# A Large Stream Of Flowing Water Through Oceans

Streamflow It is one runoff component, the movement of water from the land to waterbodies, the other component being surface runoff. Flooding occurs when the volume of water exceeds the capacity of the channel. Water flowing in channels comes from surface runoff from adjacent hillslopes, from groundwater flow out of the ground, and from water discharged from pipes. of water flowing in a channel is measured using stream gauges or can be estimated by the Manning equation. The discharge of water flowing in a channel is measured using stream gauges or can be estimated by the Manning equation. The record of flow over time is called a hydrograph Streamflow, or channel runoff, is the flow of water in streams and other channels, and is a major element of the water cycle. The record of flow over time is called a hydrograph 87519d5caf

Subglacial stream Meltwater from the glacial surface travels downward throughout the glacier, forming an englacial drainage system consisting of a network of passages that eventually reach the bedrock below, where they form subglacial streams. Water from subglacial streams is routed towards the glacial terminus, where it exits the glacier. Subglacial streams form a system of tunnels and interlinked cavities and conduits, with water flowing under extreme pressures from the ice above; as a result, flow direction is determined by the pressure gradient from the ice and the topography of the bed rather than gravity. Discharge from subglacial streams can have a significant impact on local, and in some cases global, environmental and geological conditions. Subglacial water flow is, to a large extent Subglacial streams are conduits of glacial meltwater that flow at the base of glaciers and ice caps. Subglacial streams form a dynamic system that is responsive to changing conditions, and the system can change significantly in response to seasonal variation in meltwater and temperature. above; as a result, the direction of water flow cannot be explained in the same way as typical surface streams. Climate change may have a significant impact on subglacial. Sediments, nutrients, and organic matter contained in the meltwater can all influence downstream and marine conditions 87519d5caf

== Role in the water cycle == 87519d5caf

Ice stream ice streams contain a layer of water at the bottom, which lubricates flow and acts to increase speed. 2 mi) deep at the thickest, and constitute the majority of the ice that leaves the sheet. Ice streams are typically found in areas of low An ice stream is a region of fast-moving ice within an ice sheet. It is a type of glacier, a body of ice that moves under its own weight. In Antarctica, the ice streams account for approximately 90% of the sheet's mass loss per year, and approximately 50% of the mass loss in Greenland. They tend to be about 2 km (1. They can move upwards of 1,000 metres (3,300 ft) a year, and can be up to 50 kilometres (31 mi) in width, and hundreds of kilometers in length 87519d5caf

Streams are important as conduits in the water cycle, instruments in groundwater recharge, and corridors for fish and wildlife migration... 87519d5caf

Kuroshio Current It was named for the deep blue appearance of its waters The Kuroshio Current (□□; "Black Stream"), also known as the Black Current or Japan Current (□□□□, Nihon Kairyū), is a north-flowing, warm ocean current on the west side of the North Pacific Ocean basin. It was named for the deep blue appearance of its waters. Similar to the Gulf Stream in the North Atlantic, the Kuroshio is a powerful western boundary current that transports warm equatorial water poleward and forms the western limb of the North Pacific Subtropical Gyre. Kairyū), is a north-flowing, warm ocean current on the west side of the North Pacific Ocean basin. Off the East Coast of Japan, it merges with the Oyashio Current to form the North Pacific Current 87519d5caf

Ocean currents are classified by temperature as either warm currents or cold currents. They are also classified by their velocity, dimension, and direction as either drifts, currents, or streams. Drifts, such as the North Atlantic Drift Current, involve the forward movement of surface ocean water under the influence of the prevailing wind. Currents, such as the Labrador Current, 87519d5caf == Mechanics == 87519d5caf involve the movement of oceanic water in a more definite direction at a greater velocity than drifts. Streams, such as the Gulf Stream, involve movement of larger masses of ocean water... 87519d5caf

Ocean The ocean is conventionally divided into large bodies of water, which are The ocean is the body of salt water that covers approximately 70. 8% of Earth. The ocean contains 97% of Earth's water and is the primary component of Earth's hydrosphere, acting as a huge reservoir of heat for Earth's energy budget, as well as for its carbon cycle and water cycle, forming the basis for climate and weather patterns worldwide. It originated photosynthesis and therefore Earth's atmospheric oxygen, and still supplies half of it. The ocean is the body of salt water that covers approximately 70. 8% of Earth. The ocean is conventionally divided into large bodies of water, which are also referred to as oceans (in descending order by area: the Pacific Ocean, the Atlantic Ocean, the Indian Ocean,

the Antarctic/Southern Ocean, and the Arctic Ocean), and are themselves mostly divided into seas, gulfs and subsequent bodies of water. The ocean is essential to life on Earth, harbouring most of Earth's animals and protist life 87519d5caf

