

Partners in flood resilience

Edmonton Water Treatment Plant Flood Mitigation Project
Community Engagement Phases 1 & 2 Summary – Fall 2022

Overview

This document is a summary, intended to provide an overview of what EPCOR heard during the first two phases of community engagement for the Edmonton Water Treatment Plant Flood Mitigation Project. For more details, read the full what we heard reports for Rosssdale and E.L. Smith at epcor.com/floodprotection.

EPCOR is taking action to protect the water supply for Edmonton and more than 65 surrounding communities in the event of a major flood, while also partnering with local communities on flood resilience.

Both of Edmonton's water treatment plants (E.L. Smith and Rosssdale) are situated in the North Saskatchewan River floodplain. Should the plants be offline for more than four days, more than a million people could be without water, with the economic impact reaching tens of millions of dollars.

We have a plan to protect Edmonton's drinking water in the event of a major flood by limiting potential damage to the facilities and ensuring we can resume water treatment as quickly as possible.

We also understand that community members are concerned about the potential impact of a major flood on local homes, businesses and essential services. EPCOR has programs in place to help mitigate the impacts of rainfall and river-related flooding in Edmonton neighbourhoods. And of course any plan that disturbs the ground or vegetation will consider the Indigenous heritage of our sites and how we will incorporate proper ceremony, mitigation of impact and restoration.

By taking action now, we can manage the risk associated with climate change and ensure that customers continue to receive clean, safe and reliable water service for years to come.

OUR APPROACH TO COMMUNITY ENGAGEMENT

Community members' questions, feedback and input are important to us. We want to work with people to meet the needs of our communities while being mindful of costs.

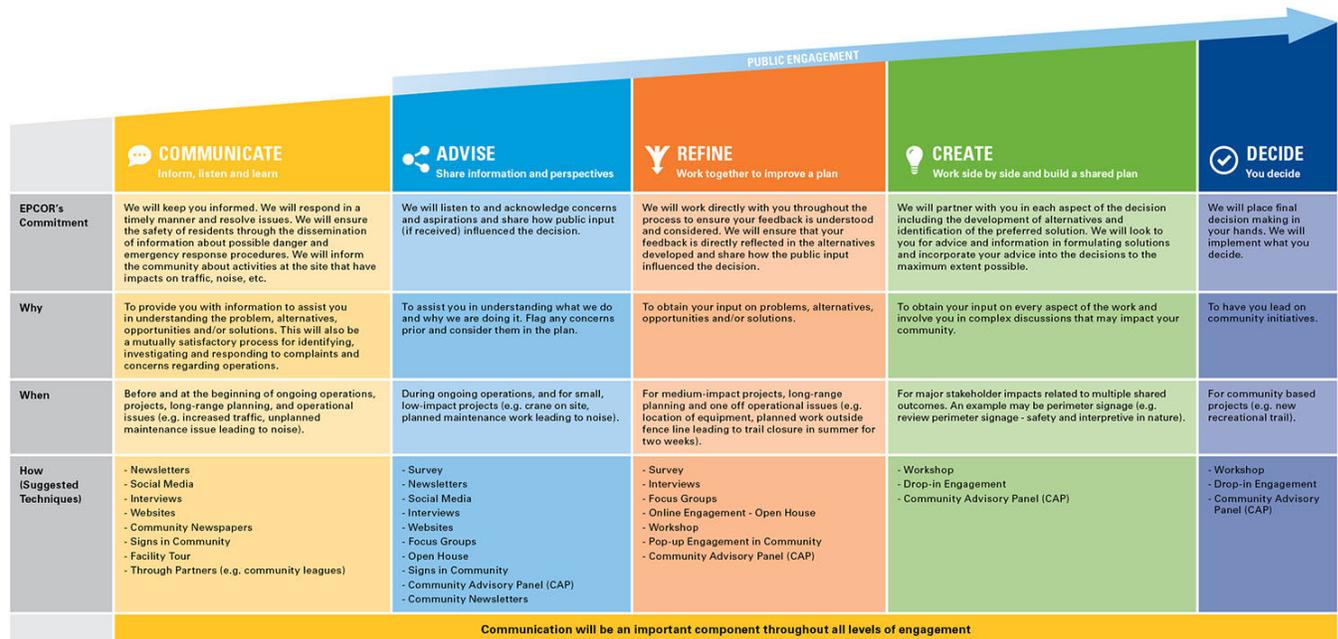
The community engagement process for this project is being conducted to the REFINE level in our **public engagement framework** (*Figure 1*), which means that we are seeking community members' input to help us improve the quality of the project design. At this level, we commit to ensuring that the feedback is directly reflected in the project design and sharing how the input influenced the final design.

