



Town of Lakeshore Flooding Task Force Meeting

Shoreline Management Plan

Project Overview
Nov. 12, 2019



Agenda



Project Team and Project Partners



Plan Purpose, Objectives, and Outcomes



Relationship to Other Projects



Project Workplan and Engagement



Discussion

Consultant Team

Stantec Consulting Ltd.
Stephanie Bergman

Zuzek Inc.
Peter Zuzek

Technical Advisory Group

Town of Lakeshore

Community and Development Services
Kim Darroch, Manager of
Development Services
Engineering and Infrastructure Services
Building Services

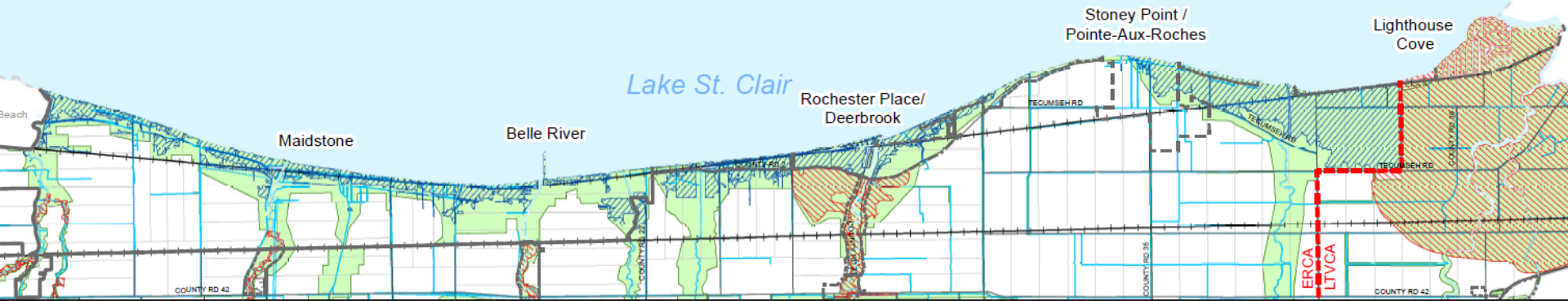
County of Essex

Essex Region Conservation Authority (ERCA)

Lower Thames Valley Conservation Authority (LTVCA)

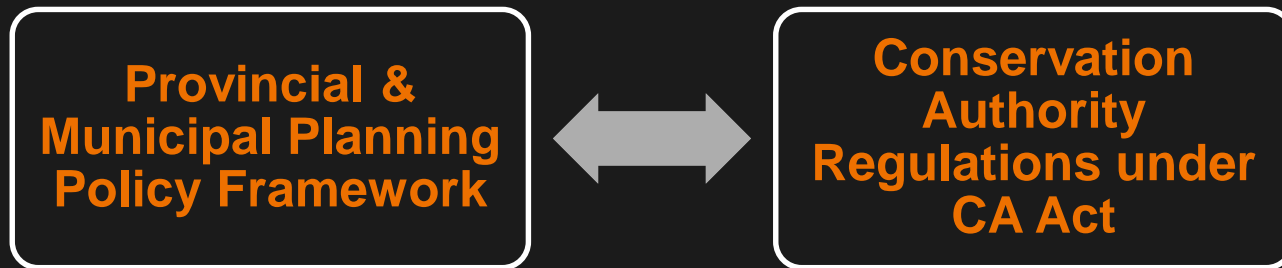


Project Team



- Existing shoreline Regulations based on floodline/erosion mapping from 1976
- Provincial policy direction
- Coordinated approach to minimize danger to public health, safety, and property

