



Administrative Report

Office of the Manager, Planning Services

To: Warden MacDonald and Members of Essex County Council

From: Rebecca Belanger, MCIP, RPP
Manager, Planning Services

Date: Wednesday, April 05, 2023

Subject: Award of Contract for Coastal Engineering
Consultant-Shoreline Natural Hazard Mapping
County of Essex

Report #: 2023-0405-IPS-R08-RB

Purpose

To provide County Council with an update regarding a grant application to the Ministry of Natural Resources and Forestry through the Flood Hazard Identification and Mapping Program (FHIMP) to conduct coastal flood hazard mapping for the County of Essex.

Further, to seek County Council's approval on the award of contract to retain the coastal engineering consultant to complete this mapping and data sharing initiative.

Background

At the September 7, 2022 County Council Meeting, James Bryant the Director of Watershed Management Services for the Essex Region Conservation Authority (ERCA) requested support of a grant application to update the coastal flood hazard mapping within the Essex Region. The grant was available through the Flood Hazard Identification and Mapping Program (FHIMP) with funding by Natural Resources Canada and the Ontario Ministry of Natural Resources and Forestry (MNRF).

For context, it is important to note that the Essex Region's coastal mapping which is used for regulating development through the *Conservation Authorities Act* and the *Planning Act*, was last completed in 1976. This information needs to be updated for the roughly 200-plus kilometres of

shoreline in our region. The results of such an undertaking would provide new flood hazard maps for Essex County, with a required component of the analysis to include assessing climate change impacts specific to the coastal environment.

The regional flood hazard maps are used by regulatory agencies, specifically Conservation Authorities (i.e. ERCA and LTVCA) to ensure development is “safe” with respect to flooding. The mapping is also utilized by planning authorities (the County and seven municipalities) to ensure that development occurs in a safe manner in accordance with the Provincial Policy Statement, County Official Plan and local Official Plans.

Such flood hazard maps provide the baseline for ensuring new development is reasonably safe from the threat of flooding, and that threats for existing development are better understood to minimize flood-related impacts, before, during and after a potential flood. Over the past 6 years Essex County’s shoreline communities have often been under threat as areas within the region were significantly impacted by floodwaters associated with record rainfall and long-lasting high-water levels within the Great Lakes. During the period of 2017 through 2020 potential coastal flooding was continuously a threat creating the need for road closures in several of the local municipalities.

Better understanding of such threats through coastal flood hazard maps helps with Emergency Management as it touches each pillar within that framework: Prevention, Mitigation, Preparedness and Planning, and Response and Recover. The revisions to the County-wide natural hazard mapping will be considered in the annual updates to the County’s Emergency Response Plan and Hazard Identification and Risk Assessment (HIRA).

During 2020, ERCA in partnership with the County undertook the first step in updating natural hazard mapping with a Regional Floodplain Prioritization Study. The flood hazard identification and priority setting was the required first step toward obtaining certain funding opportunities. This mapping exercise aligned municipal growth areas (settlement areas) with natural hazards to confirm the relative risk across the region. In determining relative risks from flood hazards, the highest priority area is the shoreline followed by the inland floodplains through-out the watershed. This information proved valuable in obtaining a large grant from the federal Disaster Mitigation and Adaptation Fund (DMAF) to support flood modelling work within the City of Windsor, Town of Tecumseh, and the Town of LaSalle.

In the fall of 2022, the County was notified by ERCA that the Province had \$7.1 million brought forward through the NRCan (administered by the MNRF)

available to Municipalities, Conservation Authorities, and Indigenous Communities to be used in support of flood hazard mapping projects.

Discussion

The County, in collaboration with ERCA, submitted an application seeking matching grant funding in the amount of \$240,000. Of note, the County had approved \$200,000 over the last number of years ear-marked in past budgets specifically reserved for the flood hazard mapping updates. Additionally, ERCA is providing in-kind services equivalent to \$40,000, which was used to increase the funding request from \$200,000 to \$240,000. In September 2022, County Council directed that a letter of support be provided along with the grant application indicating regional interest and benefit to our coastal communities.

Following notice of success by the MNR for the grant funding, County Planning began working with the Procurement Division to determine the appropriate steps to secure a coastal engineering consultant to conduct this work. County Administration followed a public procurement process on Bids and Tenders with the outcome having the only interest by Zuzek Inc. It should be noted that the consultant expertise is extremely limited in this field. Additionally, Zuzek Inc. has done substantial work within this region that supports this project, including but not limited to the following:

- Lakeshore Shoreline Management Plan
- Tecumseh Shoreline Management Plan
- Leamington Graduated Risk Floodplain Assessment
- Southeast Leamington Sustainable Management Strategy

The institutional knowledge that will benefit the County by utilizing this consultant will provide a superior outcome with this mapping exercise and value for money.

Should County Council approve the award of contract in the amount of \$439,999.36 to Zuzek Inc. Administration is prepared to immediately finalize the contract and advance the work program.

The Essex Regional Coastal Flood Hazard Mapping and Data Sharing project will include a phase of communication and data sharing through-out the entire work program. The intent is that stakeholder and municipal government meetings are held in the fall of 2023 with a final presentation on the overall study findings in February or March of 2024. The work program involves the review of historical technical shoreline engineering reports; bathymetric surveys of the nearshore in the spring/summer of 2023; drone

imagery and shoreline observations; the inventory of major shoreline structures and additional related tasks.

Another component of the work program will include the development of a complex storm surge model including the requirement to assess climate change scenarios.

The final flood hazard mapping will ultimately be hosted on the County of Essex and ERCA's websites as a refined shoreline flood-prone areas layer for use by municipalities, the development community and for reference by interested residents.

Financial Implications

Zuzek Incorporated submitted a price of \$439,999.36 (inclusive of HST) to conduct this work for the County. The project is fully funded by the County's Flood Hazard Mapping Reserve and the matching grant funding contribution provided by the NRCan and the Ministry of Natural Resources and Forestry.

Consultations

The Manager of Procurement and Compliance directed the public procurement process.

The County Solicitor also reviewed the procurement process and will review the final contract proposed for this initiative.

The Director of Finance has been involved through-out all steps of this grant application to ensure proper financial procedures have been followed by County Administration.

The Director of Watershed Management Services, ERCA, has been involved through-out all steps in this project, has reviewed this report, and will assist with the on-going project management for this initiative.

Recommendation

That Essex County Council approve the award of contract to Zuzek Incorporated for the Essex Region Coastal Flood Hazard Mapping consulting services in the amount of \$439,999.36 (inclusive of HST).

Approvals

Respectfully Submitted,

Rebecca Belanger

Rebecca Belanger, MCIP, RPP, Manager, Planning Services

Concurred With,

Allan Botham

Allan Botham, P.Eng., Director, Infrastructure and Planning Services

Concurred With,

Mary Birch

Mary Birch, Interim Chief Administrative Officer

Appendix Number	Title
N/A	N/A