

# Ausable Bayfield Conservation Authority – Shoreline Management Plan Update



Steering Committee Meeting: Thursday, May 12<sup>th</sup>, 2016 (10:00 – 3:00)

# Our Agenda

Marks of Success for Today...

Time	Details	Lead
9:30	Official Welcome <ul style="list-style-type: none"> <li>• Recap of Project Overview &amp; Anticipated Outcomes</li> <li>• Round Table Introductions</li> </ul>	Alec Scott, Water & Planning Manager, ABCA
9:40	Meeting Purpose & Objective <ul style="list-style-type: none"> <li>• Meeting Structure &amp; Logistics</li> <li>• Participant Marks of Success</li> </ul>	Karen Wianecki, Director of Practice, Planning Solutions Inc.
9:45	Progress Update Since the Inaugural October Steering Committee Meeting <ul style="list-style-type: none"> <li>• Synopsis of Progress in Several Key Areas</li> <li>• Identification of Tasks Underway (River Dredging, Shoreline Protection Works Discussion Paper, Landowner Fact Sheet)</li> <li>• Questions &amp; Comments from Participants</li> </ul>	Alec Scott & Karen Wianecki
10:00	Recession Rate Calculation – Initial Results <ul style="list-style-type: none"> <li>• Overview of Methodology</li> <li>• Initial Results</li> <li>• Questions &amp; Comments from Participants</li> </ul>	Robin Davidson-Arnott
10:45	Refreshment Break	
11:00	Climate Change – Anticipated Impacts On Coastal Processes Affecting the Shoreline of ABCA <ul style="list-style-type: none"> <li>• Overview of Methodology</li> <li>• Notable Observations &amp; Conclusions</li> <li>• Questions &amp; Comments from Participants</li> </ul>	Robin Davidson-Arnott
12:00	Lunch (Provided)	

12:45	Structures in the 3:1 <ul style="list-style-type: none"> <li>• Overview of the Issue</li> <li>• Outline of ABCAs Go Forward Strategy</li> <li>• Key Decision Required: Direction from Steering Committee is required: What will we recommend to the ABCA Board of Directors?</li> </ul>	Alec Scott
1:45	Updated Shoreline Management Plan <ul style="list-style-type: none"> <li>• Draft Table of Contents</li> <li>• Overview of Deficiencies From Inaugural Meeting</li> <li>• Questions &amp; Comments from Participants</li> </ul>	Karen Wianecki
2:15	Overview of Updated Engagement Strategy <ul style="list-style-type: none"> <li>• Steering Committee Engagement</li> <li>• Municipal Engagement</li> <li>• Community Engagement</li> <li>• Proposed Timing for the Public Information Sessions</li> <li>• Questions, Comments &amp; Suggestions</li> </ul>	Karen Wianecki
2:40	Comments/Questions from Observers? Additional Items for Discussion?	All Participants
2:55	Key Learnings <ul style="list-style-type: none"> <li>• Next Steps &amp; Where To From Here</li> </ul>	Karen Wianecki
3:00	Meeting Concludes	Alec Scott

# Meeting Purpose & Objectives

- To provide a status update on the progress since the initial Steering Committee meeting, including:
  - Recession Rate progress
  - Climate Change – Anticipated Impacts
  - Shoreline Stability Issues & Opportunities - Steering Committee Recommendation Required
- To share draft material developed to date and to obtain feedback from Steering Committee members:
  - Second Community Newsletter
  - Riparian Landowner Fact Sheet
  - Draft Table of Contents for the Updated Shoreline Management Plan
- To discuss municipal and community engagement updated process and timelines for community meetings.
- To allow any observers to ask questions or raise issues at the end of the meeting.
- To discuss next steps.

# Brief Overview

Our Team & Project Scope of Work

# Consulting Team – Brief Overview

**Planning Solutions Inc.**

**Karen Wianecki  
(Project Lead)**

Stakeholder Engagement &  
Facilitation  
Provincial Policy Expertise  
Report Writing

**Aqua Solutions 5  
Judy Sullivan**

(Integrated Shoreline Management,  
CA Regulations (Flooding Erosion,  
Dynamic Beach and Slope Stability  
Hazards), Provincial Policy and  
Technical Guidelines for Shorelines of  
the Great Lakes, Structural Assessment  
and Coastal Engineering)

