



Engagement Report:

Community Conversations On Flood Mitigation And Resiliency



Fredericton

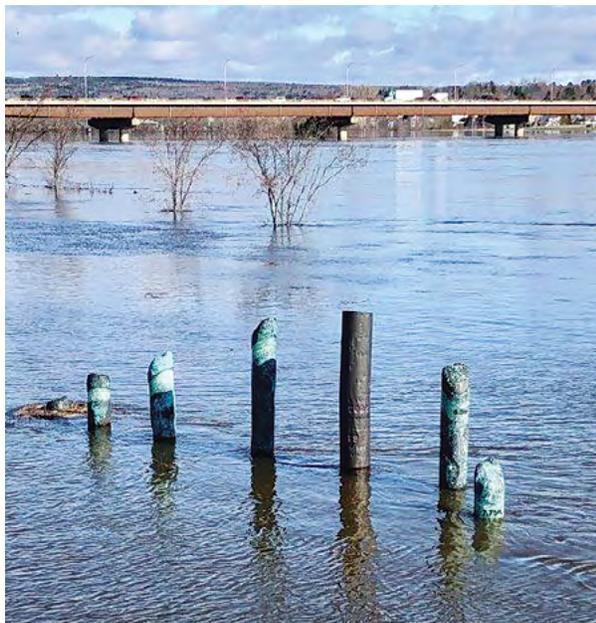
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Building flood resilience is a process – we can't do everything at once. Meeting the challenge presented by both river- and rain-related flooding will be a huge financial and operational challenge that will span years if not decades.

On August 15, 2019, the federal government announced \$11.4M in new funding to help protect Fredericton's key transportation systems and municipal infrastructure to ensure essential services can continue during floods and to bolster our resiliency efforts. The City will invest another \$17M during the next 8 years, bringing the combined investment to more than \$28M.

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Community Engagement Overview

Why we asked for feedback

While City engineers and planners have lots of ideas on how best to spend the new funding, we also wanted to hear from residents, business owners and community groups about their experiences during the 2018 and 2019 floods and their ideas to help us improve Fredericton's flood resiliency.

This is what we did

- We asked citizens to take part in two community conversations on flooding, the first on July 30 at the Fredericton Convention Centre and the second on August 15 at the Ramada Inn. People were invited to talk about how the floods affected them and to make suggestions to the heads of the City's departments of Engineering and Operations, Planning and Development, and Emergency Measure Operations.
- We promoted the community conversations through posts on the City's Facebook and Twitter accounts, as well as targeted Facebook ads and traditional newspaper ads. Local media (CBC and the Daily Gleaner) also ran stories about the upcoming sessions. Finally, staff and city councillors reached out to individuals and organizations with an interest in the topic.
- To assist people in preparing for the sessions, we set up a webpage that included a discussion paper with context on how floods happen, what the City's already been doing in terms of flood mitigation and resiliency, and some questions to ponder, such as:
 - o How should the City of Fredericton prioritize investments in flood mitigation?
 - o What flood resiliency solutions could be explored by the provincial and federal governments?
 - o What can people do to better protect their homes and themselves?

Who Came?

The community conversations attracted a total of more than 120 people, with 13 people presenting at each session. Presenters included residents whose homes

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had been flooded, business people, community organizers, insurance industry representatives, environmental advocates and academics.

What You Told Us

We took all your comments, feedback and suggestions and assigned them to the corresponding service within the City of Fredericton. Then we asked the staff in those departments and divisions to respond. When your feedback reflected something we already do, we explain it. When you've pointed out something we need to be doing better, your comments will result in concrete actions that the City can take in anticipation of the next flood. And when you suggested something the City couldn't act on, we've explained why.

Themes that are Out of Scope (But Still Important to Hear)

A few of the things we heard from you during our Community Conversations concerned issues that are outside the City's power to address:

- New Brunswick needs stronger rules to protect watersheds.
- Deforestation on land near waterways contributes to flooding and needs to be addressed.
- Fish ladders should be built at various points in the Saint John River
- Is the Mactaquac Dam strong enough?

We'll share your feedback with the Departments of Environment and Local Government (including the Climate Change Secretariat), Natural Resources and Energy Development and NB Power.