During the engagement activities detailed below, we talked to a number of community members about how the flood barriers around the water treatment plants will look and be experienced by those who live, work and recreate in the areas around the facility, as well as rights-holders and Indigenous Nations and communities with an interest in the areas around the facility. We heard from a number of community members who shared their perspectives on which design considerations are important for EPCOR to consider while building flood barriers.

Community members we engaged include:

- Property owners
- Residents
- Indigenous Nations and communities
- Members of the public
- Community leagues
- Elected officials
- Government agencies
- EPCOR employees
- Other interested parties

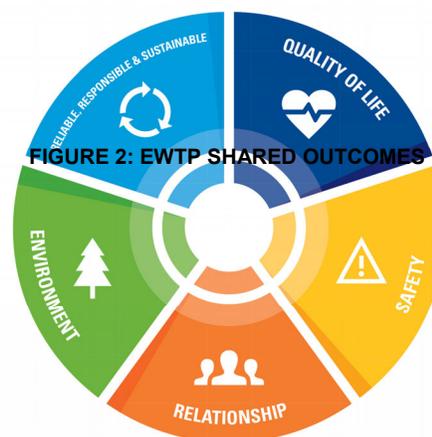
FIGURE 1: EPCOR'S COMMUNITY ENGAGEMENT FRAMEWORK



HOW WE MAKE DECISIONS

EPCOR makes project decisions by considering a number of factors, including technical requirements, costs to water ratepayers and community input. Community members' input will be used alongside technical requirements for the project to select designs that are aligned with community values, are suitable for the Rossdale and E.L. Smith sites, and are mindful of costs to water ratepayers.

As a precursor to the Edmonton Water Treatment Plant (EWTP) Flood Mitigation Project, EPCOR began planning for future work at our Rossdale and E.L. Smith Water Treatment Plants in November 2020. We invited community members, including Indigenous communities and First Nations, special interest groups, residents, recreational user groups, community league representatives and individuals who have interest in the WTPs. This community engagement work helped us to better understand how we can operate the plants in an environmentally and socially responsible manner that aligns with community interests.



We established five **shared outcome statements** (Figure 2) for the Edmonton water treatment plants and refined them in response to feedback from special interest groups, recreational users, residents, and Indigenous peoples. These shared outcomes will guide our work at the Rossdale and E.L. Smith Water Treatment Plants moving forward.

ENGAGEMENT TIMELINE

Following the Shared Outcomes development, EPCOR undertook the first two phases of the EWTP Flood Mitigation Project community engagement between May 2021 and June 2022.

Preliminary Design

Shared Outcomes	November 2020 – March 2021	Community and Indigenous engagement about shared outcomes to guide future work at the Edmonton water treatment plants.
Phase One	May – September 2021	Community and Indigenous engagement about early concepts to understand what should be considered in the design process for the flood barriers.
Phase Two	October 2021 – June 2022	Community and Indigenous engagement about refined options for the flood barriers, including further conversations about potential community amenities to include in the flood barrier area.
Phase Three (<i>We are here</i>)	Planned for fall 2022	Community and Indigenous engagement about the selected designs .

Detailed Design

Phase Four	2023	Community and Indigenous engagement on the detailed design of the flood barriers. This will include discussions about the specific barrier treatments, landscaping plans and any potential amenities.
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Construction		
Phase Five	2024-2027	Ongoing communication with the community and ongoing communication and engagement with Indigenous Nations and communities about construction plans , impacts and timing.
Complete	2027	Community event to celebrate completion of the water treatment plant flood barriers.

As shown in the table above, community and Indigenous engagement is ongoing and will continue throughout this project. In order to take advantage of federal funding, construction needs to begin in 2024. While we will engage with the community and Indigenous Nations and communities to ask for specific input at the stages noted on the timeline, we are committed to working with community members throughout the planning and construction of these necessary flood barriers.

COMMUNICATIONS ACTIVITIES

We employed a number of tactics to communicate information about the project to community members, Indigenous rights holders and other parties interested in the area around the WTPs. This included posting project information and input opportunities on our project webpage at epcor.com/floodprotection, including:

- Project need and scope
- Phase 1 (early design concepts) What We Heard Report
- Phase 2 design options
- Map showing location of planned flood barriers
- Types of flood barriers
- Flood barrier design considerations
- Current engagement activities
- Community newsletters

In addition to posting information online, EPCOR mailed a project newsletter including the same information by unaddressed mail to addresses in the communities surrounding the water treatment plants. Postcards sent to the same areas, social media, neighbourhood signage, phone calls and email were to further advertise engagement opportunities.

A newsletter, including the information described above, but presented slightly differently, was also emailed to consultation office representatives of the 32 Indigenous Nations and communities that EPCOR is engaging with on the project.

