



# Protecting the E.L. Smith Water Treatment Plant from Flooding

Project Update & Opportunities for Input

**DECEMBER 2021**

In May 2021, we sent you information about our plans to protect the E.L. Smith Water Treatment Plant in the event of a major flood. Since then, we have been talking to local and Indigenous community members to ensure the project designs meet the needs of those connected to the E.L. Smith plant.

*If this is the first time you have received information about this project we recently expanded our notification area to gather additional feedback.*

**In this newsletter, you'll find:**

- **An overview of our flood protection project;**
- **EPCOR's role in flood protection;**
- **What we heard during conversations in phase one (January - October 2021) of our engagement;**
- **How that feedback was used to inform project details;**
- **Refined flood barrier design options for around the water treatment plant;**
- **How you can work with us to improve the project design; and**
- **Next steps for the project.**



**As you read through this newsletter please consider taking our online survey!**

<https://www.surveymonkey.com/r/JLDC72P>

## **THANK YOU TO EVERYONE WHO HAS PROVIDED FEEDBACK TO-DATE!**

This is a collaborative effort and we appreciate your insight and input. The feedback you've provided to-date has helped us understand how the space around the E.L. Smith Water Treatment Plant is used and valued by community members.

We used your input to refine our early project designs and develop the options included in this newsletter. We are looking forward to continuing these conversations over the coming months as we work together to further improve our designs and select options that reflect the needs of your community.

## **PROJECT BACKGROUND**

In order to protect the E.L. Smith plant in a situation where the North Saskatchewan River overtops its banks, our engineering studies have shown that permanent flood barriers are needed in key locations around the facility. Once constructed, these barriers will limit potential damage to critical equipment and drinking water reservoirs, and ensure that we can resume producing clean drinking water as quickly as possible after a flood.

*This work is being supported by more than \$21 million in grant funding through the Alberta Community Resilience Program and the Government of Canada's Disaster Mitigation & Adaptation Fund.*

In addition to planning these flood barriers, we are also working to:

- Increase protection to critical assets or relocate them to higher ground; and
- Prevent river water from backing up into the water plant through drainage pipes that discharge to the river.

See [epcor.com/floodprotection](http://epcor.com/floodprotection) for more information about this portion of the work.

*The E.L. Smith Water Treatment Plant is located in the river floodplain where it brings untreated water out of the North Saskatchewan River, treats it, and pumps safe, clean drinking water to homes and businesses in Edmonton and surrounding communities. As this river valley location presents an increased chance of flooding, we have a long-term plan in place to protect nearly one-third of the population of Alberta's drinking water supply.*



## WHAT WE'VE BEEN DOING

In early October, we wrapped up the first phase of community engagement for this project. We heard from participants through a variety of formats, including collaborative online workshops, surveys, emails, one-on-one conversations and social media.

During these conversations, we asked participants how they use and value the areas where permanent flood barriers are needed around the plant and how we can ensure the project design aligns with community priorities.

We held two online workshops to discuss the early design concepts in June 2021, followed by a series of online drop-in question and answer sessions throughout the summer. We also connected with individual community members through email, phone and social media. These conversations provided participants with opportunities to learn about why this work is needed and provide feedback about how they want to experience the flood barriers.

*We respectfully acknowledge that this is Treaty 6 territory – the traditional lands of the Blackfoot, the Cree, the Dene, the Nakota Sioux, and the Saulteaux and later the Métis. Located on the banks of the North Saskatchewan River, the area where the E.L. Smith plant is situated was formerly Enoch Cree Nation reserve lands.*

*This area has a long history of Indigenous use and significance. Historically, these areas along the North Saskatchewan River were traditional transportation ways, communication networks and encampment spots. The ongoing discovery of archeological evidence demonstrates the longstanding use of the river valley by Indigenous peoples and connects EPCOR's river valley operations to present-day Indigenous rights-holders.*

It is important to EPCOR that we seek out, hear and include the perspectives of Indigenous Nations and communities with an interest in these lands. In addition to the public engagement sessions, we held two online workshops with Indigenous community members who taught us about the historical and cultural importance of this area.