Engineering and Operations

The Engineering and Operations Department is the largest in the City's administration. Its primary role is to maintain the City's physical infrastructure and core services, such as:

- Water and sewer
- Waste water treatment
- Storm water management
- Roadway Management and Operations
- Transportation Engineering
- Municipal buildings
- Municipal vehicle fleet (City, Police and Fire)
- Parks and Trees
- Transit
- Parking

Engineering and Operations is also home to the various environmental programs and initiatives the City undertakes. We've listed your comments and suggestions on specific environmental themes in a separate area within this section.

What We Heard:

Downtown intersections should be raised to lower the chances of flooding in those areas.

Response:

- As part of the flood resiliency work that will be done in the next decade, we'll look at coordinating changes to road elevations and valving of the storm sewers that run under major roads in the City and downtown intersections.

What We Heard:

The City needs to prevent water from coming up through its infrastructure.

Response:

- To help reduce the potential of flooding through municipal infrastructure, this fall we'll strategically place valves in select locations where the back-up of flood water through the municipal infrastructure can be reduced. In this application, the city will be using a duckbill style valve that is made of a flexible material that prevents water from entering the storm system during floods.

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What We Heard:

The City should prioritize projects so that simpler and cheaper jobs can be done soon while larger and more complicated projects take shape.

Response:

- The City already coordinates projects by considering a number of issues, including the life-cycle of assets, impacts on traffic, risks to the public, impacts to neighbourhoods, businesses, residents, and budgets. Prioritizing projects in this way means crews aren't returning to the same places every few years to re-do the same work. This is the philosophy we're applying to the valving work being done in a few neighbourhoods this fall, for instance.

What We Heard:

The City should put more storm drains in flood-prone areas.

Response:

- Storm drains are connected to the City's storm sewer system. During floods, more storm drains may actually allow more flood water to enter neighbourhoods because they offer more opportunities for the water to move in. So, the best fix is to look at where we can install additional valves in the storm sewer system to reduce the amount of water entering neighbourhoods. We'll do that.

What We Heard:

The City should make predictive modelling tools easily available to citizens.

Response:

- Predictive modelling for flooding is done by the New Brunswick Emergency Measures Organization (NB EMO) and we provide links to these projections from the City's Riverwatch Fredericton website (<http://www.fredericton.ca/en/safety-services/river-watch>). We plan to do more to promote the predictive modelling through social media ahead of the next flood season.
- Currently, the Province's flood projections are updated daily, but we'll be asking NB EMO to increase the number of daily updates before and during floods.

- There's currently a four to six hour time lag between real time readings of the river gauge located near the Aquatic Centre and the updates to the provincial NBEMO website and the Federal Hydrometric Website. We will be asking NB EMO to work with the federal government to provide live updates from the river gauge so that we can provide more timely updates on Fredericton's website.

What We Heard:

The City should provide advice to residents on how to flood-proof their homes.

Response:

- We'll create a guide for homeowners to accompany the flood preparedness kit produced by Fredericton's Municipal Emergency Measures Organization. It will include practical information on maintaining your property and completing simple or more complex upgrades that can help build your home's flood resilience.

Environmental Initiatives:

An inter-departmental team has been established to develop the City's first Climate Change Adaptation Plan (CCAP), set to be completed in March 2020. The CCAP will allow us to assess climate risks and vulnerabilities in the community and prioritize concrete actions.

A second committee is being established to guide the development of Community and Corporate Energy Plans which will:

- examine how the City of Fredericton and citizens use energy
- suggest what our energy and greenhouse gas (GHG) emissions reduction priorities should be
- determine how we can best attain our reduction goals.

The City has long included climate change adaptation activities within our emergency preparedness work as well as through our infrastructure renewal and asset management by doing things like raising roads and installing bigger water and sewer pipes. And climate change mitigation has been made a priority through energy savings practices and retrofit programs. But while we've been on the leading edge

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of these practices, we're now taking the time to build frameworks to base our actions more specifically on risk, vulnerability, residents' needs, and our shared desire to enjoy a safe and thriving community despite climate change impacts.

What We Heard:

We heard you say that all administrative reports provided to Council by staff must include a climate plan, and that there needs to be a "climate lens" on all Council decisions.

