

Urban Planning and Economy

Edmonton

Edmonton Water Treatment Plant Flood Mitigation Project

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Protecting Critical Infrastructure

Infrastructure that Protects Community

- EL Smith & Rossdale Water Treatment Plants (WTP) supply clean drinking water to over 90 communities servicing 1.3 million people
- Up to 2 days of reservoir capacity
- A major flood event could prevent EPCOR from producing potable water well beyond 2 days
- Power and clean water are essential for recovery from flood. By protecting critical infrastructure, emergency resources are freed up to support community recovery

Flood Mitigation Goals

MAIN GOAL: Mitigate the risks a major flood would pose to Edmonton's drinking water supply

- Increase protection and lessen chance of damage of critical treatment plants
- Resume drinking water treatment as quickly as possible
- Physical barriers to protect equipment if the river overtops its banks
- Prevent river water from backing up through drainage pipes that discharge to the river

Grant funding is conditional on a 2024 construction time

Indigenous & Community Engagement

Indigenous Nations & Communities

- More than 30 Nations and Communities
- Elders, Knowledge Keepers, monitors and other members
- Walking tours, community meetings, pipe ceremonies

Neighbours

- Communities around EL Smith
- Communities around Rossdale
- Interested community leagues

Commitments

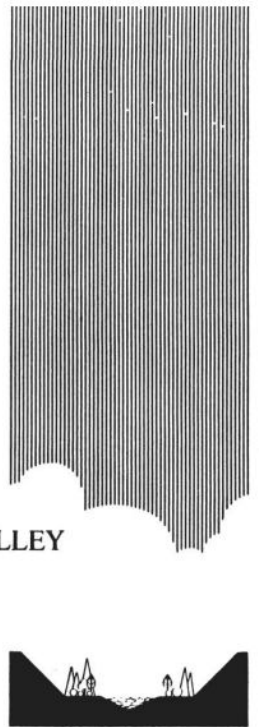
- Not worsen flooding
- Ecological responsibility
- Celebrate history
- Space to support recreation and community gathering

North Saskatchewan River Valley Area Redevelopment Plan, Bylaw 7188

- Requires Council to deem the project essential, before it can proceed
- Requires Council to review and approve a *"Site Location Study"* and *"Environmental Impact Assessment"* for major facilities developed on public land in the river valley

NORTH SASKATCHEWAN RIVER VALLEY
Area Redevelopment Plan
Bylaw No. 7188

February 1985
Office Consolidation, May 2021



Site Location Study

- Reviews multiple locations and options for a project that consider the *“costs, and social, environmental and institutional constraints which make a River Valley location essential.”*
- Alternatives reviewed for this project:
 - Not pursue the project
 - Re-locate the mitigation within EPCOR’s boundaries
- **Recommendation: Impacts in the proposed location were outweighed by the benefits of increasing the resilience of critical infrastructure to flooding.**

Environmental Impact Assessment (EIA)

- Project Impacts:
 - Vegetation removal and role of these areas for wildlife habitat and movement
 - Risk of increased erosion, sedimentation and insignificant negative impacts to view corridors
- Mitigation:
 - EPCOR will restore larger vegetation and wildlife habitat areas than were removed
 - Shift barriers from natural areas towards EPCOR's property
 - Use flood walls, rather than embankments, in the design where possible

Tree Removals & Revegetation

	Total Trees	Mature Trees (>25 cm dbh¹)	Small Trees (25->10 cm dbh)	Saplings (<10 cm dbh)
E. L. Smith*	496	59	188	249
Rossdale	61	18	32	11
Total	557	77	220	260

* Tree counts are estimates based on natural area size and extrapolated from a smaller surveyed area



Pictured: conceptual maps of E.L. Smith (left) and Rossdale (right). Barrier maintenance zone is shown in light green; areas under consideration for revegetation are in dark green.

Questions and Thank You

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