## WHO WE'VE TALKED TO

Over the past seven months, we've talked to a number of community members about how they use the space around the E.L. Smith Water Treatment Plant – and what we should consider as we plan how the flood barriers will look and be experienced by those who live, work and recreate in the areas around the facility. We've heard from:

- Property owners
- Residents
- Indigenous Nations and communities
- Members of the public
- Community leagues

- Elected officials
- Government agencies
- EPCOR employees
- Other interested parties

We've also been coordinating our planning and design efforts with other projects underway in the area including the City of Edmonton's Ribbon of Green project team.

The input we've received to date has been used to inform our project design and will continue to be used as we move forward. Thank you again to everyone who participated in the engagement activities we've held since May.

- 8 Social media advertisements
- 7 Meetings and workshops
- 5 Online surveys
- 2 Self-guided walking tours

## WHAT WE HEARD

To date, we have had many conversations about the project and have compiled and assessed all of the information we have received. This feedback has been used in combination with engineering studies and other information to determine options for the flood barriers that reflect community priorities while being mindful of costs.

A variety of topics, concerns and questions were brought up during our conversations about the project. The majority of participants told us that they are attracted to the river valley for various recreational uses including biking, walking, running, and enjoying the natural state of the area.

During our first phase of engagement, we heard from participants that there are a number of considerations that we should include when designing how these necessary flood barriers will look and be experienced by those using the areas around the two water treatment plants.

Participants mentioned that the natural state of the area is important, and the loss of vegetation should be mitigated. EPCOR also prioritizes this and will work to keep the area around the barriers natural and reduce the impacts to existing plants and trees.

Other general design consideration categories that we heard include:

- 1. Education and history:** add interactive features or educational signage that could inform people on the site history, Indigenous connections to the area or what the water treatment plant does.
- 2. Art:** adorn the area with local or Indigenous art, murals or sculptures. The public art could be interactive in nature or highlight the community's character.
- 3. Community space:** enhance the area near the flood barriers by creating flexible or welcoming spaces. These spaces could also enhance recreational use of the area.

We know that installing permanent flood barriers around both water treatment plants will have impacts on many different people. We are committed to working with the community to ensure that the flood barriers align with local priorities.

During our second phase of engagement we will continue these discussions with community members in order to hear if there is anything else we should consider in our design process or add to this list.

As we move forward, we will continue to involve you in the process, and respond to your questions or concerns.

## WHAT WE DID

We compiled and assessed all of the perspectives, suggestions and comments received over the past seven months. We combined this information with the technical requirements of protecting the E. L. Smith Water Treatment Plant to refine our early design concepts and develop a number of viable options for the E.L. Smith site. We have included more information about these options on the following pages.

## PLANNING TIMELINE

### SPRING 2021



Community engagement about preliminary concepts to understand what should be considered in the design process for flood barriers.

### SPRING 2022

Community engagement about the **final designs** selected to proceed to detailed design.

### WINTER 2021/2022 (CURRENT PHASE)

Community engagement about **refined options** for the flood barriers. This is when we will seek your input on **design considerations and community amenities** for the flood barriers.

**Did you know?** We're also working to protect the Rosedale Water Treatment Plant from flooding. Together, these two water plants provide clean, safe drinking water to almost a third of Alberta's population. For more about what we are planning at Rosedale, visit [epcor.com/floodprotection](http://epcor.com/floodprotection).

## OUR COMMITMENT TO YOU

Your questions, feedback and input are important to us. We want to work with you to choose designs that meet the needs of your community while being mindful of costs.

This public engagement process is being done to the **REFINE** level in our public engagement framework, which means that **we are seeking your input to help us improve the quality of the project design.** We will ensure that your feedback is directly reflected in the project design and share how your input influenced the final design.

Interested in learning more about how we engage with our neighbours in E.L. Smith? Check out [www.epcor.com/sharedoutcomes](http://www.epcor.com/sharedoutcomes).



## HOW WE MAKE DECISIONS

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

### **Maintaining the natural state of the area around the water treatment plants is important to EPCOR and community members.**

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.