**Dr. Robin Davidson-Arnott**

(Coastal Geomorphology,  
Beach/Dune Interaction, Erosion of  
Cohesive Shorelines) Provincial Policy  
and Technical Guidelines for Shorelines  
of the Great Lakes

**University of Guelph  
Adam Bonnycastle**

(Geomatics, Spatial Analysis, Erosion  
and Recession Rate Hazard)

**Dr. Ryan Mulligan  
Queen's University, Civil Engineering**

(Coastal Engineer &  
Oceanographer, Numerical  
Modelling, Dredging, Climate  
Change Analysis and Coastal  
Process expertise)

**Michael Tanos, P. Eng.,  
Billy Singh,  
Terraprobe**

(Geotechnical Hazards, Review  
of shoreline slope stability and  
geotechnical issues, if required)

# Project Work Plan, Timeframe & Deliverables

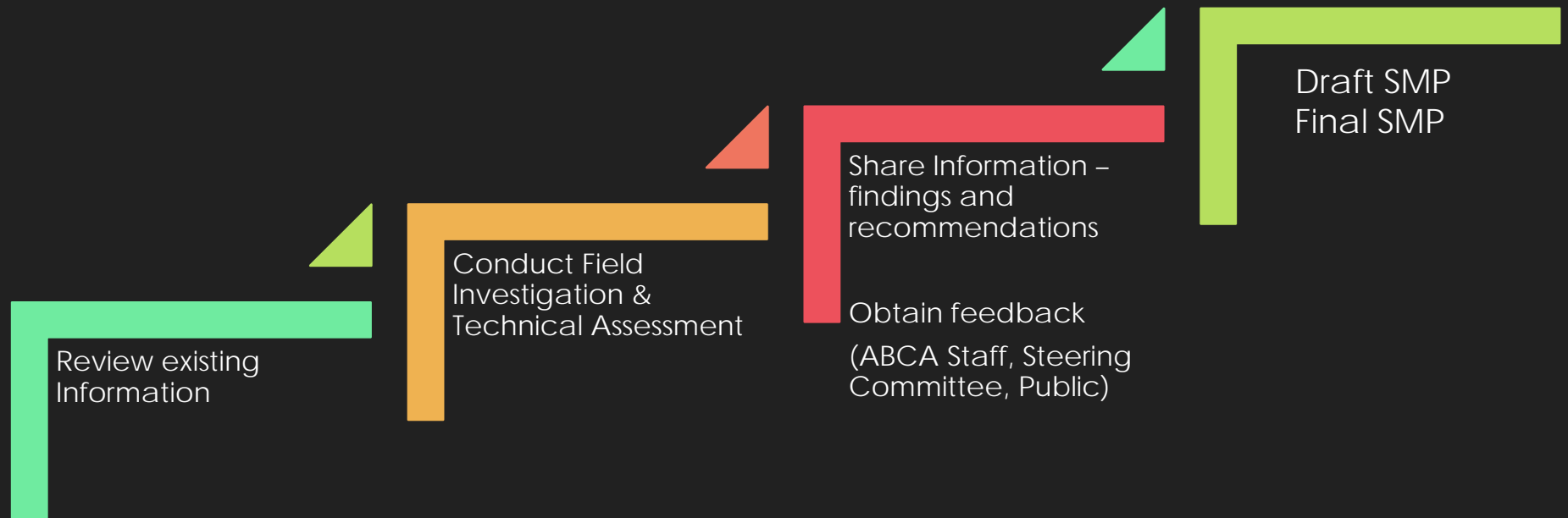
- Time frame: Shoreline Management Plan completed by November 2016 (Approximately 16 months)
- Deliverables: Updated Shoreline Management Plan for that portion of the shoreline that falls under ABCA's jurisdiction
- Proposed Approach:
  - Logical
  - Iterative
  - Straightforward
  - In keeping with the prescribed requirements of the RFP



# Key Tasks

- Review existing mapping and aerial photography, historical and recent erosion data and documentation
- Review available information and determine a defensible and updated long term erosion rate (100 year) for the ABCA shoreline
- Review available data and provide a technical position on shore protection and its impact on shoreline processes and long term erosion
- Review available information and provide a general assessment on harbor dredging along the ABCA shoreline
- Brief discussion on the impacts of climate change on shoreline process
- Facilitate Steering Committee and Public Meetings as well as Technical Presentations
- Provide technical expertise as required
- Draft Report outlining key findings and recommendations for updating the Shoreline Management Plan
- Draft & Final Shoreline Management Plan