Response:

- Many administrative reports to Council on various topics currently include a section called "Sustainability," but we will look at updating this section in relevant reports by requiring that staff explain how a given project contributes to the upcoming CCAP or Energy Plan. Doing this will ensure that climate change is included as a "lens" on Council decisions.

What We Heard:

You said the City must move to a zero-carbon footprint

Response:

- The City is in the process of setting new targets for energy and GHG reductions that will be implemented throughout the corporation (which includes our buildings, vehicle fleet and water and sewer operations).
- As of 2018, we have decreased the corporation's GHG emissions 34% over 2004 levels.
- We have a council-approved revolving energy fund for buildings (savings on utility bills from previous energy reduction projects go back into a fund for further energy reduction projects).
- This year, we are completing our first carbon neutral study on a City property: We're investigating the possibility of making City Hall carbon neutral while continuing to meet the requirements that come with the building's heritage designation.

- As well, our third renewable energy project is underway at the Kimble Fire Station (we've already installed solar panels at the Fredericton Public Library and at Killarney Lodge).
- From a community perspective, the City's upcoming Community Energy Plan will seek solutions to reduce Fredericton's overall energy consumption.
- As of 2017, community GHG emissions are down 20.1% compared to baseline 2000 levels – because of population growth this is a 36% reduction per capita

What We Heard:

You suggested the City build bio-engineered riverbanks by using natural elements like trees and shrubs to slow the water's rise.

Response:

- The current Municipal Plan calls for the City to acquire riverfront property whenever it becomes available. This practice has been in place for many years and the City has bought up many hectares of riverfront property to restrict development and encourage better ecological management by treating the land, restoring it to its previous state and protecting it into the future. We'll continue to do this.

What We Heard:

You told us you want stronger rules around vehicle idling.

Response:

- A revised anti-idling policy which applies to all City vehicles will go before Council by the end of 2019. Once approved, the revised policy will be accompanied by a staff awareness campaign. As for creating a by-law on idling aimed at the general population, it would not only be very difficult for police to enforce, it would draw resources away from other, more urgent road safety enforcement issues.

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Municipal Emergency Measures Organization:

The City of Fredericton Municipal Emergency Measures Organization (EMO) plans and coordinates emergency services and resources during major emergencies and disasters. EMO works with city services, emergency responders and other partners, corporations, communities and non-profit agencies to help Fredericton prepare for, respond to and recover from a disaster.

What We Heard:

We heard you say EMO support isn't visible enough during flood events, which makes you wonder whether we're doing enough check-ins with citizens living in flooded areas.

Response:

- EMO meets throughout the year with partners to ensure we have all the latest information and forecasts related to flooding
- If the information on snow pack and the forecast predict a high probability of flooding, Fredericton firefighters make door-to-door visits in neighbourhoods on the flood plain to distribute information to help residents prepare for rising waters.
- During both these pre-flood neighbourhood tours and as flood conditions change, staff take the opportunity to determine which homes should be on a "wellness check" list. This is because the people living there have physical disabilities or are otherwise vulnerable and could need help should the waters rise quickly. Once a home is on the wellness check list, EMO staff will check in with those residents at least once a day.
- During floods, EMO activates and staffs the Municipal Emergency Operations Center (EOC). The EOC coordinates all municipal flood response activities which involve Engineering and Operations as well as the Police and Fire Departments. EMO also provides public updates via social media and press briefings, and the www.fredericton.ca/RiverWatch page is

regularly updated with information including road closures and alternate forms of transportation.

- EMO also ensures that additional crews of firefighters are available during significant floods. When roads are closed, mobile command posts are set up to ensure emergency access to all flooded areas. These command posts are staffed with both response and logistical specialists equipped with boats and rescue equipment.

What We Heard:

You said the City should work with community groups to communicate with affected neighbourhoods before and during flood events.

Response:

- EMO works very closely with the Red Cross, the Salvation Army, Samaritan's Purse and other organizations during flood events to provide services including shelter for people forced to leave their homes, help with property clean-up and counselling. EMO also carefully vets any organizations seeking to volunteer services during and after floods.