As one of the primary land use owners within the Ribbon of Green, EPCOR's watershed management team is committed to stewarding a healthy and ecologically robust river valley. EPCOR has selected a 1 kilometre squared natural area adjacent to the water treatment plant and is working with the City of Edmonton to manage this area and achieve the objectives listed below. Edmontonians can be assured that in this area that EPCOR operates there will no net loss of ecological function and natural river valley area.

EPCOR is committed to collaboratively achieving the following objectives:

- No net loss of vegetative cover;
- Net gains of naturalized area, closed canopy forest, and connectivity; and,
- Long-term reduction of stormwater runoff to the North Saskatchewan River through green infrastructure projects.



## LEGEND

-  Flood wall
-  Grass-covered embankment

**There are three key locations around the E.L. Smith Water Treatment Plant that need permanent flood barriers, shown on the map. The legend beside the map shows which type of flood barrier will be used for each location.**

To meet technical requirements, reduce the impacts to vegetation and/or minimize the cost to rate payers, the type of barriers around E.L. Smith have already been selected. **At this time we are looking to understand which design elements are preferred by the community.**

Two different types of flood barriers will be used at E.L. Smith to meet the requirements of planning for a major flood: **grass-covered embankments** or **flood walls**.

In the next few pages you will see renderings and cross-sections for each key flood barrier location. There are unique details to consider at each location.

*Please note that we are still in the planning process and these details will change based on your input and as our plans progress.*



### **Grass-covered embankments topped with security fencing.**

Grass-covered embankments have the following features:

- The embankments are natural looking; and
- They have specific landscaping requirements that can only accommodate naturalized grasses or sod so the area can be mowed. Roots from large vegetation can form small holes in grass-covered embankments and encourage burrowing animals.



### **Flood walls topped with security fencing.**

Flood walls generally take up a smaller amount of space.



Security fencing on top of the flood barriers protects the water reservoirs and treatment plant.

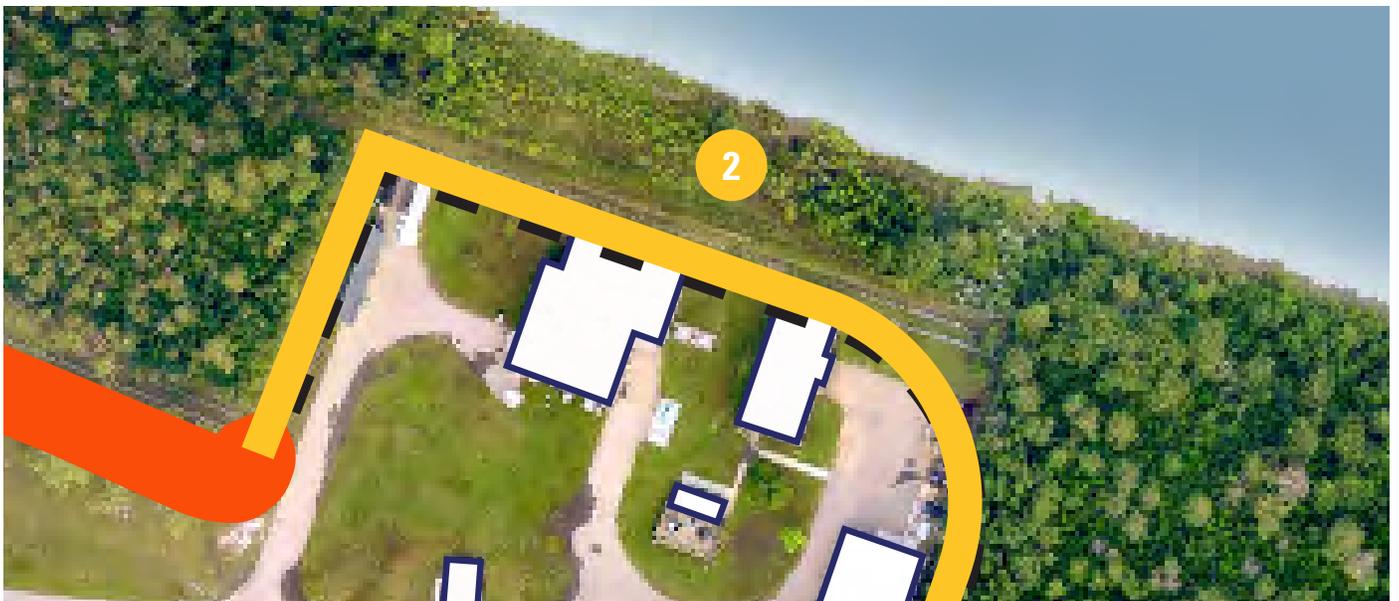
**With either type of flood barrier (wall or grass-covered embankment) buffer zones are in place that restrict the type of vegetation that can be replanted. The buffer zone is about 5m from the wall or end of the embankment slope. This is to maintain the structural integrity of the barrier. Sod or naturalized grasses are the only option for replanting here. Roots from large vegetation can encourage burrowing animals.**

