Lakeshore Floodplain Mapping

Planning Advisory Committee

October 21, 2025

Planning and Development Department

EAST HANTS

Background

- Through Motion 24(267), Council requested that staff investigate the possibility of creating floodplain protections around lakes:

  C24(267) Passed that staff be directed to prepare a report on feasibility of establishing a floodplain policy regarding the flooding of lakes in East Hants (to show what the process of getting a floodplain study is, the costs, and what is involved).

- The Municipality currently utilizes High Risk (HF) and Moderate Risk (MF) zoning based on a flood plain study conducted in 2014.

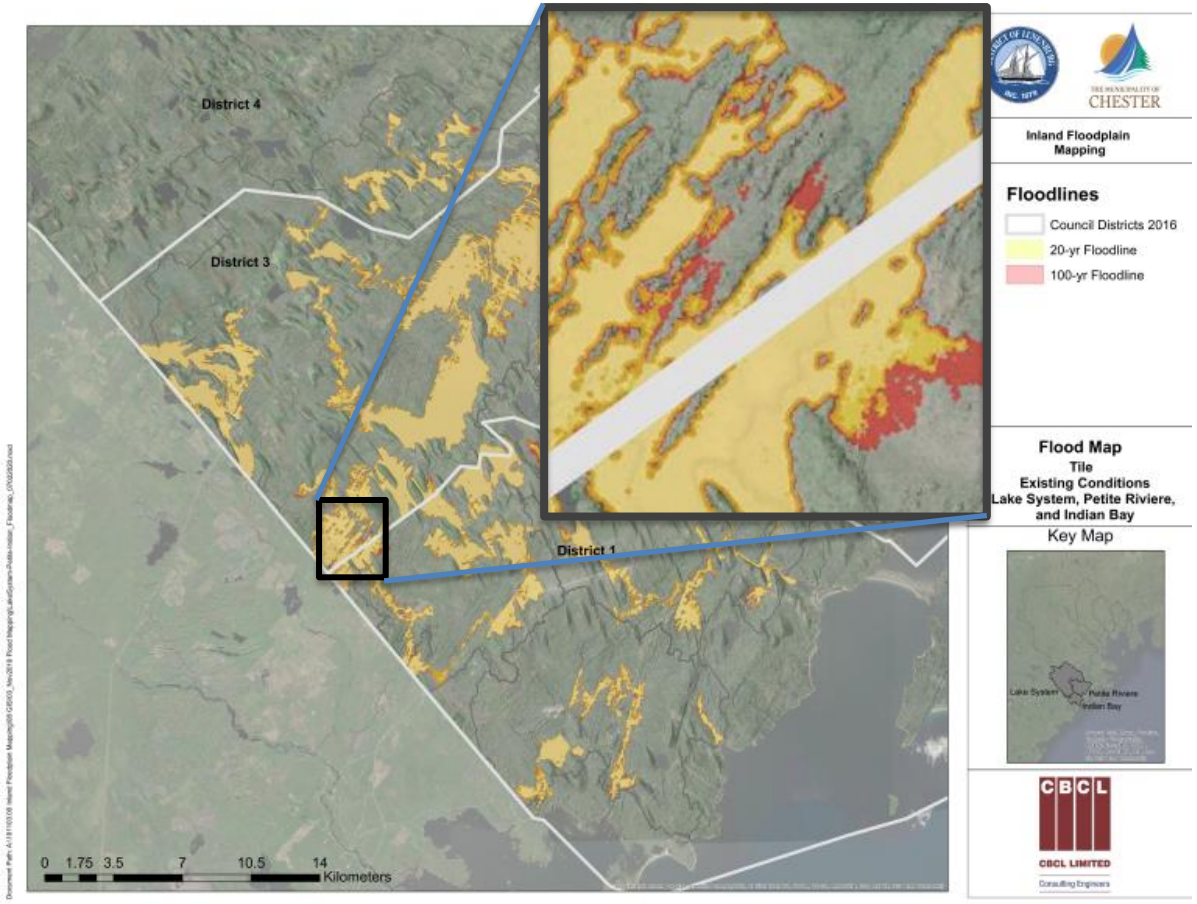
- This floodplain mapping and the accompanying zoning are only applicable to the Shubenacadie River, from Grand Lake to a point north of the village of Shubenacadie and a portion of the Nine Mile River.

Discussion

- Lakes present a unique and complex set of challenges for precise flood mapping.
- Conducting floodplain studies for river systems is more reliable as hydrological modelling of water flow and flood elevation is more standardized and historically well-defined.
- Lake systems on the other hand, do not have a well defined floodway and flood fringe.
- The Municipality of the District of Lunenburg recently considered planning regulations based on a floodplain study for lakes in their jurisdiction.
- In the end, the municipality decided not to restrict development around lakes based on this study due to concerns with its accuracy and significant public opposition.

Discussion

- The District of Lunenburg/District of Chester spent $196,800 + HST on their study and given the number of lakes in East Hants (100+/-), a similar cost should be expected in this municipality.



Discussion

- Although there is no floodplain protection surrounding lakes in East Hants, the municipality does employ setback requirements from lakes that prevent development within 30m of the lakeshore, unless there is an undersized lot where a setback can be reduced to 15m.
- In addition, within 10m of a lakeshore vegetation removal is also restricted.
- These measures protect the sensitive riparian zone from ecological damage and also help prevent placing structures in a location that may flood.

Discussion

- Conducting a floodplain study for the lakes in East Hants would involve the following:
  - **Data Collection:** Hydrological data (rainfall, flows), topographic/bathymetric surveys, and climate projections. For lakes, this includes modeling wave effects or ice jamming if applicable.
  - **Modeling & Analysis:** Use approved software to simulate flood scenarios, calibrate with historical events, and produce hazard maps classifying risks (e.g., depth x velocity: low to high danger).
  - **Stakeholder Involvement:** Public input, land owners, provincial agencies.
  - **Outputs:** Flood maps, reports with recommendations for zoning (e.g., setbacks, floodproofing), and GIS data for ongoing use.
  - **Formal Review & Adoption** as land use regulations.

Conclusion

- While the goal of protecting residents, property, and sensitive lake environments from flood risk is a commendable planning goal, expanding HF/MF zoning to lakes is not recommended due to the cost, technical complexity and potential public concern.
- Furthermore, East Hants currently uses standard setback requirements and limits vegetation removal surrounding lakes.
- These tools help protect the lake environment and structures from flood damage without the need for more detailed analysis.

Alternative

- Council may direct staff to budget for a lakeshore floodplain study.

Recommendation

Maintain current lakeshore setback regulations and not pursue floodplain mapping and regulation surrounding lakes.

Recommended Motion

Planning Advisory Committee recommends that Council:

- ***maintain current lakeshore setback regulations and not pursue floodplain mapping and regulation surrounding lakes.***