

Tantramar Climate Change Adaptation Collaborative



Reducing Flood Risk

Saturday, January 20, 2018
Maritime Conference Centre, 21 Wright St.

Workshop Report

By Amanda Marlin, EOS Eco-Energy
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Background

The Tantramar Climate Change Adaptation Collaborative (TCCAC) is a network of 80+ professionals working on climate change adaptation and addresses impacts at the regional level across Tantramar-Memramcook, NB and Cumberland County, NS since 2012. The Collaborative includes planners, GIS analysts, university researchers, non-profits such as Ducks Unlimited Canada and Nature NB, municipal staff and councillors, emergency measures coordinators, and representatives from provincial and federal governments. The Collaborative also includes those with a focus on emissions reduction and sustainable energy use like EOS Eco-Energy. EOS is also the coordinator of the Collaborative. The Collaborative created a regional adaptation plan which is updated annually and advanced by its working group of about 15 members.

The Collaborative's working group organizes a workshop each year. Depending on the content, sometimes it is just for the Collaborative and sometimes for the wider public. For example, last year's workshop was solely for the Collaborative because it was a 5-year review and planning session. This year the working group decided to offer its annual free workshop to the public with a focus on educating local residents about adapting to and mitigating climate change, specifically ways to reduce flood risks. The Tantramar-Memramcook and Cumberland regions are low-lying and have witnessed numerous freshwater floods over the past few years.

Reducing Flood Risk

The *Reducing Flood Risk* workshop was hosted by the Tantramar Climate Change Adaptation Collaborative on Saturday, January 20th, 2018 from 9am to 1pm at the Maritime Conference Centre in Sackville, NB. More than forty people attended from across the Tantramar region, Cumberland County and southeast New Brunswick including members of the public, planners, researchers, local municipal councillors from Sackville, Cap Pele and Beaubassin Est, as well as representatives from local emergency measures organizations, New Brunswick government, non-profits, Mount Allison University, Université de Moncton, and community organizations. We were also joined by members of the media from the Wark Times and Radio Canada.

The Presentations

Sabine Dietz, member of the working group and President of Aster Group, was the master of ceremonies for the morning and welcomed everyone. She also provided background on the TCCAC and introduced the speakers. The workshop consisted of 5 presentations and a discussion panel. The event also included information booths by Town of Sackville, Cumberland County EMO, EOS Eco-Energy, and Nature NB. The three-hour workshop was recorded by Wade Settle Connections and turned into 6 separate videos (one per presentation plus the discussion panel) which will be available on the EOS Youtube Channel (https://www.youtube.com/channel/UC4UJaDRkpCUme9miBDFME_g) by end of March 2018. A brief summary of the presentations is offered below.

Serge Dupuis, Professor of Civil Engineering, Université de Moncton ***Adapting Infrastructure in a Changing Climate***

Serge gave the opening keynote address and set the stage for the rest of the morning. He talked about why inland flooding is changing and the extreme weather we are now seeing including heavy rain and rapid snow melt. He explained that our existing infrastructure was built for a previous climate and not the extremes we see now. He gave an introduction to hard and natural approaches and how they can be married together.

Jamie Burke, Senior Manager of Corporate Projects, Town of Sackville ***Lorne St. Mitigation Project***

Jamie explained the flood risk reduction project taking place on Lorne St. in Sackville, NB. The funding for this project came in part because of the town's corporate adaptation plan which EOS helped to coordinate. The plan helped to prove the need for funding for the project. Jamie explained that phase 1, now complete, included underground work to improve and enlarge pipes and ditches. The 2nd phase will include holding ponds and phase 3 will be a naturalized stormwater pond. The Town is currently working with a landscape architect to design the pond. A new aboiteau will also be needed to allow the stormwater to drain into the Bay of Fundy. The Town hopes to begin phase 2 this winter and is currently undergoing an environmental impact assessment for the project.

Adam Campbell, Head Conservation Delivery Atlantic, Ducks Unlimited Canada
Naturalized Approach to Stormwater Management

Adam explained how wetlands function and their benefits including limiting flooding and filtering pollutants. He also said that Ducks Unlimited Canada's Native Plant Solutions division designs and builds naturalized stormwater ponds. Such ponds differ greatly from "water jails" which look like empty holes during dry periods and deep ponds that fill up with water and need to be fenced off. Naturalized ponds mimic nature and include a wetland plant zonation which DUC staff will hand plant with a variety of appropriate plants. It can take 3 years to have a fully functional wetland retention pond. Adam also provided a local example from Fairview Knolls in Moncton. The naturalized stormwater pond not only helps limit flooding but also provides an urban wetland connection and increased lot values around the pond.

Adam Cheeseman, Climate Change Projects Officer, Nature NB
Hold it, Slow it, Absorb It: Reducing Flood Risk with Nature

Adam explained how nature can help reduce flood risks. He explained how watersheds work and mentioned EOS Eco-Energy's new Chignecto Watersheds Committee which will be monitoring water quality across the Chignecto Isthmus. He went on to explain that nature offers food, medicine, clean water, clean air, erosion control, flood control, etc. Wetlands act as sponges, absorbing water and filtering out toxins. Forests also help to hold water. Adam mentioned Middlebury, Vermont as an example of a small town that is incorporating natural and conventional methods for flood risk reduction. Adam also said that natural approaches can be less costly than more traditional methods.

