

Spring runoff and sedimentation – important ecosystem functions

Many people think of spring runoff as a nuisance because of the resulting high water events or localized flooding. Running water is a powerful force; it can move boulders and rip trees out of the ground. During the spring runoff period, there is more water in rivers, lakes and streams, and more water means more force or power to move things. When runoff slows to an end, the objects (or sediment) moved by high water are deposited or “dropped-off” in a new place. This process can greatly change the characteristics of a water body and its surrounding area. Nevertheless, spring runoff is a very important event in the natural world.

As spring snow melt and rain rushes into rivers, lakes and streams, tiny sediment particles are picked up and carried within the water, making it turbid (murky or dirty). As more water pours in, larger particles like pebbles, sticks, cobbles and logs get pushed along. Sometimes insects and small animals get carried downstream in the flows too.

During normal or low water levels, sediments do not move as easily and build up as deposits on the lake or river bottom. When runoff arrives, these deposits are distributed to new locations, benefiting plants, animals and insects in the ecosystem. Too many years of consistent low or average flows can cause too many nutrients to build up in some places and not enough to accumulate in other places.

Repositioning of sediments on the bottom during runoff also creates a greater variety of aquatic habitat, attracting more critters to the ecosystem. Sometimes pools are filled in and new ones are formed, or the shape or path of the water body changes. New gravel beds for fish spawning and aquatic insects appear. Mud flats develop, providing a smorgasbord for birds and bugs and fertile soil for plants. Woody debris gets lodged into banks or sinks to the bottom, producing homes for all kinds of creatures.

Many ecosystems depend on regular runoff and flooding to stay healthy and diverse. The Columbia River is no exception. Even though the Columbia River Basin is the most hydroelectrically developed river system in the world, Lake Windermere is part of the only free flowing section. Therefore, natural, healthy amounts of runoff and flooding enter the portion of the Columbia River from Columbia Lake to the river’s first dam at the Kinbasket Reservoir. Be prepared for variable water levels, and remember how important runoff is to nature.

For more information, contact the Lake Windermere Project at 250-341-6898. You can also visit the Project office located in the old District of Invermere office beside the Invermere Community Centre. The Lake Windermere Project is a long-term comprehensive stewardship program dedicated to safeguarding the health of our lake.

The Lake Windermere Project is made possible by generous support from Wildsight, Environment Canada, Columbia Basin Trust, the Real Estate Foundation of B.C., and those community members who have donated through the Lake Windermere Stewards and Ambassadors program.