Purpose of the Plan



Official Plan Policies and
Hazard Mapping

Zoning

Building Permits

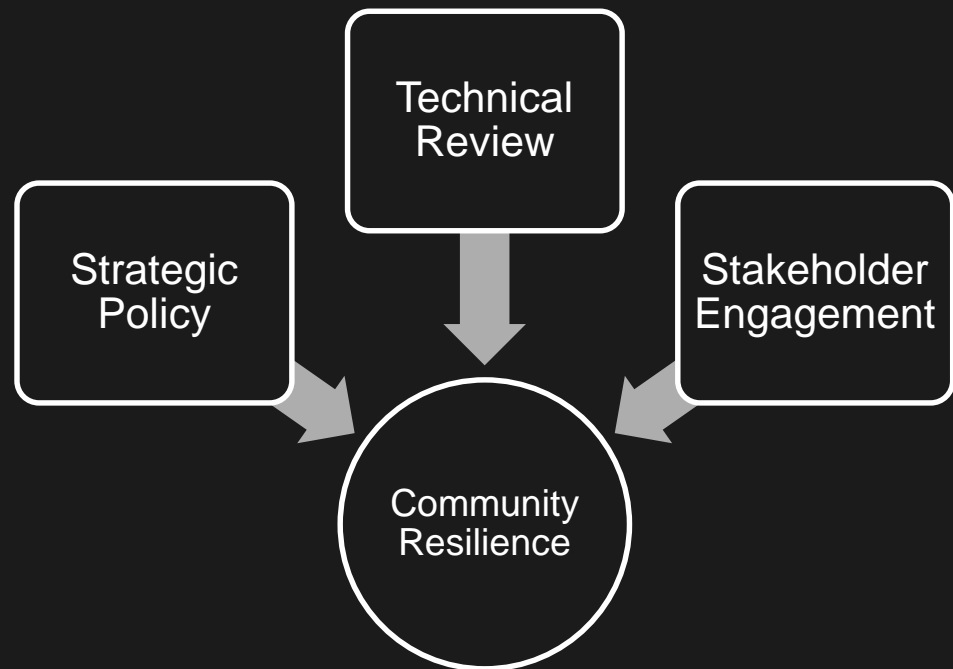
Municipal
Infrastructure

Strategic Actions

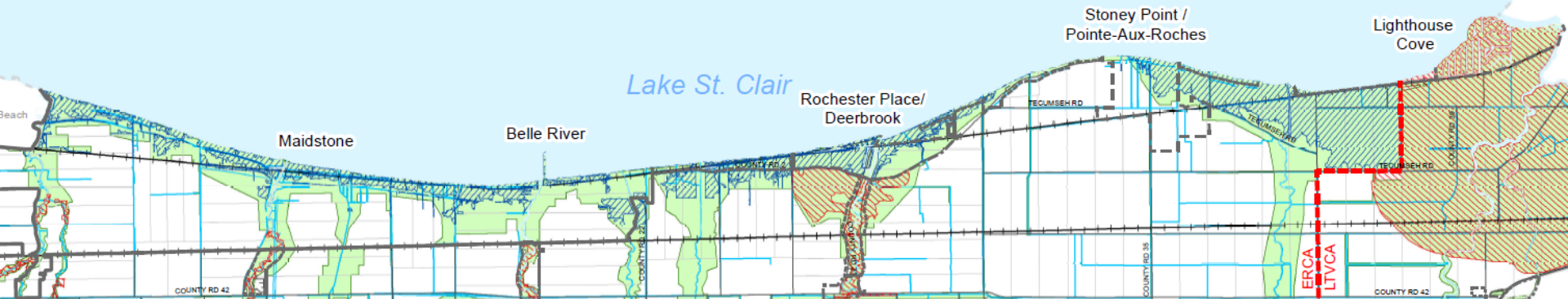
Building/Development:
Section 28 Permits

Planning and Regulatory Framework

- Complete technical assessment and produce new hazard mapping
- Update and integrate planning/regulatory policies
- Community and stakeholder engagement & education
- Create community resilience in the face of climate change



