that can safely accommodate program. Locations are typically private property and not consistent.	No, Big bins are a complementary program, not a replacement.
Open additional NW location	Enhanced services to residents, reduces delay time, improved access	Additional operating and debt servicing costs	Not at this time

To further investigate the options identified in Section 7, the Waste Management Utility considered **three short list alternatives:**

Alternative 1: Approve the relocation and expansion of the NW Eco Station in principle
Alternative 2: Renovate Existing site
Alternative 3: Increase operating hours

Discussion on Alternative Review:

Alternative 1: Approve

Implementing this alternative would mean that the Waste Management Utility would secure a suitable site that is currently held by Land Enterprise and plan for future construction to coincide with projected customer growth.

Alternative 2: Renovate Existing Site

Waste Management Utility is not the owner of the Coronation site and is operating the building through rent payments to the City. Renovating the existing site will likely require significant changes/demolition of the existing building (with multiple tenants) and will likely trigger the request for the Utility to purchase the site prior to renovation. While this option can improve some of the efficiency, it remains significantly undersized for the current program delivery model.

Alternative 3: Increase Operating hours.

This option involves increasing the weekly operating hours to distribute traffic volume. Currently, during peak periods, the Station increases operations from 40 hours per week to 60 hours per week (based on 6-day operation). There is a possibility to increase to 70 hours per week by operating on Sunday as well. While this option can increase the volume of traffic assuming customer visits are distributed, it does not provide the enhanced benefits noted earlier for a larger site.

Section 8 Organizational Change Impacts

The table below lists the key stakeholders and the impacts the service has on these stakeholders.

Impact & Description	Alternative 1 (NW Eco)	Alternative 2 (Renovate)	Alternative 3 (Operating Hours)
Stakeholder 1: City of Edmonton Waste Management Utility (Internal/External)			
Impact 1 – Increase in operating costs for existing services	Yes	Yes	Yes
Impact 2 – Negative impacts on existing Eco Station Program	No	No	No
Impact 3 – Increased source segregated recyclables for waste diversion instead of landfill mixed wastes	Yes	No	No
Stakeholder 2: City Council (Internal)			
Impact 1 – Provide direction and feedback to residents	Low	Medium	Medium
Stakeholder 3: City Residents			
Impact 1 – Reduced wait times and delays	Yes	Minimal	Minimal
Business and Operational: Transportation Operations (Internal)			
Impact 1 – Resources expended to collect improperly disposed waste items along City roadways	Low	Medium	Medium
Business and Operational: Alberta Environment/Alberta Recycling Management Authority (External)			
Impact 1 – Funding for HHW disposal and E-waste	No	No	No

From an Organizational Change Impact perspective, Alternative 1 (construction of a new NW Eco Station) has the potential to offer the highest level of positive impacts as follows:

- provides source segregation for the Utility, increasing diversion rate
- improved customer service by reducing wait time
- provides the potential reduction for waste items left along city roadways
- potential reduction in hauling costs to Ryley as a greater amount of waste is diverted from landfill.

Section 9

Cost/Benefit Analysis

The following table summarizes the financial analysis of the alternatives from a preliminary perspective, using design and construction cost experiences from the Ambleside and Kennedale Eco Station. If the project is approved in principle, the Waste Management Utility will secure the land and proceed with preliminary design and costing, and a more in-depth financial analysis will be performed to finalize project scope and costing.

The 2014 operating budget at Coronation Eco Station is $1,820,196. The financial review of alternatives compares estimated additional operating impacts.

Assumptions:

1 No inflation has been applied to costs based on actual year in which it is expended.
2 The site is acquired at current fair market value, with payment terms over 4 years.
3 The cash required to fund the balance of the capital costs will be through Retained Earnings in future years.
4 Potential cost savings through increased diversion and reudction in distant hauling has not been included.

