Environment & Climate Review

(Industrial Investment Action Plan - 2024 IIAP)

Edmonton's City Plan supports economic opportunities in existing industrial, commercial and institutional areas as well as new opportunities to transform and sustain Edmonton over the long-term. At the same time, increased industrial activity may increase greenhouse gasses and have detrimental impacts to land, biodiversity, air quality and Indigenous rights if potential impacts are not considered in the planning of these areas. There may be tradeoffs between economic, environmental, and social considerations. The City of Edmonton does not regulate industrial emissions, however, the City's choices about what types of industries to attract to the area can mitigate some of these risks. With thoughtful consideration, the City can enable sustainable and climate resilient industrial activity in alignment with The City Plan.

The Industrial Investment Action Plan (2024 IIAP) has implications for environment and climate in three key areas:
i) Carbon Budget/Net Zero Target
ii) Land Use/Natural Areas
iii) Water Quality and Management

The links between these areas and the related risks and opportunities are outlined below.

Carbon Budget/Net Zero Target Industrial development poses a risk to depleting the City's 135 megatonne carbon budget and achieving its net zero target. Consideration of the type of industrial investments the City wishes to attract, as well as incentives to attract those that are suited to a low carbon future, can mitigate this risk. The greenhouse gas impacts of the IIAP cannot be quantified at this time as it depends on the actual businesses that locate in Edmonton's industrial areas in the future.	
2024 IIAP Related Actions	**Risks/Opportunities in DRAFT IIAP**
Action 2: Establish and maintain an industrial infrastructure prioritization tool. Action 8: Identify and tailor programs and incentives for target sectors that will provide a strong return to the City's tax base and advance strategic objectives. Action 9: Monitor progress and results of the Industrial Investment Action Plan.	Industrial investment in more traditional sectors like chemicals and manufacturing typically generate a material amount of greenhouse gas (GHG) emissions. Attraction of industries that will have a lower GHG impact or that are suited to a low carbon future will better align with the City's climate goals. In addition, industrial companies may have their own climate goals and there could be strategic alignment and a competitive advantage in designing lower carbon or sustainable eco-industrial parks. The IIAP implementation plan could consider: ● how different industries will support the City's goal to achieve net-zero emissions through environmental criteria in sector evaluation; ● targeting lower carbon industries or those that enable a lower carbon future; ● including climate targets in industrial investment goals and incentive programs; ● creating an eco-industrial park where businesses cooperate with each other and the local community in an attempt to reduce pollution and efficiently share resources (such as water, renewable energy energy, and infrastructure).

Land Use/Natural Areas Ecological health and biodiversity are essential to life on earth. Human use of land is the main driver of biodiversity loss. Careful consideration should be given to the footprint and buildout of new industrial development and potential impacts on ecological systems in order to minimize detrimental impacts on natural ecosystems and green infrastructure. Regional initiatives and existing industrial areas could be revitalized to accommodate more opportunities for growth with less impact to biodiversity.	
IIAP Related Actions	**Risks/Opportunities in DRAFT IIAP**
Action 7: Continue to collaborate with regional partners, Indigenous Communities and investment groups, and regional economic development agencies on economic development activities.	Regional collaboration could improve linked opportunities while reducing overall footprint on the land. The 2024 IIAP implementation plan could consider: ● collaborative planning for transportation, transit, utilities, and telecommunications. The EETP and Crossroads areas may benefit from such collaborations due to their proximity to other industrial areas.
Action 2: Establish and maintain an industrial infrastructure prioritization tool. Sub-Action 3.4 Identify key contacts that can support indigenous community members navigate the industrial investment and development landscape.	Thoughtful revitalization and buildout of industrial areas can provide an opportunity to minimize degradation of areas with high or very high ecological value for biodiversity and maintain ecological connectivity. Brownfield sites may provide opportunities for redevelopment and intensification of industrial activities on land already used for this purpose. The 2024 IIAP implementation plan could consider: ● developing conservation overlays for industrial lands to identify areas of high ecological value, ecological connectivity, and prime agricultural land to support informed decision-making aligned with City Plan targets; ● including traditional ecological knowledge where possible in addition to western scientific data sources; ● land use development policies that require conservation of higher value

	natural areas in the design of industrial areas; • opportunities to sustain wetlands (and other high value habitat) during the development process; • opportunities to maintain ecological connectivity of industrial areas that have not been developed; • opportunities to balance industrial development on agricultural lands within those areas and the long- term impact on climate and food systems.

Water Quality and Management Water scarcity will likely be an issue in the future due to climate change. It is important that the City have a plan for managing access to water for industrial development, especially those that may be water intensive. Industrial water use may need to be balanced with commercial and residential uses in the future. Industry can also have an impact on water quality in an area if wastewater from industrial processes contribute to water pollution.	
IIAP Related Actions	**Risks/Opportunities in DRAFT IIAP**
Action 2: Establish and maintain an industrial infrastructure prioritization tool. Action 3: Increase efficiency and improve business processes for industrial development.	Industrial development will require access to water and water treatment systems. Climate change is expected to cause increased periods of drought and water scarcity and a number of Industries may require large volumes of water, more than available today or in the future. The 2024 IIAP implementation plan could consider: ● planning for industrial water use as these businesses will want to ensure reliable access to water and understand water treatment and reuse requirements. Updated guidance, bylaws, and incentives may be required; ● evaluating the availability of water for the target industries and prepare a plan for water management to ensure that there is equitable sharing of water for industry locating in industrial areas and non-industrial uses in the Edmonton area; ● reviewing and potentially updating water treatment/reuse requirements in the context of a changing climate and potential water scarcity; ● managing stormwater runoff and improving water quality through the design, development, and/or revitalization of industrial sites; ● pursuing the protection, management and integration of wetlands into new and existing developments. This supports both water quality and a healthy ecosystem.

Air Quality

Industrial development can have impacts on air quality and the cumulative effects of co-located and adjacent facilities can be significant. These risks are not highlighted in this review as they are not expected to be major risks based on the 2024 IIAP focus on lower emitting industries. The additional environmental impacts of new facilities is something that will be considered in the permitting stage of any new proposed development.