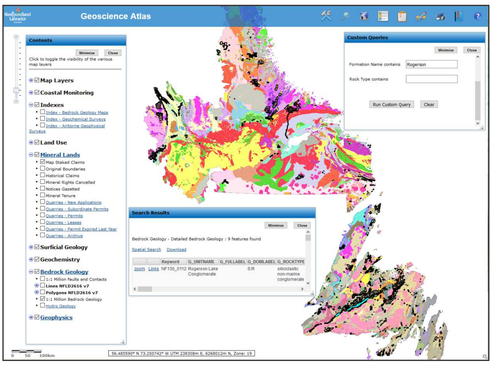
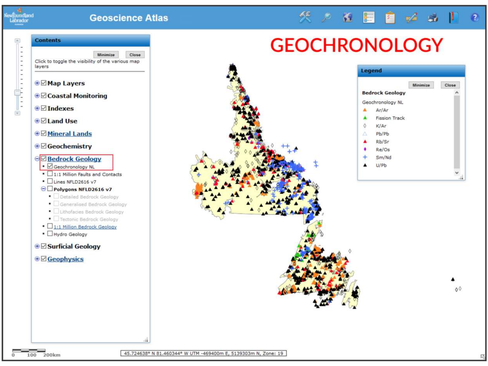
GEOSCIENCE ATLAS

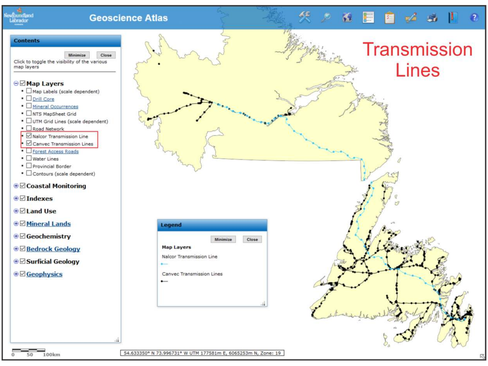
GEOLOGICAL SURVEY OF NEWFOUNDLAND AND LABRADOR



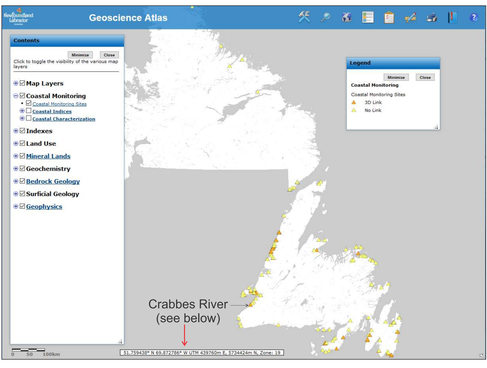
The GeoScience Atlas (http://geoatlas.gov.nl.ca) is the spatial/graphic portal to the Provincial geoscience datasets. The online Atlas interface provides search and query capabilities, as well as printing and downloading the vector datasets and raster images.



The preliminary Geochronology layer, with over 3000 records, provides information about the rock unit, the method and material dated as well as interpretative comments about the model that was used to deduce the age. The user is encouraged to bring to our attention any dates that are not included in the database.



Transmission lines indicate the proximity to the electrical power grid as well as access routes nearby (not necessarily vehicular access). The older transmission lines are in black (from the Canadian Vector topographic dataset) and the new transmission lines are in blue (from Nalcor, Muskrat Falls).



The Coastal Monitoring database provides data to assess the erosion rates of shorelines and changes in beach profiles. Over 130 sites (triangles above) have been assessed with high precision surveying equipment and with drones. The orange triangles indicate those sites that have 3D visualization links to Sketchfab.

By conducting repeated UAV flights over coastal cliffs, such as the one at Crabbes River in western Newfoundland, the volume of sediment eroded from the cliff face, and the erosion rate of the top and base of the cliffs, can be determined. The clifftop at Crabbes River has eroded at an average rate of 60 cm/year, which is an accelerated rate compared to other unconsolidated cliffs in the province. The area can be visualized in 3D by googling 'Sketchfab Crabbes River'.