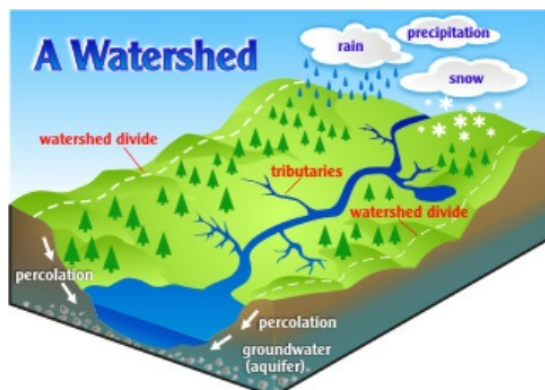


# Montague-Valleyfield Watershed Area



A watershed is an area of land that drains into a particular river, lake or other body of water. In the Southeast Environmental Association (SEA) region there are six main watershed areas, made up of 26 sub-watersheds, covering 731.6km<sup>2</sup>. The largest watershed in the SEA region, and PEI, is the Montague-Valleyfield watershed.



Simple diagram explaining how a watershed works.

## Montague-Valleyfield Watershed

### Rivers:

Valleyfield River

Montague River

### Headwaters Location:

Lewes

Ocean View

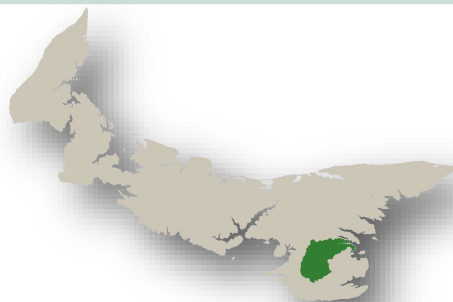
Valley

**Total length of streams:** 176km

**Total area:** 19,819ha (198km<sup>2</sup>)

**Basin Name:** Georgetown Harbour

**Largest Land Use:** Forests (53%)



Map of Prince Edward Island with the Montague – Valleyfield watershed, including sub-watershed Lower Montague, highlighted in green.

### Location

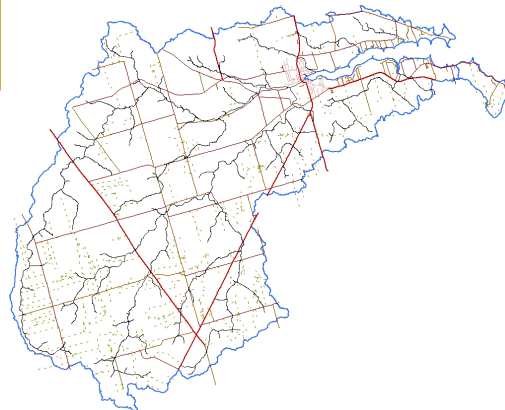
The Montague-Valleyfield watershed, is located in southeastern Kings County and includes all areas that drain into the Montague and Valleyfield Rivers:

Montague	Heatherdale
Lower Montague	Iona
Bellevue	Kilmuir
Brooklyn	Lewes
Brudenell	Lyndale
Caledonia	Newtown Cross
Glenmartin	Ocean View
Grandview	Valleyfield
Greenfield	Valley
Head of Montague	Victoria Cross

### Physical Description

The rivers of this watershed drain into the Georgetown Harbour before emptying into Cardigan Bay and ultimately into the Northumberland Strait. The watershed covers an area of 198km<sup>2</sup>. It is gently sloped, but in some areas elevations exceed 115 metres.

The Montague-Valleyfield watershed extends to the Caledonia Hills, one of only two hill lands on the Island. The total length of rivers and streams is 176km with swamps and marshes providing water storage areas and natural filtering systems for pollutants, and wildlife habitat.

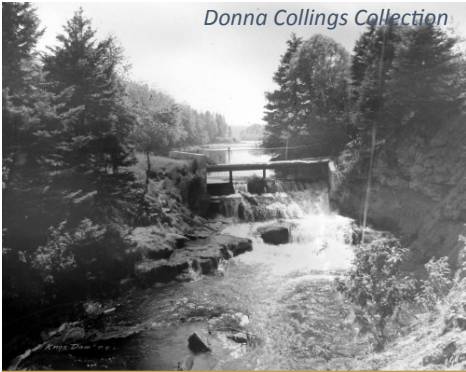


Montague-Valleyfield watershed map showing roads and streams. The total area, including the Lower Montague sub-watershed, is 200km<sup>2</sup>.

