The word “penobscot” is derived from the Wabanaki place-name for “waters of descending ledge,” in reference to the lower Penobscot River’s rocky rapids and falls. The Penobscot is Maine’s largest river, draining more than one-quarter of the state, and the second longest river in New England (after the Connecticut). The 8,592-square-mile watershed is mostly forested, with some agricultural and urban lands. The Penobscot carries a tremendous amount of freshwater to the Gulf of Maine, where it has a strong influence on circulation and mixing in the coastal waters of the Atlantic.

The mainland of the river begins at the confluence of the East and West Branches at Medway and flows to Bucksport, where it opens up into Penobscot Bay. The West Branch originates on the Maine-Quebec border near Sandy Bay Township and Penobscot Lake, in mountainous terrain 1,700-1,800 feet above sea level. The East Branch begins at East Branch Pond, northwest of Baxter State Park, in a lake-filled region 910 feet above sea level.

Below Medway, the river receives the flows of the Piscataquis and Mattawamkeag rivers; smaller tributaries of the lower river include the Passadumkeag River, Sunkhaze Stream, Kanudoska Stream, Swatsebec Stream, Sunkhaze Stream, and East Pot Brook. In total, there are over 9,000 miles of rivers and streams in the Penobscot basin.