Plan Principles



Prevention



Protection



Emergency
Response



Public
Education



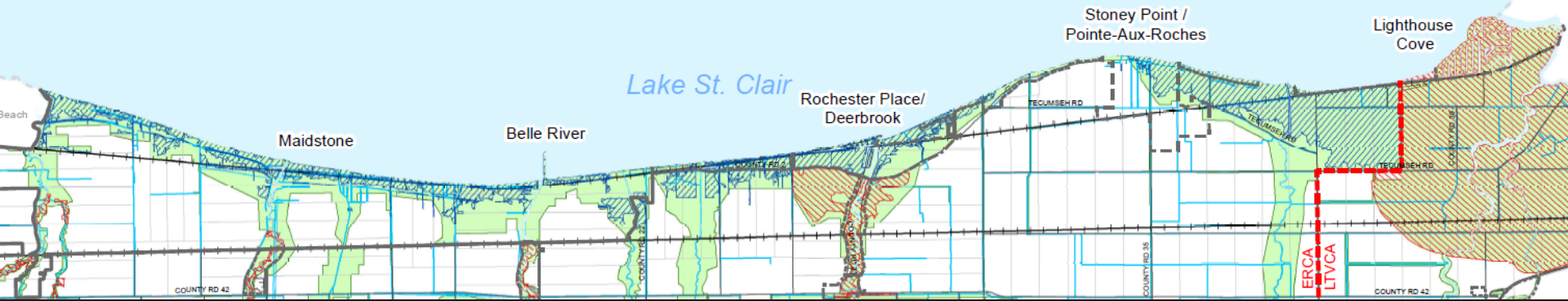
Environment



Monitoring



Plan Objectives



- Updated Shoreline Hazard mapping
- Land use and development policy updates
- Zoning regulations
- Recommendations for both public and private management approaches