### History

In the mid-1800s, Montague and area was known for its fine harbours. It was in this area where some of the first estuaries were used for mussel aquaculture. In 1899, the first hydro-electric dam in PEI was built in Valleyfield. In 1905, it was moved to Knox's Dam to meet growing demand from Montague. By the early 1920s, Montague Electric Company was producing the cheapest power east of

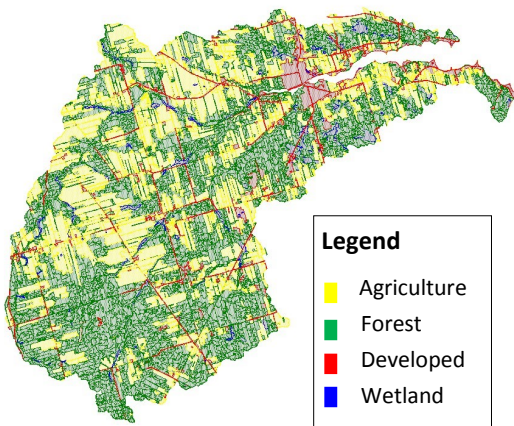
Ontario. The Keith's Mill Trail, which still exists today, was the main route used to travel between Montague and Victoria Cross from 1890 to 1928.



Historical photograph of Knox's Dam collected by local historian, Donna Collings.

Post-glacial sea level change is evident at drowned forest sites in the Lower Montague watershed. The Klondyke Road, a designated scenic heritage road, is located in the Montague-Valleyfield watershed.

## Watershed and Area Land Use



Land use map of the Montague-Valleyfield and area watershed.

Based on land use data from 2010, forested areas dominate the land in the Montague-Valleyfield watershed, followed by agricultural land. Developed land includes commercial, industrial, institutional, recreational, residential, transportation and urban. This accounts for only 7.26% of the total land. Area of wetland covers under 2.5% of the land.

Land Use	Montague-Valleyfield Area (Hectares)	Lower Montague (Hectares)	Total Area (Hectares)	%
Agriculture	6854	12.5	6866.5	34.2%
Developed	1389.1	39.9	1429.0	7.26%
Forest	10484	185.6	10669.6	53.0%
Wetland	494.4	6.2	500.6	2.49%
Non-evident	596.7	14.7	612.4	3.05%

Land use breakdown for the Montague-Valleyfield watershed and Lower Montague watershed.

## Wildlife Sightings



Green Frog hidden in the Duckweed found at MacLeod's Pond along the Valleyfield River.

The Montague-Valleyfield watershed covers a huge area, therefore providing habitat for a variety of different organisms. Some of the birds seen or heard along the streams/ivers during riparian assessments include Belted Kingfisher, Eastern Wood Pewee, Osprey and Canada Goose. Evidence of Red Squirrel, Eastern Chipmunk, North American Beaver and Snowshoe Hare was found. Other species recorded were Green Frog, Brook Trout and Water Striders.

## Conservation Issues

Riparian assessments of the Valleyfield and Montague Rivers were completed in 2013 and 2014, respectively. It was found that the tributaries of these rivers are healthy but they need work to restore them back to full function.



Collapsed Crossing found along the Valleyfield River in 2013.

Some issues include:

- Natural blockages
- Beaver activity
- Runoff
- Erosion/Siltation
- Poor or damaged crossings

These issues are a concern because they can lead to :

- Anoxic Events/Eutrophication
- Fish Kills/Population Loss
- Bacterial Contamination
- Loss of habitat



Valleyfield River one week after a fish kill, during an intense rainfall event on July 27, 1999.

With groundwater being the only source of drinking water in PEI. It is important that residents protect the environment that provides it.

## Get Involved!

The management plan for the Montague-Valleyfield watershed is currently in development. SEA requires public support and input for this to be successful. We urge you to get involved! If you are interested in offering support and improving the environment, please contact us.