# Proposed Approach



# Steering Committee Meetings

4 Meetings:

Meeting	Purpose
1	Review & approve Terms of Reference Review & endorse Engagement Strategy Review draft materials (FAQ, Community Survey) Identifications of issues, concerns & existing SMP enhancements needed SC as Champions of the Process – Call to Action
2	Share Early Findings and Technical/Expert Recommendations
3	Plan for Public Meetings
4	Review Draft SMP

9:45 – 10:00  
Progress Update

Karen Wianecki & Alec Scott

# Progress Update

- Progress realized in a number of key areas...
  1. Recession Rate Calculation (Robin to provide an update)
  2. Climate Change Impacts on Lake Huron Coastal Process (Robin to provide an update)
  3. Slope Stability Issues Discovered (Alec Scott to provide an update) – Steering Committee Recommendation is Required.

# River Mouth Dredging

- Issues relating to river dredging in three locations:
  - Port Franks
  - Grand Bend
  - Bayfield
- Policy direction is needed in a number of areas (e.g. removal/retention of spoils, etc.)
- Judy Sullivan working with Dr. Ryan Mulligan to review location and specific dredging details – ABCA to provide location and dredging details.
- Discussion Paper and recommended policy approach to be forthcoming...stay tuned.
- Potential Timing: June.

# Shoreline Protection Works

- Update policy/position on shoreline protection works considering current science
- Do we...
  - Permit none?
  - Permit some?
  - Permit all?
  - Have a different approach for construction of new works and repair of existing?
- Discussion Paper and recommended policy approach to be forthcoming...stay tuned.
- Possible Timing: June.

# Early Warning Fact Sheet for Property Owners – Shoreline Stability Issues

- Terraprobe retained to develop a Landowner Fact Sheet
- Letter of Undertaken between ABCA & Terraprobe to be signed
- Work to commence on the Fact Sheet
- Anticipated Timing: May
- Fact Sheet to be developed first in draft and reviewed by Project Committee (ABCA & Consulting Team)
- To be uploaded to ABCA website
- Fact Sheet to provide important information to landowners about what to look for as early warning signs of potential slope failure.



10:00 – 11:00  
Recession Rate Calculation

Dr. Robin Davidson-Arnott

11:00 – 12:00

# Climate Change & Potential Impacts of Lake Huron Coastal Process

Dr. Robin Davidson-Arnott

12:00 – 12:45  
Lunch

Enjoy!

12:45 – 1:45  
Slope Stability Issues

Alec Scott

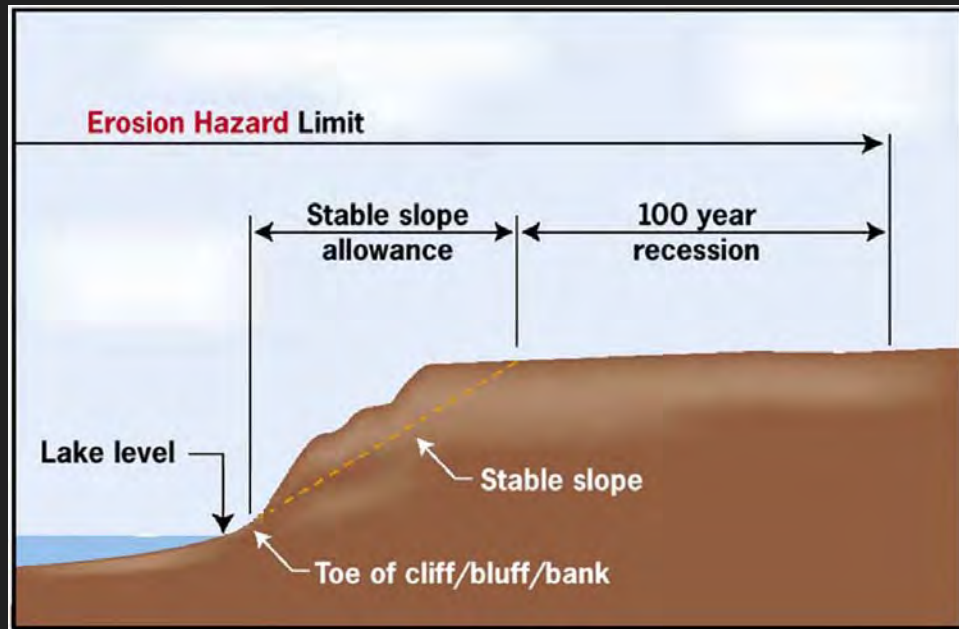
# Slope Stability Issues

## The Issue:

Whether and how to address potential significant concerns about the number of structures currently located in the Lakeshore Area 1, north of Grand Bend. **A recommendation by the Steering Committee to the ABCA Board of Directors is required.**

- After a field review of the ABCA shoreline, the consulting team has expressed significant concern about the number of dwellings that were within Lakeshore Area 1 in the bluff area north of Grand Bend.