Plan Outcomes

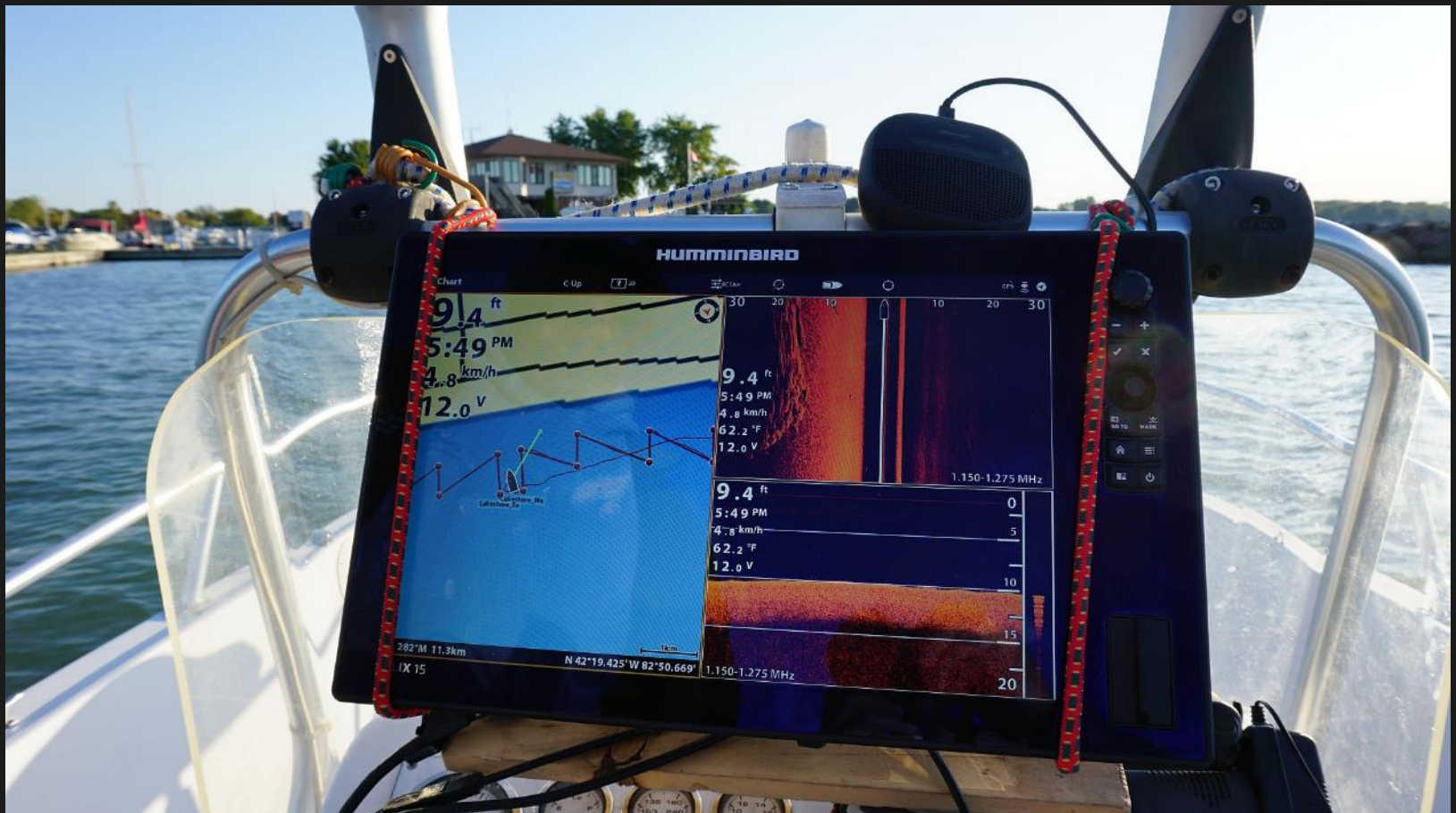


- Tracklines east of Belle River



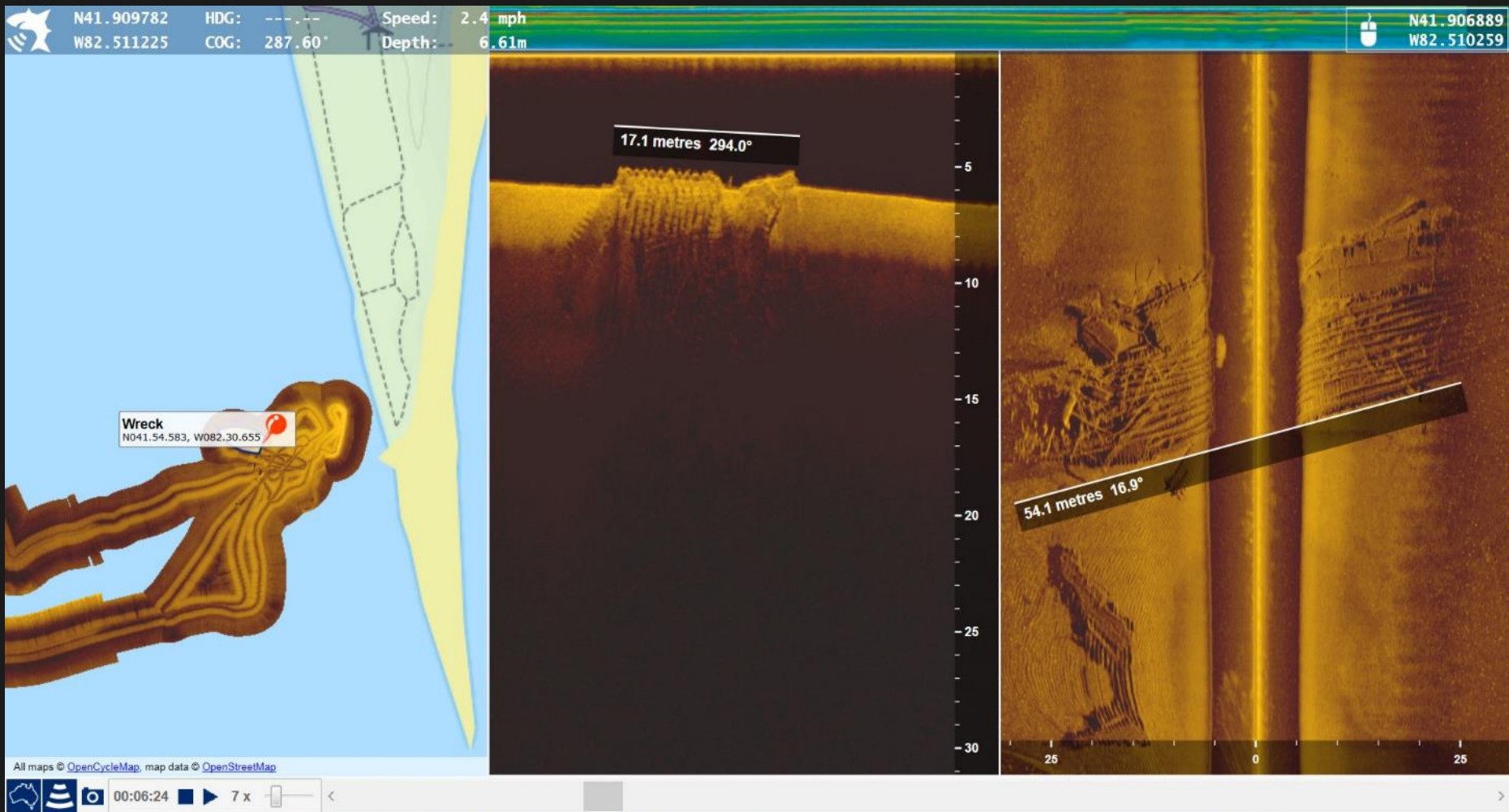
