Grindstone Creek originates above the Niagara Escarpment in Flamborough. It drains an area of 90 square kilometres making it one of the main tributaries discharging into the northwest-end of Hamilton Harbour. The Waterdown Sewage Treatment Plant discharges into the creek in Waterdown, upstream from lower Grindstone. A 50-hectare marsh lies in Hendrie Valley where the lower portion of Grindstone Creek flows. This highly productive, shallow wetland, northeast of Cootes Paradise, provides crucial spawning, nursery and adult habitat for many native fish as well as food and shelter for a variety of birds, mammals, amphibians and insects. The slopes of Hendrie Valley are comprised of mixed deciduous forest. Its sheltered, southerly exposure provides a reasonably warm, dry microclimate, creating a unique habitat that is home to several rare and uncommon plants and animals including many Carolinian species. The Province of Ontario has classified Grindstone Creek as an Area of Natural and Scientific Interest (ANSI) and the Municipality of Halton has listed the creek as an Environmentally Sensitive Area (ESA).