	Alternative 1	Alternative 2	Alternative 3
Capital costs	19,800	7,800	-
Financing	(7,800)	(7,800)	-
Cash Required in 2019-2020	12,000	-	-
Annual Interest & Principle	560	560	-
Annual Depreciation	690	330	-
[1]Change in additional FTEs	240	100	500
Change in operating costs	150	70	10
Less: change in revenues	(700)	(200)	-
Net Cost of Operations (annual)	940	860	510
Estimated # of customers served	150,000	100,000	80,000

[1] Assumes that if hours were extended to Coronation, it would need to be extended to all sites.

Financial Evaluation of Alternatives

While Alternative 1 has the highest net cost of operations on an annual basis, it also has the highest number of potential customers served. If these projections hold true, the incremental cost per customer for option 1 is actually the lowest among the three alternatives. Alternative 3 has the lowest financial impact and may be implemented as customer demand increases but does not provide the benefits of additional working area, material separation, safety and reuse options a larger site can provide.

Section 10 Resourcing

The following table summarizes the resource demand during implementation of the different alternatives.

Resource Impact during Implementation

	Alternative 1	Alternative 2	Alternative 3
Waste Management Staff	Medium	Medium	Low
Project Management & Maintenance	High	High	None
Financial Services Staff	Medium	Medium	Low
Procurement Staff	High	High	None

Section 11 Key Risks and Mitigating Strategies

The risks and mitigating strategies for alternatives are summarized below:

Project Risk Assessment	Alternative 1 (Approve NW Eco)		Alternative 2 (Renovate)		Alternative 3 (Extend Hours)	
	Probability	**Impact**	**Probability**	**Impact**	**Probability**	**Impact**
Risk 1- Land costs could escalate	Medium	Low	Medium	High	Medium	Low
Risk 1 General Mitigation Strategy	*Work with Land Enterprises to accurately assess and possibly secure property as early as possible to guarantee cost*					
Risk 2 – Development/construction costs could escalate	Medium	Medium	Low	Medium	Medium	Low
Risk 2 General Mitigation Strategy	*Use appropriate project management strategies to control costs as well as consider extended operation at existing site*					
Risk 3 – Alberta Environment declines Industrial Approval Application	Low	Low	Low	Medium	Low	Low
Risk 3 General Mitigation Strategy	*Work with regulator and site neighbours to address operating concerns or direct impacts*					