## 1. NORTH OF WATER TREATMENT PLANT



A grass-covered embankment was chosen for this location to keep the area looking more natural, and because there is space to accommodate it within the existing fenceline. There will be some trees and vegetation removed on the water treatment plant side of the fence in order to construct the embankments and allow for a buffer zone. The trees could be replanted within the water treatment plant site.

## 2. NORTH OF WATER TREATMENT PLANT ALONGSIDE RIVER



A flood wall was chosen for this location. The wall will range from 2.5 to 4.5 metres tall depending on the contour of the ground. A wall here would protect the critical river water intake infrastructure, while minimizing the impact to the wildlife corridor between the river and the water treatment plant. The space between the flood wall and the trees could be planted with local grasses.

### LEGEND

-  Flood wall
-  Grass-covered embankment

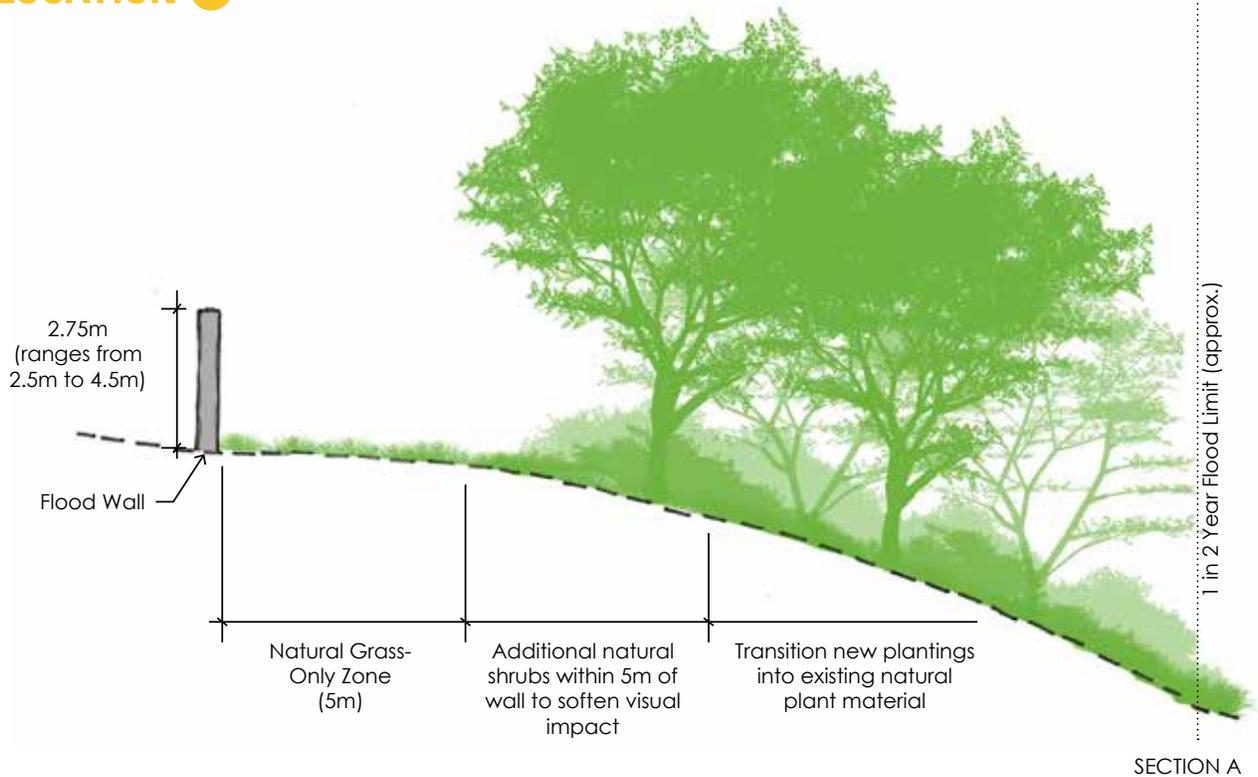
Flood wall with stone finish



Flood wall with art finish



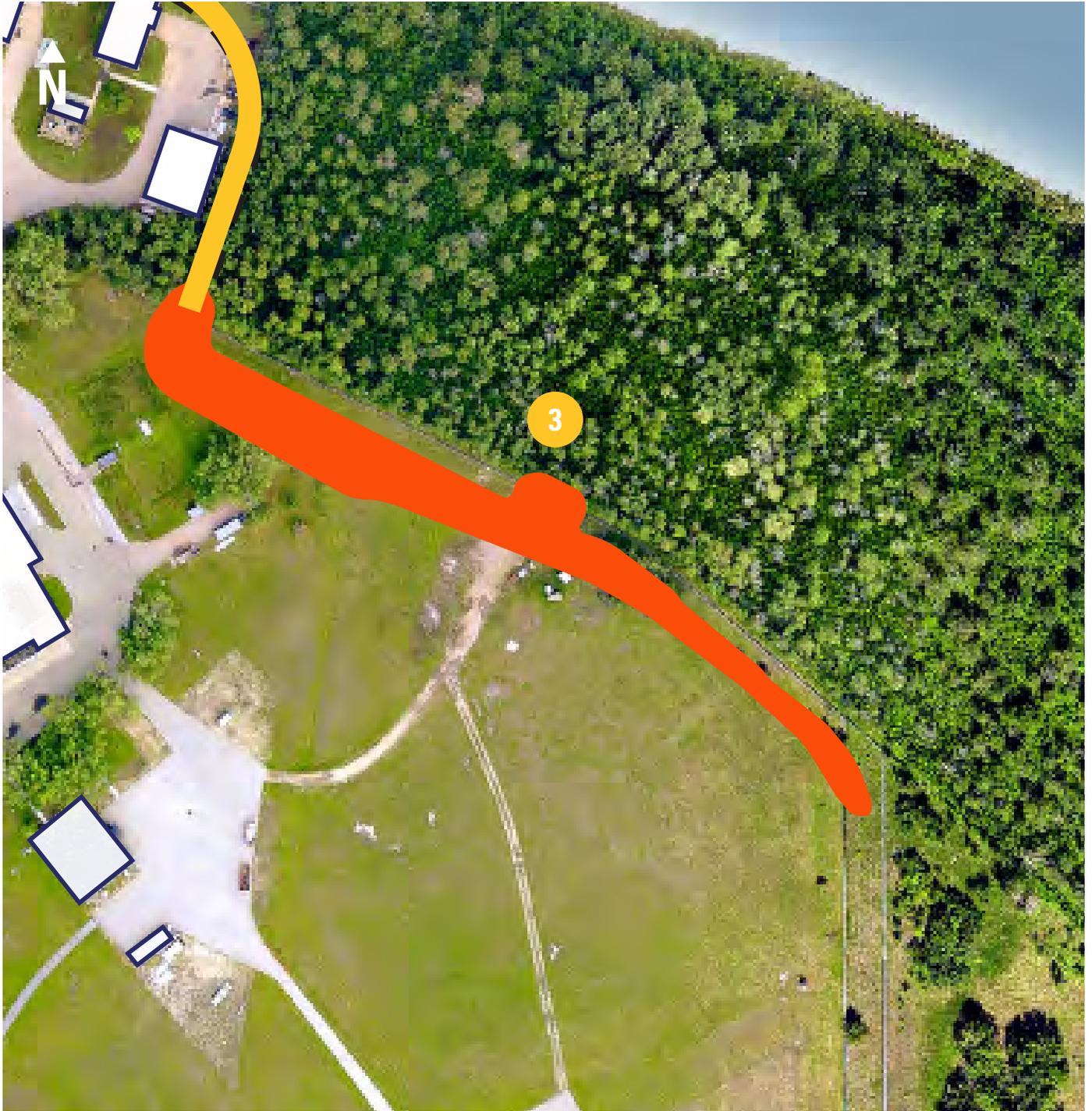
## LOCATION 2



## WHICH DESIGN CONSIDERATIONS ARE MOST IMPORTANT TO YOU IN THIS AREA?

Design considerations for education and history, art and community space can be found on page 11.

### 3. NORTHWEST OF WATER TREATMENT PLANT



A grass-covered embankment was chosen for this location to keep the area looking more natural, as there is ample space to accommodate the flood barrier on the water treatment plant side.

There will be some trees and vegetation removed on the water treatment plant side of the fence in order to construct the embankments and allow for a buffer zone. The trees could be replanted within the water treatment plant site.

