

# Prince Edward Island 2020 Provincial Forest Envirothon

## KEY TOPICS (7) – LEARNING OBJECTIVES UNDER EACH KEY TOPIC

- 1. Understanding how groundwater and surface water systems function.**
  - a. Understanding of groundwater maps.
  - b. Knowledge of aquifers and water geology.
  
- 2. Understanding the importance of water quality and quantity as a foundation in a healthy ecosystem.**
  - a. Understanding the connection between groundwater and surface water.
  
- 3. Understanding a variety of water quality indicators in different landscapes**
  - a. Knowledge of how agriculture practices, urban development, nitrates, toxic algae, etc. affect water quality and health.
  - b. Understand the issues of water health, including physical, chemical and biological properties and its role in the hydrological system.
  
- 4. Understanding a variety of water quantity indicators in different landscapes.**
  - a. Knowledge of water quantity impacts such as agriculture practices, urban development, groundwater levels
  - b. Understanding of stream gauges and groundwater maps.
  
- 5. Understanding how sustainable and best management practices enhance and protect water quality and quantity for humans and wildlife.**
  - a. Understand the importance of moving toward sustainable practices to protect water quality and quantity.
  - b. Understand best management practices that improve water quality and quantity such improved agriculture practices, forest management, urban planning and water efficiency.
  - c. Understand the role of technology: flow meters, observation wells, Unmanned Aerial Vehicles (UAV) (drones, GIS, etc.), LIDAR, precision agriculture, and water monitoring wells etc.
  
- 6. Understanding the differences of local and regional systems that manage natural resources and the importance of each in water resources.**
  - a. Knowledge of various agencies including woodlot owner groups, watershed management groups, farm organizations, anglers and shellfish growers, tourist operations and municipalities work together for conservation success.

- b. Understand why Water Conservation Authorities were created, how they operate and what their goals are.
- 7. Understanding the social, economic, political impacts of natural resources management and decision making.**
  - a. Describe the social, economic and political impacts of regulating water quality and quantity.
  - b. Understand the delicate balance behind decision making – funding projects, social responsibility, regulatory authority.