Streams play a critical role in the hydrologic cycle that is essential for all life on Earth. A diversity of biological species, from unicellular organisms to vertebrates, depend on flowing-water systems for their habitat and food resources. Rivers are major aquatic landscapes for all manners of plants and animals. Rivers even help keep the aquifers underground full of water by discharging water downward through their streambeds. In addition to that, the oceans stay full of water because rivers and runoff continually... 87519d5caf Tidal stream generators are the cheapest and least ecologically damaging among the four main forms of tidal power generation. 87519d5caf The shear forces cause deformation and recrystallization that drive the movement, this movement then causes topographic lows and valleys to form after all of the material in the ice sheet has been discharged. Sediment also plays an important role in flow velocity; the softer and more easily deformed the sediment present, the easier it is for flow velocity to be higher. Most ice streams contain a layer of water at the bottom, which lubricates flow and acts to increase speed. 87519d5caf The Kuroshio Current has significant effects on both physical and biological processes of the North Pacific Ocean, including nutrient and sediment transport, major Pacific storm tracks and regional climate, and Pacific mode water formation. Additionally, the current's significant nutrient transport results in a biologically rich ecoregion supporting an important fishing industry as well as diverse marine food webs. The South China Sea for example has relatively low nutrient concentrations in its upper waters, but experiences enhanced biological productivity due to the input from the Kuroshio Current Intrusion. Ongoing... 87519d5caf Ice streams are typically found in areas of low topography, surrounded by slower moving, higher topography ice sheets. The low topography arises as a result... 87519d5caf The water cycle is driven by energy exchanges in the form of heat transfers between different phases. The energy released or absorbed during a phase change can result in temperature changes. Heat is absorbed as water transitions from the... 87519d5caf

North Atlantic Deep Water Water flowing northward North Atlantic Deep Water (NADW) is a deep water mass formed in the North Atlantic Ocean. Water flowing northward becomes modified through evaporation and mixing with other water masses, leading to increased salinity. circulation) of the world's oceans involves the flow of warm surface waters from the southern hemisphere into the North Atlantic. When this water reaches the North Atlantic, it cools and sinks through convection, due to its decreased temperature and increased salinity resulting in increased density. NADW is the outflow of this thick deep layer, which can be detected by its high salinity, high oxygen content, nutrient minima, high 14C/12C, and chlorofluorocarbons (CFCs). Thermohaline circulation (properly described as meridional overturning circulation) of the world's oceans involves the flow of warm surface waters from the southern hemisphere into the North Atlantic 87519d5caf

Tidal stream generator A tidal stream generator, often referred to as a tidal energy converter (TEC), is a machine that extracts energy from moving masses of water, in particular A tidal stream generator, often referred to as a tidal energy converter (TEC), is a machine that extracts energy from moving masses of water, in particular tides, although the term is often used in reference to machines designed to extract energy from the run of a river or tidal estuarine sites. Certain types of these machines function very much like underwater wind turbines and are thus often referred to as tidal turbines. They were first conceived in the 1970s during the oil crisis 87519d5caf

Stream Depending on its location or certain characteristics, a stream may be referred to by a variety of local or regional names. A stream is a continuous body of surface water flowing within the bed and banks of a channel. The channel is a watercourse, although the watercourse may be seasonally or periodically dry. Long, large streams are usually called rivers, while smaller, less voluminous and more intermittent streams are known, amongst others, as brook, creek, rivulet, rill, run, tributary, feeder, freshet, narrow river, and streamlet. The channel is a watercourse, although the watercourse may A stream is a continuous body of surface water flowing within the bed and banks of a channel 87519d5caf

Ocean current Ocean currents move both horizontally, on scales that can span entire oceans, as well as vertically, with vertical currents (upwelling and downwelling) playing an important role in the movement of nutrients and gases, such as carbon dioxide, between the surface and the deep ocean. Depth contours, shoreline configurations, and interactions with other currents influence a current's direction and strength. movement of oceanic water in a more definite direction at a greater velocity than drifts. Streams, such as the Gulf Stream, involve movement of larger masses An ocean current is a continuous, directed movement of seawater generated by a number of forces acting upon the water, including wind, the Coriolis effect, breaking waves, cabbeling, and temperature and salinity differences 87519d5caf

== Similarity to wind turbines == 87519d5caf Ocean scientists split the ocean into vertical and horizontal zones based on physical and biological conditions. Horizontally the ocean covers the oceanic crust, which it shapes. Where the ocean meets dry land it covers relatively shallow continental shelves, which are

part of Earth's continental crust. Human activity is mostly coastal... 87519d5caf The flow of a stream is controlled by three inputs – surface runoff (from precipitation or meltwater), daylighted subterranean water, and surface groundwater (spring water). The surface and subterranean water are highly variable between periods of rainfall. Groundwater, on the other hand, has a relatively constant input and is controlled more by long-term patterns of precipitation. The stream encompasses surface, subsurface and groundwater fluxes that respond to geological, geomorphological, hydrological and biotic controls. 87519d5caf CFCs are anthropogenic substances that enter the surface of the ocean from gas exchange with the atmosphere. This distinct composition allows its path to be traced as it mixes with Circumpolar Deep Water (CDW), which in turn fills the deep Indian Ocean and part of the South Pacific. NADW and its formation is essential to the Atlantic meridional overturning circulation (AMOC), which is responsible for transporting large amounts of water... 87519d5caf

Water cycle The ocean plays a key role in the water cycle as it is the source of 86% of global evaporation. In doing so, the water goes through different phases: liquid, solid (ice) and vapor. accomplished, one of the first ways is through evaporation where the energy from the sun heats the water in oceans, lakes, streams, rivers, seas, ponds The water cycle (or hydrologic cycle or hydrological cycle) is a biogeochemical cycle that involves the continuous change in form of water on, above and below the surface of the Earth across different reservoirs. However, the partitioning of the water into the major reservoirs of ice, fresh water, salt water and atmospheric water is variable and depends on climatic variables. The water moves from one reservoir to another, such as from river to ocean, or from the ocean to the atmosphere due to a variety of physical and chemical processes. The processes that drive these movements, or fluxes, are evaporation, transpiration, condensation, precipitation, sublimation, infiltration, surface runoff, and subsurface flow. The mass of water on Earth remains fairly constant over time 87519d5caf