#### LEGEND

-  Flood wall
-  Grass-covered embankment

# FLOOD BARRIER DESIGN CONSIDERATIONS

In location 2 we can incorporate community-preferred design elements into the flood barrier. Below is a list of potential amenities that may be included.

We appreciate the ideas participants brought forward in phase one of our engagement that helped shape this list of amenities and what they could mean to the community. We are still in the early phases of this project and are open to further ideas.

## EDUCATION AND HISTORY

**Educational features:** improve signage or add interactive features outside the existing fence line to educate people about the services the water treatment plant provides.



**Historical features:** add features that draw inspiration from local history. Options could include working with a local historic group, or highlighting the history at this site.



**Indigenous connections:** honour Indigenous perspectives of water and the connections that many Nations have to this site since time immemorial. Recognize the importance of water for all beings.



## ART

**Artistic features:** adorn the area with local or Indigenous art, murals or sculptures. The public art could be interactive in nature or highlight the community's character. EPCOR would further engage with the local and Indigenous community regarding art selection.



## ENGAGEMENT OPPORTUNITIES

Now is the time to get involved! We want to hear from you so that we can design flood barriers that protect the E.L. Smith Water Treatment Plant and integrate into your community as much as possible, while being mindful of costs.

We want to understand your preferences for amenities at each location.



Take our online survey right now by scanning this QR code with your smart phone.

<https://www.surveymonkey.com/r/JLDC72P>

Visit our project web page at [epcor.com/floodprotection](http://epcor.com/floodprotection) to find:

- Registration links for our online workshops
  - **Thursday, February 10 from 9:30 - 11:30 a.m.**  
[https://zoom.us/meeting/register/tJ0qc--rrDlvHtBxBRrKX8d1Jsfxf6ZEbsb](https://zoom.us/join/zoom/register/tJ0qc--rrDlvHtBxBRrKX8d1Jsfxf6ZEbsb)
  - **Wednesday, February 16 from 6:30 - 8:30 p.m.**  
[https://zoom.us/meeting/register/tJ0ucuGsrDgsG9QhUKXCaLO-uXHE3-4EypIN](https://zoom.us/join/zoom/register/tJ0ucuGsrDgsG9QhUKXCaLO-uXHE3-4EypIN)
- A map to a self-guided walking tour you can take to see the locations where flood barriers are needed.

## OUR E.L. SMITH WEBPAGE

Did you know that we regularly share facility updates about the E.L. Smith Water Treatment Plant, information about works underway, and advertise future engagement activities on our website? Check it out at [www.epcor.com/elsmith](http://www.epcor.com/elsmith).

We've also been advertising engagement opportunities on our EPCOR Canada social media pages.



[twitter.com/EPCOR](https://twitter.com/EPCOR)



[facebook.com/EPCOR](https://facebook.com/EPCOR)



[linkedin.com/EPCOR](https://linkedin.com/EPCOR)



[@EPCOR](https://instagram.com/EPCOR)

## LET'S TALK

**Phone:** (780) 412-3599

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**We believe in listening to and engaging with participants. Community input and involvement is an important part of our decision making and we want to hear what you think about our initiatives.**