# Sackville and Little Sackville Rivers
# **Floodplains**

## Background

- The Sackville and Little Sackville Rivers were identified as flood risk areas as part of the Canada-Nova Scotia Flood Reduction Program in the mid 1980s

- Studies were completed in the 1980s and 1990s to identify the floodplains

- Current development regulations are still based on the 1980s and 1990s' studies

## Project Goals

- Update floodplain mapping for the Sackville and Little Sackville Rivers

- Increase public awareness of the 2017 Sackville Rivers Floodplain Study findings

- Incorporate updated floodplain mapping into municipal planning documents

*Union Street, Bedford, 1956*

*1956 Flood in Bedford*

*1956 Flood in Bedford*

*Bedford Place Mall, December 2014*

1956 Images: Reproduced with permission from The Chronicle Herald

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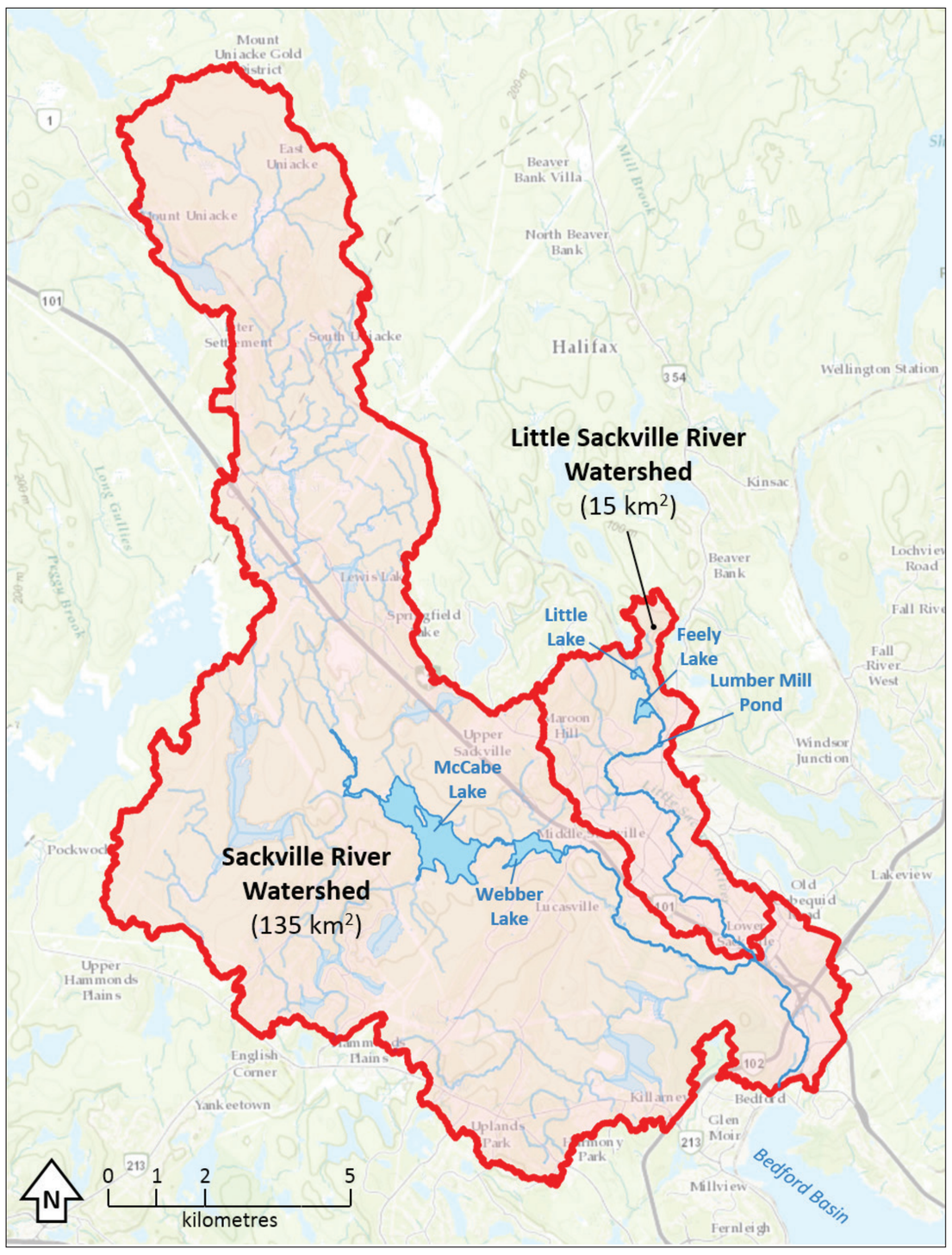
## Study Area: Sackville and Little Sackville Watersheds

