

# THE SNAKE RIVER



## ABOUT

The Snake River flows for more than 1,600 kilometers (1,000 miles). It has its origins in northwestern Wyoming. Flowing west, it drains Wyoming, Idaho, and Washington. It is the largest tributary to the Columbia River. Snake River conservation efforts have focused on reducing waste from croplands and dairies, and limiting the impact of the dams along the river have on the surrounding wildlife.

## HUMAN IMPACTS

The Snake River ecosystem is under threat. Nearby farms apply fertilizers, which are rich in phosphorus and nitrogen, to crops to help them grow, but rainwater carries unused nutrients into the river. Microorganisms, mainly algae, living in the water use the nutrients and grow rapidly. As the algae grow, the oxygen concentration in the water decreases. In addition to nutrient pollution, dams are also affecting the health of ecosystems along the river. Four dams along the lower Snake River generate clean, renewable electricity for nearby communities. However, these barriers also restrict the flow of water in the river. The water pooling behind the dam warms to temperatures that negatively affect salmon health. The dam also prevents salmon from returning to their spawning habitat.

## IMPACTS TO WILDLIFE

Damming and pollution of the water in the Snake River has severely affected fish populations. In the past, more than two million adult Chinook salmon (*Oncorhynchus tshawytscha*) and steelhead (*Oncorhynchus mykiss*) returned from the ocean to the river to spawn every year. The dams have changed the breeding environment of the fish and contributed to a reduction in the populations. Since the dam construction, many salmon can no longer reach the spawning ground. While the state of the salmon population is alarming, the repercussions ripple throughout the entire ecosystem. For example, in the ocean, orcas (*Orcinus orca*) depend on salmon for survival. As the population of salmon suffers, so too does the orca population.

## MAPPING

Create a map that shows the Snake River and its watershed. Label the states that the Snake River flows through and any major cities near the river. Use Google Earth to explore the satellite image of the river and follow it from the headwaters to the outlet. What signs of human impact do you see? These might include a wall or fence, lights, active construction, roads, traffic, human settlements (towns, houses/buildings). Determine which human impacts exist in this area and add these to your map. Make sure to include a key on your map so that people looking at your map will know what your symbols and lines mean.