- Tracklines west of Belle River

Field Work - Bathymetry



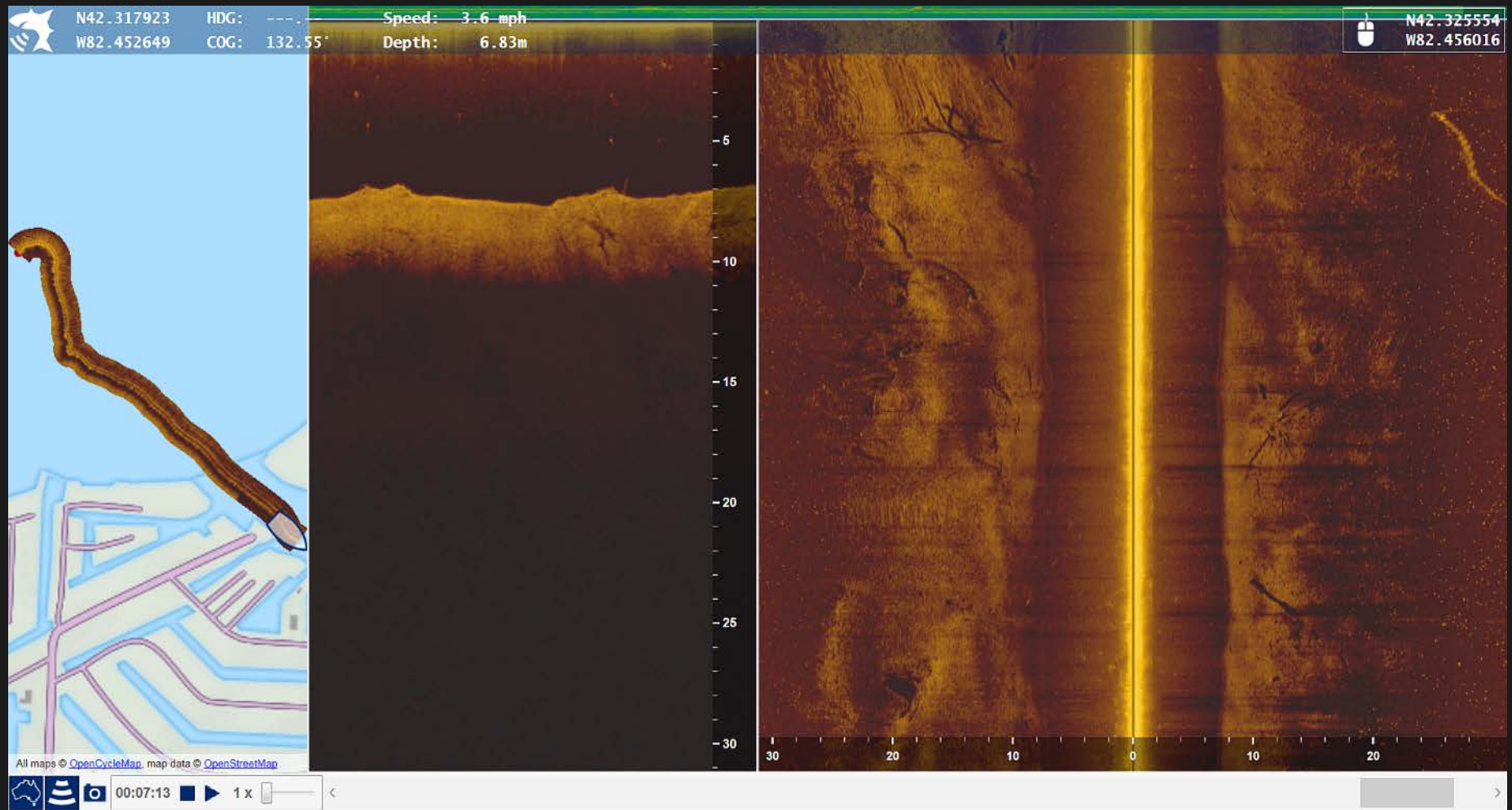
- SOLIX records water depths and sonar imagery