ENGAGEMENT ACTIVITIES

In the first phase of engagement for this project, we showed the community early concepts of the flood barriers, and asked what we should consider in the design process for the flood barriers. The goals for that phase of engagement were to

- Hear from participants about how they experience the areas where flood barriers are needed to protect the two water treatment plants.
- Understand how EPCOR can improve these experiences through project design, while being mindful of costs and environmental footprint.

In this second phase of engagement, we shared designs for the WTPs that were refined based on the feedback received during Phase 1. The goals for this phase of engagement were to:

- Confirm what was heard during Phase 1 engagement from participants about how they want the barriers to look and feel (design considerations).
- Identify community interests, perspectives, experiences, issues and key considerations relating to the flood barriers.
- Brainstorm additional considerations for the project team to evaluate while designing the flood barriers.

To achieve these objectives, EPCOR hosted a variety of engagement activities, using virtual and in-person techniques:

- Online surveys
- Self-guided walking tours
- Indigenous walking tours
- Community workshops (in person and online)
- Archeological monitoring
- Discussions (phone, meetings)
- Indigenous ceremony

What We Heard: Rossdale

ADDRESSING COMMUNITY CONCERNS

During conversations with the Rossdale community, we heard a number of questions relating to the impact of the project, and EPCOR's role as a neighbour in the community. Community members told us it is important for EPCOR to address these larger concerns before engaging on flood barrier design. To summarize these concerns:

1. What is EPCOR doing to support flood protection for the community as a whole?
2. How is EPCOR ensuring that the proposed flood barriers will not adversely affect nearby homes in the event of a major flood?

We understand that Rossdale residents are concerned about the potential impact of a major flood on their personal properties.

A key commitment of our plans to protect the Rossdale Water Treatment Plant is that the flood barriers will not worsen flooding in the surrounding neighbourhood or negatively impact nearby homes. EPCOR relies on hydraulic modelling from the provincial government, which is based on work by the United States Army Corps of Engineers. The modelling, as confirmed by a third-

party consultant, shows that there would be no change in the water level across the flood plain around Rossdale due to the treatment plant flood barriers. Modelling also confirmed that flows around the plant would not be redirected into the neighbourhood.

PARTNERS IN FLOOD RESILIENCE

EPCOR also has programs in place to help mitigate the impacts of both rainfall and river-related flooding.

To manage flood impacts to residential and commercial customers in Edmonton, including the Rossdale neighbourhood, EPCOR has developed the Stormwater Integrated Resource Plan (SIRP). SIRP is a 20-year, \$1.6-billion plan that includes a variety of actions to slow, move, secure, predict and respond to flooding in Edmonton neighbourhoods.

As part of efforts to help Rossdale residents protect their properties from the impact of a major flood, we have actively promoted our Homeowner Flood Prevention Program. This includes a free Flood Prevention Program available to residents in the City of Edmonton. Our flood prevention advisors help residents identify their individual property risks and options to mitigate those risks. A backwater valve subsidy is also available to eligible properties and we have distributed free moisture detection devices to Rossdale and Riverdale.

We are also committed to helping protect our neighbours in the Rossdale community. In the event of a severe flood from the river overtopping its banks, the City of Edmonton and Alberta Environment and Parks would activate their Emergency Operations Centre. EPCOR would work with our partners during the response, and, by protecting the treatment plants, ensure that safe, clean water remains available to help with response and recovery efforts.

HOW PEOPLE USE THE AREA

Generally speaking, the majority of respondents told us that they are attracted to the area for various recreational and transportation uses including biking, walking, running, and enjoying the natural state of the area. Indigenous participants referenced many histories and stories of the area, and the area's historical and contemporary significance to Indigenous peoples. We heard that access to the river and areas around the water treatment plant sites is important and that harvesting remains an important activity in the area. Respondents also told us that preservation and enhancement of the ecology of the area were priorities.

PREFERENCES FOR FLOOD WALLS VERSUS GRASS-COVERED EMBANKMENTS

There are five key locations around the Rossdale WTP that need permanent flood barriers. A combination of grass-covered embankments and flood walls will be built around the plant to meet technical requirements, reduce the impacts to vegetation and minimize cost to rate payers.

At the two locations facing east, we asked participants what kind of barrier they preferred. (EPCOR was required to narrow options at other locations due to technical requirements.) We provided them with renderings and cross sections of how the different barrier designs would look. The three primary options explored were a grass embankment, a flood wall and a combination of the two.

At Location 2, this flood barrier will be located east of the water treatment plant facing the Rosedale neighbourhood. Between the flood barrier and the multi-use trail along 101 Street, there is currently a grassy space with trees. For this location we asked participants if they preferred a grass-covered embankment, flood wall, or partial wall and embankment for the flood barrier. The responses were relatively evenly distributed between these options.