# Schematic showing erosion hazard limit...



# Slope Stability Issues (continued)

- A detailed investigation of the degree of risk was not part of the scope of work assigned to the consulting team - if this issue arose in the context of their work, Terraprobe was identified in the original Proposal submission.
- Unsolicited Proposal received from Terraprobe (attached to your Agenda material)
- Terraprobe proposing two-phase approach:
  - *Phase 1: A desktop review of the available information (topographic maps provided by the client, aerial photographic data and published geological subsurface information comprising shoreline slopes) and consultation with Aqua Solutions 5 Inc. to identify the Areas of Concern within the study limits requiring further assessment.*
  - *Phase 2: A higher level review of the available information for the Areas of Concern in conjunction with site visit, slope mapping, site measurements of the setbacks of selected structures from the existing crest, and consultation with Aqua Solutions 5 Inc., to categorize zone of Significant (Zone of Pending Failure) and Zone of Higher Slope Instability Risks.*

# Slope Stability Issues (continued)

- ABCA undertook a mapping exercise (no field work verification) and found...

Distance to Top of Bank	Total Number of Dwelling Units	Total Number of Accessory Buildings/ Structures	Total Buildings	Additional Comments
5 m	108	126	234	Structures within 5 metres of the top of bank are <u>generally scattered along the shoreline</u> rather than being clustered in specific subdivisions.
10 m	153	55	208	Structures within 10 and 15 metres of the top of bank are <u>generally clustered in specific subdivisions</u> rather than being scattered along the shoreline.
15 m	274	83	357	



# Slope Stability Issues - Options

- 3 Options:

1. Do Nothing
2. Do Something
3. Do Everything

# Option 1: Do Nothing to Address The Concern

- Do nothing to address the potential risk and carry on with the SMP update.
- Number of pros and cons...

Pros	Cons
No additional cost to ABCA.	Does not provide ABCA or landowners with required information about the level of risk.
Allows the SMP to proceed as proposed.	

# Option 2: Do Something

**A. *Communication & Awareness:*** As part of the SMP project, communicate the slope stability risks to shoreline property owners and educate property owners and municipalities. This would include a press release on the current erosion and slope stability risks along the shoreline as well as the development of an “Early Warning” Fact Sheet for shoreline bluff property owners. The Fact Sheet will be developed by Terraprobe and will provide information about the early warning signs that property owners should be looking for that may indicate slope stability issues and concerns. Please note: a Press Release has already been issued by ABCA. In addition, ABCA provided direction to PSI on May 4<sup>th</sup> confirming that Terraprobe is to be retained to complete the Landowner Fact Sheet. Estimated cost for the Fact Sheet = \$1200.00 - \$1500.00. Work will commence immediately to develop the Fact Sheet.

**B. *Initial Investigation:*** Carry out an initial assessment of the degree of risk based on the scope of work define in Phase 1 of the Terraprobe proposal. Estimated cost = \$10,000.00 plus applicable taxes.

## Option 2 – Pros & Cons...

Pros	Cons
Would enable ABCA to provide important but generalized risk-based information to landowners and community members.	Does not provide specific details or information regarding the degree of risk on a property specific or area wide basis. Would not define the limits of any areas currently at immediate risk.
The initial investigation option would provide additional insight and information for ABCA, municipalities and landowners regarding the degree of risk.	<p>Does not provide a detailed assessment of areas of concern.</p> <p>Requires additional funds to be allocated either for the development of the Fact Sheet or the Phase 1 assessment.</p> <p>May impact timing for delivery of updated SMP.</p>

# Option 3: Do Everything

- *Do everything* – increase the scope of the current consulting contract to include the detailed assessment (Phase 1 and Phase 2) by Terraprobe. Additional cost = \$29,000.00 plus applicable taxes.
- Number of pros and cons...