Field Work - Bathymetry



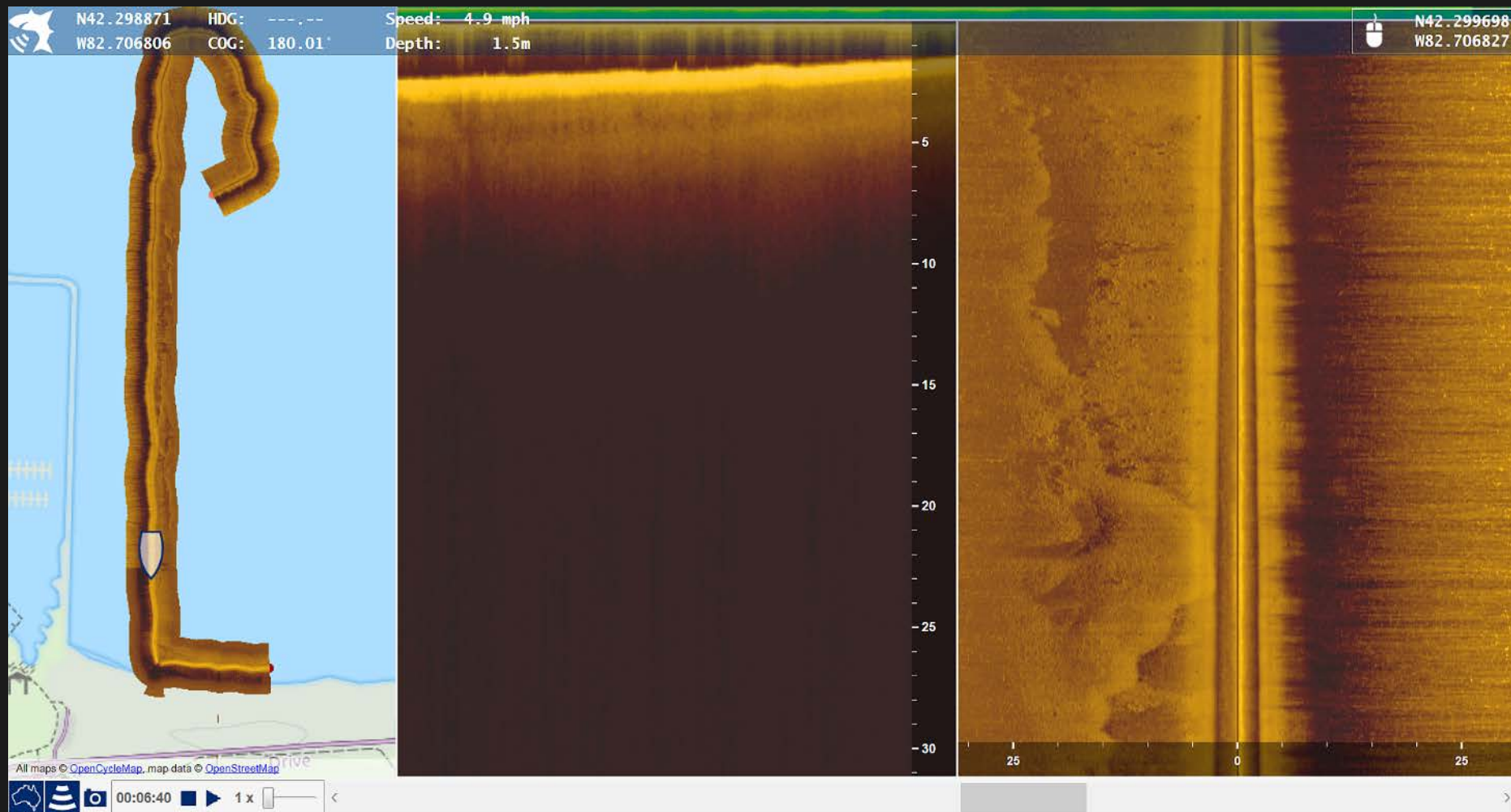
- Sample of sonar imagery (Conemaugh, Nov. 21, 1906)