At Location 3, this flood barrier will be located east of the water treatment plant, near Fire Station No. 21. Between the flood barrier and the multi-use trail along 101 Street, there is currently a grassy space with trees and landscaped beds. While a small majority of people indicated that they preferred a grass covered embankment in this area, a large number of participants indicated their preference for a flood wall.

BARRIER DESIGN RECOMMENDATIONS

While there was no clear community preference for the type of barrier to be used at each location, community input did provide insights into how people want the barriers to look and feel. EPCOR will take these considerations forward as we begin detailed design of the barriers.

Create space for recreation and transportation.

- Ensuring space for multiple uses at the same time
- Clean and tidy, easy to maintain

Blend into existing surroundings

- Integrate into community character (friendly, inviting, non-institutional design, minimizing chain-link fence)
- Integrate into natural environment of river valley through landscaping, adding foliage

Consider how to discourage vandalism.

- Space for art and murals

Improve “institutional” look/feel of the WTP.

- Beautify barriers through landscaping, art

Celebrate the history of the area.

- Settler history
- Indigenous history
- What happens on site (WTP, water source, etc.)

Add amenities that support recreation and community gathering

Align with City, EPCOR, and Community priorities.

- Develop the project with consideration for the Shared Outcomes created in partnership with community members
- Coordinate with City project teams plans for the area (e.g. Touch the Water)

What We Heard: E.L. Smith

HOW PEOPLE USE THE AREA

Generally speaking, the majority of respondents told us that they are attracted to the area for various recreational uses including biking, walking, running, and/or enjoying the natural state of the area. Indigenous participants also indicated that harvesting is an important activity in the area.

BARRIER DESIGN CONSIDERATIONS

There are three key locations around the E.L. Smith Water Treatment Plant that need permanent flood barriers. Grass-covered embankments and flood walls will be built around E.L. Smith to meet technical requirements, reduce the impacts to vegetation and minimize the cost to rate payers. Technical requirements dictated the type of barriers to be implemented for each location. Phase 2 engagement for E.L. Smith therefore focused on design considerations, rather than barrier type.

Participants in our first phase of community engagement mentioned that the natural state of the area is important, and the loss of vegetation should be mitigated. During this second phase of engagement, EPCOR shared with participants that maintaining the natural state of the area around the water treatment plants is important to EPCOR as well as to community members.

DESIGN RECOMMENDATIONS

In dialogue with community members, there was a clear preference for maintaining the natural state of the area as much as possible. Participants also noted opportunities for sharing education and history with visitors. With that in mind, following are key insights from community members' feedback into barrier design that EPCOR will take forward to detailed design:

Prioritize maintaining and enhancing existing environment.

- Integrate walls into the natural landscape of the area over through landscaping, living components or other features

Support existing recreational use through minimal amenities.

- Be careful about encouraging additional traffic to the area — keep the area “wild”
- Develop a vegetation management plan

Include educational features that include Indigenous representation.

- History of the area, information about the river, and Indigenous involvement

Align with City, EPCOR, and Community priorities.

- Develop the project with consideration for the Shared Outcomes created in partnership with community members
- Coordinate with City project teams plans for the area (e.g. Ribbon of Green)

Our Commitment to Vegetation Management

EPCOR is committed to stewarding the environment at our water and wastewater treatment plants. That means minimizing the impact of our activity on vegetation and wildlife, and replanting, restoring or replenishing habitat to its previous state, or greater, within our fenceline.

To do this, we have begun to develop a vegetation management plan to improve overall ecological structure and function and restore habitat on our sites. We are mapping current vegetation at each site and outlining a long-term plan to increase natural areas. This could include wildflower/pollinator gardens, developing a diverse undergrowth and forest succession strategy around already treed areas, and planting more trees to support city-wide goals toward improving the urban forest.

In addition to developing vegetation management plans for our sites, we will be looking for opportunities to work collaboratively with the City of Edmonton and align with the Urban Forest Management Plan on vegetation and habitat management outside our fencelines.

For the flood barrier project, we will restore vegetation that is lost due to the construction of these barriers so that we achieve an overall net gain in ecosystem structure and function in the area. This includes expanding natural areas within our fenceline if we are unable to restore them outside.

What's Next

In the first phase of engagement, we compiled and assessed all of the perspectives, suggestions, and comments received on this project.

In the second phase of engagement, we combined this information with the technical requirements for protecting Edmonton's water treatment plants in a situation where the North Saskatchewan River overtops its banks to refine our early design concepts and develop refined options for consideration.

Phase three of engagement, in which we will share what we heard was important for each site, and ask for comments to ensure we've appropriately understood feedback, will be initiated in fall 2022, with formal engagement opportunities to be scheduled.