- A watershed is the area from which all surface water drains into a common water body, such as a river, lake, or ocean

- The Sackville River watershed has lower slopes, more lakes, and less development

- The Little Sackville River watershed has higher slopes, fewer lakes, and more development




*(CBCL Limited, 2017, 9)*

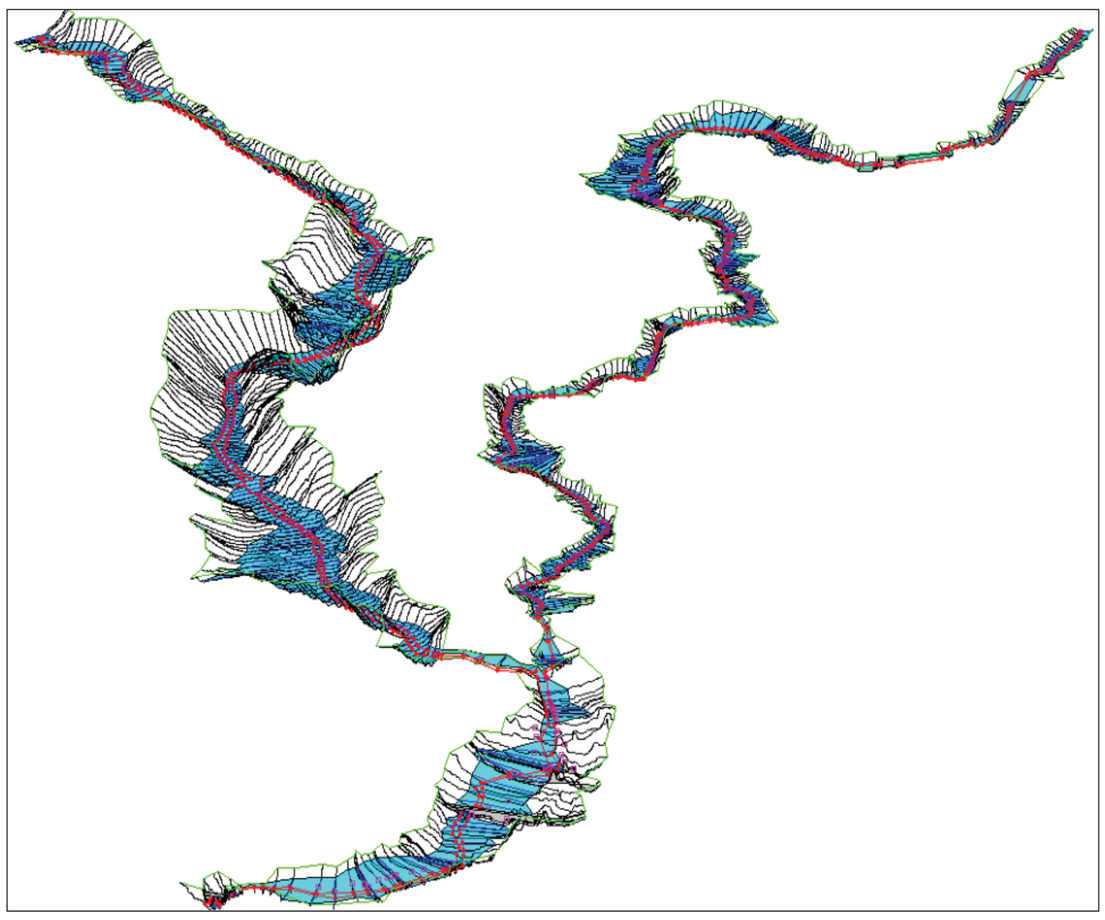
## Study Methodology

- Data collection and analysis (e.g. topography, lidar, historic precipitation events, and historical river flow and water levels)