Field Work - Bathymetry



- Mouth of Thames River

Field Work - Bathymetry



- Typical lake bottom profile east of Belle River Marina
- ## Field Work - Bathymetry



- No shoreline protection

Field Work – Shoreline Observations



- Nature based shoreline protection (rock and vegetation)

Field Work – Shoreline Observations



- Steel sheet pile wall (high)

Field Work – Shoreline Observations



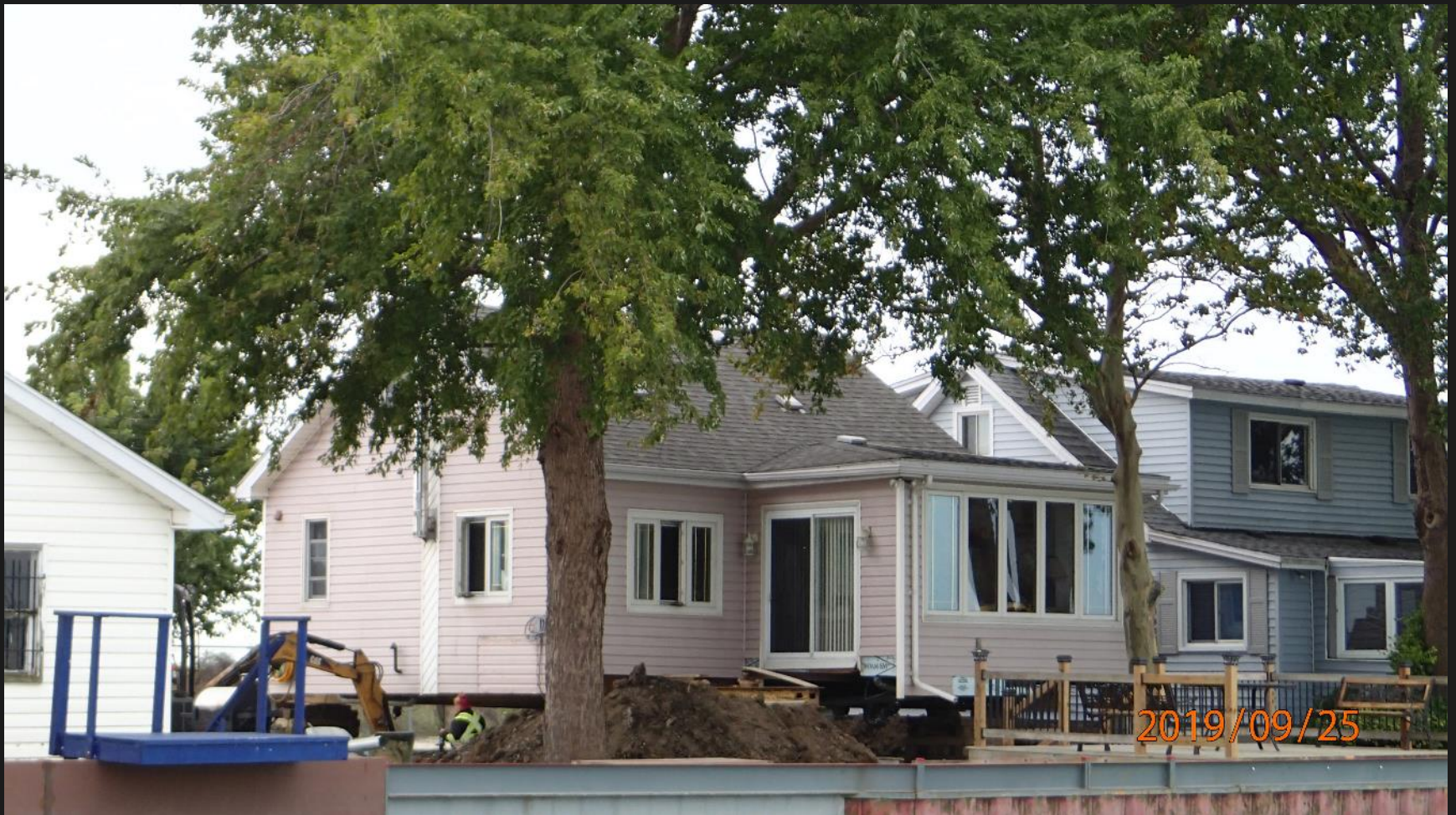
- Steel sheet pile wall (low)

Field Work – Shoreline Observations



- Low flood-prone properties

Field Work – Shoreline Observations



- House foundation being raised?