What We Heard:

You told us that mental health is a major concern both in terms of the anxiety people suffer leading up to a flood and the stress and despair felt during floods and in the aftermath. You said people don't necessarily know where to go for help when they need it most.

Response:

- EMO offers a number of emergency preparedness kits on the City's website, including one on flooding (<http://www.fredericton.ca/en/safety-services/emergency-preparedness/flooding>). But given what we heard during the sessions, we will add information on where to access free mental health services quickly and easily. We'll also add a section on how to prepare your property to better withstand damage from floods (as described in the Engineering and Operations section).

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Planning and Development

Fredericton's Planning and Development Department provides service in the areas of land use planning, zoning, land subdivision, building inspection, heritage and economic development.

What We heard:

The City should create incentives and / or penalties relating to new construction on flood plains.

Response:

- For decades now, the City has limited what development is allowed on flood plains and we've required that developers meet a number of building standards tied to reducing the risks from flooding. Given this, we're not persuaded that introducing an explicit incentive/penalty regime is needed.

What We Heard:

The City should create stronger rules around protecting natural features at the river's edge.

Response:

- The City has a policy related to acquiring riverfront property. The City also establishes zoning lines in full consideration of natural features such as water courses, significant slopes and wetlands. (For more on the City's policies regarding acquiring riverfront properties in order to build flood resistance, check out the Environmental Initiatives section under Engineering and Operations).

What We Heard:

The City should require a lifecycle analysis of all new developments by examining what new buildings will generate both in terms of revenue for the City and capital or maintenance costs (such as new water and sewer pipes or roads and sidewalks).

Response:

- Fredericton has experienced very little outward suburban expansion in the past decade as most of our growth has been through higher density infill development (buildings going up in spaces between existing developments, such as in empty lots in the downtown or repurposed properties elsewhere in the city). This means there really hasn't been any significant new maintenance costs for the City (snow removal and road repairs, for instance) or capital costs from having to build new pipes and other infrastructure.

What We Heard:

The City needs stricter rules around the creation of drive-throughs, which encourage idling and, consequently, contributes to global warming and rising waters.

Response:

- New restaurant drive-throughs have not been permitted in the City Centre for some time now. More recently, a 2013 zoning by-law review subjected commercial properties to a suite of new requirements addressing issues relating to lot size, queuing spaces, pedestrian access, outdoor speakers and lighting. Along with these additional requirements, the Community Planning Division made drive-throughs subject to a Planning Advisory Committee approval. These regulatory improvements have slowed the number of drive-throughs being built in the city.

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Transit and Parking Services:

The Transit and Parking Division provides regular fixed route transit bus service throughout the city, as well as charter tour operations as requested. It also provides a parallel transit service for mobility impaired residents of the city. As well, the Division also manages spaces in support of businesses and other destinations in the downtown. The City operates two municipal parking garages and several off-street parking lots, as well as the on-street parking meter program. Other services provided by Parking Services include enforcement of parking by-laws in the downtown, maintenance of parking equipment, and collection of parking revenue.

What We Heard:

We heard you say the downtown needs to be more accessible and inviting during flood events, and that a big step toward that would be building a parking garage above the flood plain.

Response:

- Fredericton's Transit Plan and Parking Plan both call for a new parking garage. In the next few years, the Transit and Parking Services Division will perform a detailed study to determine where it should be, what type of design it should have, how many spaces it should have and how much it will cost.

What We Heard:

You also said that more should be done to encourage people to use Fredericton Transit.

Response:

- We're going to look at how we might reallocate resources within the City to better promote the transit system and, ultimately, welcome more riders.

What We Heard:

You told us the city needs a park-and-ride system.

Response:

- Both the City's Transit Plan and the Parking Plan identify park and rides as a medium-term solution for encouraging Transit ridership and mitigating parking demand downtown.
- During the 2018 flood, the City paid a private contractor to shuttle people from designated parking lots to the downtown. We did the same thing with the City Transit bus fleet in 2019. Unfortunately, very few people used the service in either year. Despite this and given what we heard from you, we'll continue offering park-and-ride during future floods, but we'll do more to draw attention to the service and we'll be more aggressive in encouraging GNB and downtown businesses to promote it with their employees.