

# Highlights of the Community Engagement Program in 2012

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## Cheticamp Project

The objective of the Cheticamp Project is to identify climate change impacts and adaptation options for the fisheries and tourism sectors in the project study area, which extends from Grand Etang Harbour north to Cape Breton Highlands National Park. It also encompasses the town of Cheticamp. The project is managed by the Ecology Action Center.

The role of the Nova Scotia Department of Natural Resources (DNR) in the project is to assess coastal vulnerability. In 2011 and 2012 a continuous series of photos were taken along the coastline using a DNR helicopter. This dataset was used in conjunction with existing geology maps to prepare presentations for two workshops held in Cheticamp in 2012. In 2012, the author spent three days walking the coastline to identify coastal materials and assess the coastal vulnerability. A report documenting this work is currently being prepared. A draft copy will be supplied to the Ecology Action Center and the local communities by the end of March 2013.

A LIDAR survey was also flown over the study area in 2011. These data were used by Saint Mary's University to produce a series of flood risk maps showing sea-level changes projected through to 2100. The maps were used by the author to identify areas of risk for further evaluation during the 2012 shoreline traverses.

The communities located in the study area rely heavily on the fisheries and tourism sectors for economic development activities. Since the communities and road infrastructure are close to the coast they are vulnerable to damage by coastal erosion and flooding. Loss of the road and wharf infrastructure would have negative impacts on both

economic sectors so it is important to evaluate their vulnerability.

## Service Nova Scotia Workshops

The 54 municipalities in Nova Scotia must prepare a Climate Change Adaptation Plan by 31 December 2013 in order to obtain their share of the Federal Gas Tax Rebate. This work is coordinated by Graham Fisher, Planner at Service Nova Scotia who prepared a workbook that outlines the steps required to complete the plan. When the workbook was ready for launch Graham contacted the author and requested DNR's participation in four workshops he was organizing for community planners and Chief Administrative Officers. Most of the municipalities are located on the coast in areas that are vulnerable to damage by severe storms. Since geology plays a critical role in determining coastal vulnerability, Graham felt it was important to have DNR's participation in the workshops. The four workshops were held in Halifax, Yarmouth, Port Hawkesbury and Truro with a good attendance at the 4 events.

The author's presentation focused on the following items: (1) the strong connections between geology and coastal erosion, (2) the connections between geology and water resources in a time of climate change when the province could see extreme precipitation events and/or periods of drought, (3) karst topography, landslides, metals in the environment and other geohazards, which could be impacted and become more dangerous in the predicted fluctuating and more extreme weather events, and (4) the need to identify and zone aggregate resource extraction areas in municipal plans in an effort to reduce costs per ton of aggregate and armor stone. A large amount of

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aggregate and armor stone could be required in the future as communities and the province work to prepare their municipal infrastructure to adapt to climate change. The workshops provided an excellent opportunity to educate municipal staff on the connection between geology and adaptation to climate change.

### Other Presentations

Jeff Poole and the author gave a presentation to a second year land-use planning class at Dalhousie University's School of Planning again this year. This is the fourth consecutive year we were given the opportunity to present to this class. The presentation focuses on defining the connections between geology and wise land-use planning. Topics covered include coastal geology, geohazards, water resources and mineral resource and aggregate development. Jeff connects into the Mineral Resources Branch website and offers a live demonstration on how the students can access the geological databases and incorporate the available data in their planning projects. There were over 50 students in the class so it was good opportunity to bring some focus on geology to a group of future planners.

The author returned to the Dalhousie School of Resource and Environmental Studies for a second time in 2012 to present to one of the fourth year classes. Like the School of Planning presentation, the lecture covered a wide variety of geological topics, but the focus was mineral resource development. This class is always very engaged and interested in the subject so there are many good questions raised and answered.

The St. Margarets Bay Tourism Association asked for assistance again this year to train their summer tour guides on the geology of Peggys Cove. Given that close to a million people a year pass through this community, this knowledge is passed along by the tour guides to a large number of people over the summer season so it is important that they understand the geological story. A half day was spent at Peggys Cove training the guides.

Another tourism group that the author provides assistance to each year is the Parrsboro Geological Museum. Each year they run at least one and sometimes two Elderhostel (now Rhodes Scholar) tours in the province. The tours focus on the geology of the Parrsboro–Joggins area, but the week-long tour starts out at Peggys Cove so the author takes a day to lead the group on a tour around the cove. The people in the group are generally retired, although this year's group contained two younger couples. They generally come from all over the United States and Canada and occasionally Europe. Most of them have advanced degrees in some subject, a few even taught geology or were career geologists. Needless to say the questions asked are often challenging. They all leave with a much better perspective on both the geology of Peggys Cove and the social and environmental challenges that face this small community. The tour always leaves me wondering how many tourists we could attract to the province if we had more tours that focused on the connections between geology and the environment.