Field Work – Shoreline Observations



- Flooding of ingress and egress routes

Field Work – Shoreline Observations



- Challenges with interior drainage schemes

Field Work – Shoreline Observations

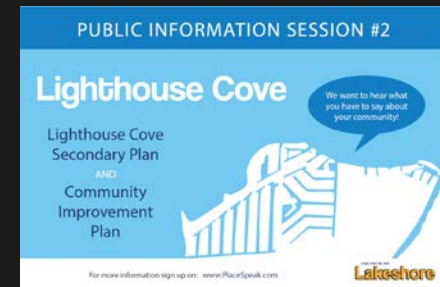
- Finalize shoreline reaches
- Evaluate existing shoreline protection approaches
- Identify high risk areas
- Public meeting

In 2020:

- Updated analysis of extreme lake levels
- Establish nearshore wave climate
- Update erosion, flooding, and dynamic beach hazards
- Generate new hazard maps to regulate development
- More public meetings and reporting

Technical Analysis – Next Steps

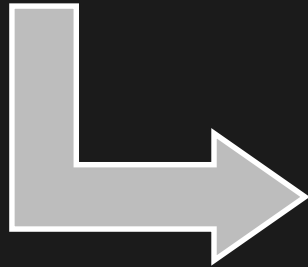
- Town of Lakeshore Strategic Plan 2019 - 2022
- Official Plan Comprehensive Review (draft Sept. 2019)
- Lighthouse Cove Secondary Plan (Ice Jam Modelling @ Thames River)



Relationship with other Projects

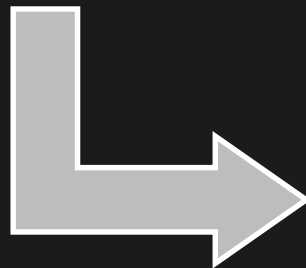
Phase 1 – Background Review and Data Collection

- Drone photography
- Lake bottom depths (via boat)
- Shore Protection Database
- Identify high risk areas



Phase 2 – Technical Analysis

- 1:100 year Flood Level
- Wave Uprush
- Dynamic Beach Assessment
- Policy Options



Phase 3 Shoreline Management Plan

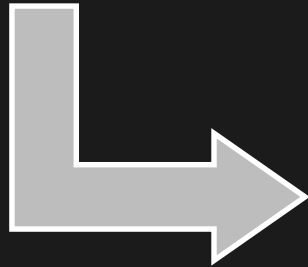
- Draft/Final Plan
- Land Use/Policy Recommendations
- Emergency Response
- Monitoring



Project Work Plan

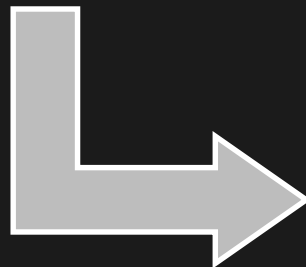
**Phase 1 –
Background
Review and
Data Collection**

- Place Speak Survey and Mapping Activity
- Public Information Centre No. 1 (**Nov. 28**)
- Summary Report/Place Speak Update



**Phase 2 –
Technical
Analysis**

- PIC No. 2
- Summary Report/Place Speak Update



**Phase 3
Shoreline
Management
Plan**

- PIC No. 3
- Draft/Final Shoreline MP



Engagement Plan



Questions?

Question:

- What, in your opinion, is the greatest challenge facing the shoreline residents and communities in the short/long term?



Discussion

Question:

- What, in your opinion, is the greatest challenge facing the decision makers of the **Town of Lakeshore** with respect to the Lake St. Clair shoreline in the short/long term?



Discussion

Question:

- When making decisions about how to mitigate the impacts of flooding and erosion along the shoreline, what do you think should be the most important?



Discussion

Thank you!
Please sign up at
www.lakeshore.ca/Placespeak