Amanda Marlin, Executive Director, EOS Eco-Energy
Reducing Flood Impacts at Home

Amanda said that everyone needs to worry about flood risks. Your own home could be impacted, or you could be cut off from town, or vital services could be impacted in your community. She went on to explain how to prepare for flooding both inside and outside your home such as elevating valuables and hazardous materials, clearing storm drains, decreasing hard surfaces and planting rain gardens. She also stressed the importance of family flood plans and having an emergency kit. She listed what to include in a kit such as food, medicine, water, first aid kit, tools, toilet paper and personal hygiene items, etc. She explained it is important to have both a "shelter in place kit" and a "go kit" for when you may need to evacuate in a rush. Amanda explained how to clean up safely after a flood and wrapped up with information on flood insurance and noted that overland flood coverage is now available in our region. She stressed that it is important to be prepared, not scared.



Participants listen to presentations during the workshop. Photo A. Marlin

Panel Discussion

A panel discussion was held at the end where participants could ask presenters any remaining questions. One question focused on how to collaborate with municipal officials and the benefits of doing so. All presenters agreed that while sometimes collaboration can seem difficult or that groups don't always see eye to eye, the end result is better. Presenters also mentioned a desire to work together, and help each other. Some groups are able to fill in the gaps and do things that municipal governments just don't have the time or resources to do. It was agreed that collaboration is crucial for climate change adaptation.

The discussion wrapped up with a door prize draw consisting of an EOS winter toque, EOS beeswax candles and a flood alarm monitoring system which went to a resident of Shediac.

Evaluations

At the end of the workshop and before the lunch (which was provided by the Black Duck Café), participants were asked to fill in evaluation forms. Thirty-one people filled out the forms. All of them rated the overall event as a 4 or 5 out of 5. Twenty-three out of 31 said they felt they now know more about flood risks than before the workshop. The rest had a high level of understanding to begin with (4 or 5 out of 5). Most (23 out of 31) also felt more prepared for flooding as a result of attending the workshop. And 29 said they were likely or very likely to

implement some of the flood risk reduction options they heard at the workshop. Some of the ways participants said they plan to reduce flood risks at home include:

- Longer downspouts
- Check for backflow valves
- Check what kind of insurance coverage they have
- Install a rain barrel
- Plant a rain garden
- Make a flood plan
- Better drainage
- Landscaping grading
- Put together a 72 hour emergency kit
- No more clear cutting
- Will help spread awareness
- Live on a hill
- Plant trees and plants
- Elevate things in my finished basement
- Look at getting a sump pump
- Landscape in accordance with natural water flow
- Avoid building basements in the future

Participants were also asked what they found most interesting about the workshop. Some of the comments included:

- Maps of the Lorne St. flood plain and plans for retention ponds (5)
- All the different perspectives, activities and progress (5)
- Ducks Unlimited Canada's theory of wetlands (4)
- How nature can be used to limit flooding (4)
- What affects flooding (2)
- How to prepare for flooding at home (3)
- How each presentation flowed into the other (2)
- That the Sackville Waterfowl Park is also a retention pond

Finally participants were asked what sorts of additional workshops, programs or events they would like to see EOS offer? Respondents said:

- More workshops like this (4)
- More rain gardens (3)
- resentation by insurance companies regarding changing climate and changing insurance
- Advocate that the Town of Sackville give a rebate to those who conserve water
- Do another rain barrel program
- Offer specific neighbourhood solutions
- Have a specific emergency preparation day - EOS, EMO and Town of Sackville could collaborate

- Red Cross Emergency Kit program again
- High efficiency building techniques
- Zoning for smart growth
- What the region will look like in 50 or 100 years.
- What does the region need next? CN rail, transportation workshop?
- Storm surges

Finally, participants had great things to say about the workshop in general:

- *"Excellent!"*
- *"Thank you for this really valuable workshop!"*
- *"The presentations flowed really well into each other. A good broad overview."*
- *"Great presentations!"*
- *"Great job and much appreciated."*
- *"Well done."*
- *"I appreciated that it was free. The entire program exceeded my expectations."*
- *"This was excellent! We're new to the area and this type of collaboration is impressive. Other communities can learn a lot."*
- *"Great work! Great event!"*

Media Coverage

The media took notice of this workshop and attended for all or part of the morning. Bruce Wark of the local Wark Times in Sackville attended and published an article which can be found at: <https://warktimes.com/2018/01/21/be-prepared-flood-risk-workshop-hears-extreme-weather-is-here-to-stay/>. Radio Canada attended and featured a story on the workshop on the evening television news of January 20th, 2018, as well as stories on the radio Saturday, Sunday and Monday. There was also an online story: <http://ici.radio-canada.ca/nouvelle/1079306/inondation-nouveau-brunswick-preparation-tempete>

Next Steps

The Collaborative working group is planning a late winter follow-up meeting to consider all information presented during the workshop as well as feedback and ideas from participants for next steps.

Thanking our Funders

Funding for the workshop was provided by the New Brunswick Environmental Trust Fund. RCE Tantramar provided funding for the video. For more information on this workshop, contact EOS Eco-Energy at eos@nb.aibn.com or 506.536.4487.