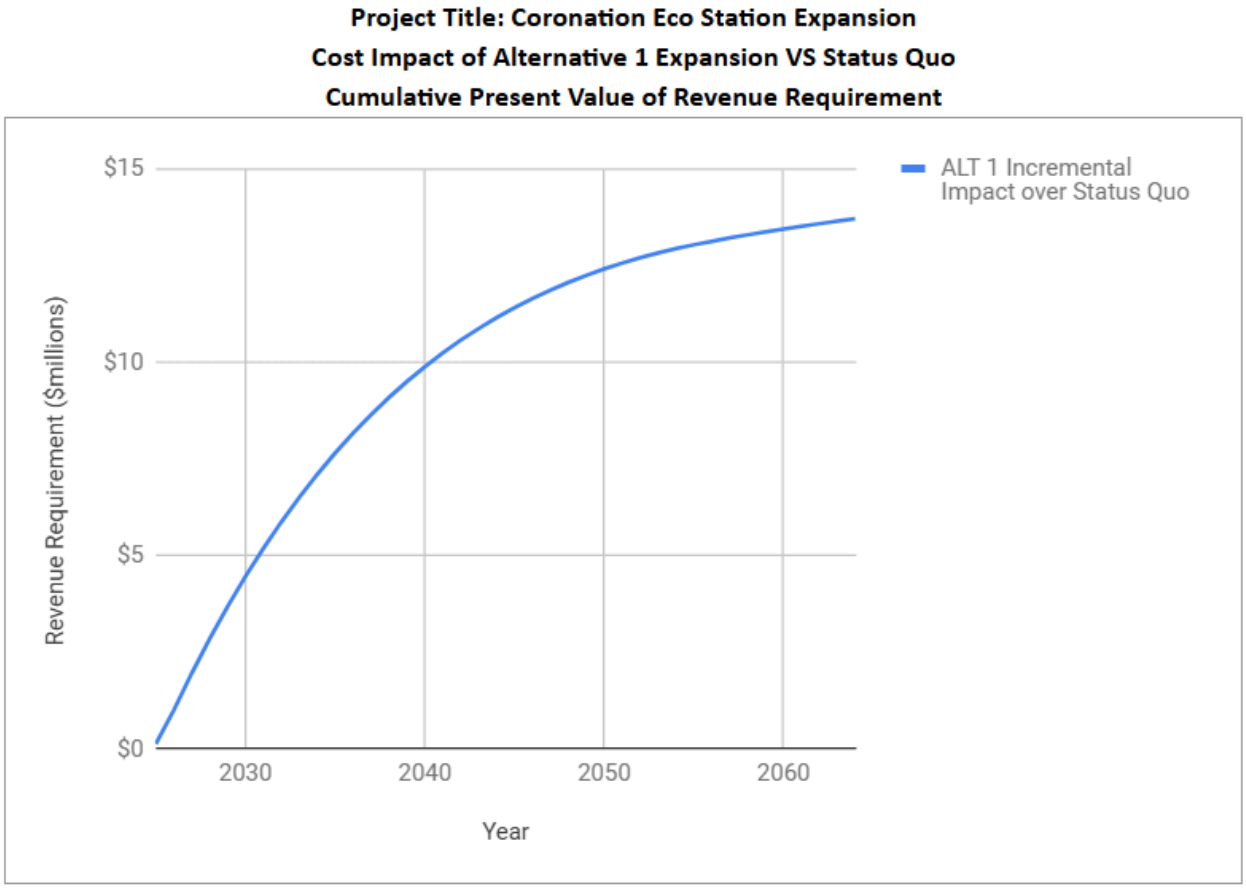
Section 12 Conclusions & Recommendations

Based on the preceding analyses, Alternative 1, approval in principle of the NW Eco Station is recommended. The opportunity to secure a site that can accommodate Eco Station operations and manage public demand while meeting regulatory compliance is key to improving service levels. With Kennedale Eco Station soon to open it will be prudent to assess the impact to Coronation and determine if construction of the NW Eco Station could be delayed, but the acquisition of an operating site should be completed within the current planning period.

Appendix B: Financial Utility Revenue Requirement

The following graph and table demonstrate the cumulative present value of the additional revenues that must be realized through annual rate collection to support the site expansion. This includes additional net Operating & Maintenance costs, interest and amortization expenses over the project lifecycle, which are included in the Revenue Requirement.

Alternative 0, status quo, would be the horizontal base line at $0, whereas the Alternative 1 investment results in a total incremental Revenue Requirement collection from utility ratepayers of $13.7 million over a 40-year period (in 2025 dollars).



Cumulative Present Value of Revenue Requirement

		Alternatives
Year	Calendar Year	ALT 1 Incremental Impact over Status Quo
1	2025	$0.1
2	2026	$1.0
3	2027	$2.0
4	2028	$2.8
5	2029	$3.7
6	2030	$4.5
7	2031	$5.2
8	2032	$5.9
9	2033	$6.5
10	2034	$7.1
11	2035	$7.6
12	2036	$8.2
13	2037	$8.6
14	2038	$9.1
15	2039	$9.5
16	2040	$9.9
17	2041	$10.2
18	2042	$10.6
19	2043	$10.9
20	2044	$11.1
21	2045	$11.4
22	2046	$11.6
23	2047	$11.9
24	2048	$12.1
25	2049	$12.2
26	2050	$12.4
27	2051	$12.6
28	2052	$12.7
29	2053	$12.8
30	2054	$12.9
31	2055	$13.0
32	2056	$13.1
33	2057	$13.2
34	2058	$13.3
35	2059	$13.4
36	2060	$13.4
37	2061	$13.5
38	2062	$13.6
39	2063	$13.6
40	2064	$13.7