- Hydraulic (water flow) and hydrologic (amount of runoff) system modelling

- Flood scenario modeling

- Climate change impacts



*Three-Dimensional View of HEC-RAS Hydraulic Model*
*(CBCL Limited, 2017, 42)*

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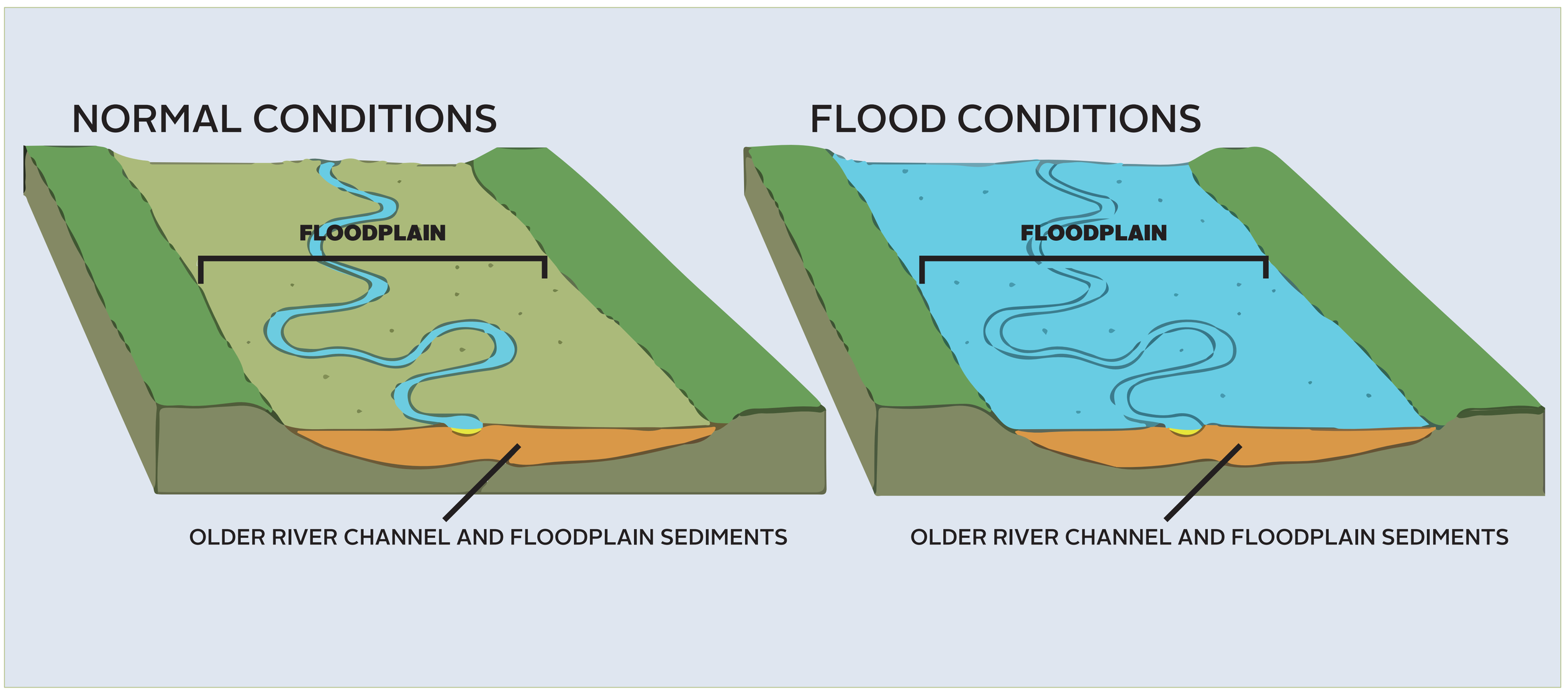
## What is a floodplain?

- A floodplain is an area of land adjacent to a watercourse which is prone to flooding
- When left in a natural state, floodplains store flood waters
- Floodplains can provide open space, habitat for wildlife, fertile land for agriculture, and opportunities for walking, fishing, hiking, and biking
- When floodplains are developed, river flooding can increase

## What are 1-in-20 and 1-in-100-year floodplains?

- The 1-in-20-year floodplain floods, on average, once every 20 years, or has a 5% chance of flooding in any given year. It is sometimes referred to as the **floodway**
- The 1-in-100-year floodplain floods, on average, once every 100 years, or has a 1% chance of flooding in any given year. It is sometimes referred to as the **floodway fringe**



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## Why were the floodplain maps updated?

- **Public safety**
- **Environmental protection**
- **Protection of properties**
- **Reduce the need for flood control works**
- **Inform decisions on flood mitigation measures**
- **Reduce the need for flood damages restoration and assistance**
- **Changing weather patterns (heavier rain over shorter periods of time)**
- **Previous studies from 1980s & 1990s now outdated**
- **New technology and data**

*Joan Lenihan and Robert Lenihan Memorial Diamonds*

*Bedford Baseball Fields 2014*

*Bedford-Sackville Connector Greenway Trail*

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# Sackville and Little Sackville Rivers
# **Floodplains**

## Project Steps and Planning Process

**AUGUST 2018**

Regional Council initiates planning process to update floodplain policies and regulations

**FALL 2018**

Public and stakeholder engagement

**We are here**

**WINTER/SPRING 2019**

Detailed review and analysis

**SUMMER 2019***

Formal Council Review process

**The public will have the opportunity to review the proposed changes to the policies and regulations and provide feedback directly to Regional Council at a public hearing.**

**These are target dates and subject to change.*

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