Pros	Cons
Would provide ABCA, municipal partners and landowners with comprehensive information about the degree of risk.	Requires additional funding.
Would provide solid evidence to support an updated policy platform.	
Would ensure that all parties (including community leaders, landowners and regulators) have the same updated information.	May impact the timing for delivery of the updated SMP.

# A Steering Committee Recommendation Is Required...

What Option Do You Collectively Support?

1:45 – 2:15

# Updated Shoreline Management Plan

Draft Table of Contents

## Draft Table of Contents

### **1.0 BACKGROUND & CONTEXT**

#### 1.1 Study Background

1.1.1 Study Purpose, Objectives & Principles

1.1.2 Study Limits, Approach & Methodology

1.2 Why An Updated Shoreline Management Plan is Needed: Overview of Existing & Emerging Issues and Opportunities

#### 1.3 Policy & Legislative Context

##### 1.3.1 Policy Platform

- Ontario Provincial Policy Statement (MMAH, 2014)
- County Official Plan
- Technical Guide for the Great Lakes – St. Lawrence River System and Large Inland Lakes

##### 1.3.2 Legislative Platform

- Planning Act
- Conservation Authorities Act
- Ontario Regulation 97/04
- Individual CA Generic Regulations



## **2.0 TECHNICAL ANALYSIS**

2.1 ABCA Shoreline Description (Consolidated Version)

2.2 The ABCA Shoreline - Field Observations

2.3 Recession Rates

- Published Historical Rates
- Recession Rate Calculations
- Adopted Recession Rates for Setback Planning

2.4 Evaluation of Lake Levels

2.5 Slope Stability Considerations

## **3.0 SHORELINE HAZARDS**

3.1 Understanding Shoreline Hazards: An Overview

3.2 Erosion Hazard

3.3 Flooding Hazard

3.4 Dynamic Beach Hazard

## **4.0 ADDRESSING SHORELINE HAZARDS**

- 4.1 Overall Management Philosophy & Approach
- 4.2 Addressing the Erosion Hazard
- 4.3 Addressing the Flooding Hazard
- 4.4 Addressing the Dynamic Beach Hazard
- 4.5 Addressing Areas Subject To More Than One Hazard
- 4.6 Protection Works
  - 4.6.1 Bluff Stabilization Works
  - 4.6.2 Shore Protection Works
- 4.7 Emergency Response Considerations
- 4.8 Best Management Practices
  - 4.8.1 Riparian Landowners
    - Non-Structural Slope Management Practices
    - Dune Beach Management Practices
- 4.9 River Mouth Dredging

## **5.0 ADDITIONAL REFERENCES & RESOURCES**

### **APPENDICES**

- Appendix A: ABCA Hazard Maps
- Appendix B: Statistical Analysis of Recession Data
- Appendix C: Climate Change – Anticipated Impacts – Discussion Paper
- Appendix D: Shore Protection Works Discussion Paper
- Appendix E: Community Engagement Process: An Overview

# Deficiencies & Gaps: Current Plan

- Policies were developed for small scale development – nature of development and growth across the watershed is changing (complexity is increasing; demands are escalating). Policies need to address the larger scale of development that is now common place.
- Lakeshore Area 1 & Area 2 – developed more than 20 years ago. Do we need more definitive language(e.g. flooding hazard, erosion hazard).
- SMP Update needs to use clear definitive language – not open to interpretation
- Fill policy gaps
- Policies need to reflect existing Provincial Policy as well as current legislation and regulations.
- Steering Committee to have provided any additional comments by January 15<sup>th</sup>, 2016.

# Updated SMP

- First Draft: end of May/early June
  - Share with Project Committee & ABCA Staff first
  - Share with Steering Committee second
  - Share with ABCA Board (for information)
  - Share with Municipal Partners
- Obtain feedback and prepare 2<sup>nd</sup> Draft
- Secure Steering Committee endorsement and ABCA endorsement to post to the website
- Draft #2 = Presented to the Community (Information Sessions)
- Input received on Draft #2 and revisions made
- Final SMP Update Prepared
- Reviewed by Project Team & Steering Committee
- Forwarded to ABCA Board of Directors for endorsement

2:15 – 2:40  
Community & Stakeholder  
Engagement

Update: Suggested Approach & Timing

# Proposed Engagement Strategy

- Multi-faceted approach
- Regular meetings with the ABCA Project Team
- 4 meetings over the course of the project with the Steering Committee, as outlined
- Broader Community Engagement...
  - Rather than host two Public Meetings to allow community input, we have opted for a Community Survey with notice being provided to a list of ABCA stakeholders that the SMP update is underway and providing a direct link to the web survey
  - ABCA list of stakeholders (Government, Industry & Community)
  - Meet when we have information to share
  - Offer equitable access to anyone with an interest in providing their thoughts
  - Pop Up Events – once the SMP is available – What festivals are planned for July & August?
  - Demonstrate to the broader community how input has made a difference – What Did We Hear & How Has This Shaped the Outcome?
  - Recommend Public Meetings once the Technical Assessment has been completed and a draft SMP has been developed
  - Use the ABCA website to post regular project updates

# Who Are We Targeting?

- Those affected by the SMP
- Those with the ability to implement
- Those with the ability to impede implementation
  - Existing shoreline landowners concerned with protecting their shoreline properties through repairs, replacement and/or upgrades to existing structures or to increase their shoreline investment through work on existing structures or new development
  - Potential shoreline property owners
  - Organized stakeholders interested in watershed management and shoreline protection
  - Municipalities
  - Regulatory partners (MNRF, CAs)
  - Others

# What Are Our Objectives?

- Build awareness, knowledge and understanding that the process is underway and why an updated SMP is needed – for ABCA and its partners and clients
- Secure early insight about current issues, concerns and opportunities
- Promote information sharing and idea generation
- Create connections and build interest
- Create a sense of shared purpose and support for the process and the product



# Community & Stakeholder Engagement – What Have We Done?

- Background Explanatory Information: FAQ/Backgrounder
- Community Based Survey (N= 68)
- Community Newsletter #1
- Community Newsletter #2 (Draft)
- Press Release – Issued by ABCA (Slope Stability)

# Community & Stakeholder Engagement – What Needs to be Done?

- Meeting with Municipal planners and by-law enforcement officers (e.g. front line staff) to review possible policy approaches
- Community Meetings (for bluff and dynamic beach situations)
- Pop-Up Events in July & August – ABCA staff to coordinate. Steering Committee members to assist...
  - ARE YOU AWARE OF ANY FESTIVALS OR COMMUNITY EVENTS THAT COULD OFFER A PLATFORM TO PROFILE THE DRAFT SMP?
- Early Warning Fact Sheet for Riparian Property Owners (in development through Terraprobe)

# Community & Stakeholder Engagement – Where To From Here?

Suggest the following schedule:

- May: Develop Draft SMP update and share with Steering Committee, ABCA Board of Directors and then municipal partners
- May/June: Meet with Watershed Municipalities – to discuss policy approaches that make sense and that are aligned with existing provincial policy direction
- June: Receive input and revise the SMP – Second Draft end of June/early July (Draft #2)
- Reviewed by Steering Committee and recommended to ABCA Board to upload Final Draft SMP to ABCA Website
- July: Updated Community Newsletter released and Community Information Sessions scheduled and notification of same published on ABCA website and in local newspapers (Suggest 2 (one for bluff; one for dynamic beaches) – Is this appropriate? Any suggestions for change?
- Early August: Community Information Sessions
- Input on the Draft SMP over August and revisions to the Draft
- September: Updated SMP Prepared & Presented to Steering Committee for endorsement.
- October: Proceeds to ABCA Board of Directors for approval.

# Ongoing Efforts - Newsletters

Newsletter	Timing	Suggested Details
2	Spring 2016	Technical Progress; Recession Rate Methodology; Climate Change Impacts on Lake Huron Coastal Process; Slope Stability
3	Early Summer 2016	Project Status Update ; Early Findings; Dates for Public Meetings;
4	Late Summer 2016	Outcome of Public Meetings; Key Learnings; Next Steps
5	Fall 2016	Highlights of Draft Shoreline Management Plan How Community Input has shaped the Plan Opportunities to offer additional comments on the Draft
6	Winter 2016	Thank You to all who participated; Link to the Final Plan

# Formal Public Meetings

- To be convened when we have information to share
- Suggested Timing: Summer 2016 - August
- Meetings to be interactive :
  - Meeting Marketplace
  - Global Café Conversations
  - Information Booths
  - Opportunities & Priorities Station



# What Do You Think?

Questions, Comments, Suggestions?

2:40 – 2:55  
Questions & Comments from  
Observers

Any Deputations?

**Thank You!**

We Look Forward to Continuing To Work With You...Thank You So Much For Your Time Today!