Restoration workers Mike Jeffery (left) and David Randt use soil and plywood to dam one of the drainage ditches in Burns Bog.
Courtesy Corporation of Delta

Surrey North Delta Leader

Human beavers bring bog back to life

By Christine Lyon - Surrey North Delta Leader

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Mike Jeffery and David Randt meet at Delta Municipal Hall every morning at 7:15 a.m. They toss their orange coveralls, wading boots, shovels and plywood into a pickup truck and head to Burns Bog.

Jeffery and Randt spend their days damming the drainage ditches that carry water away from the bog. They dig a notch on either side of the ditch embankment, then slot in 4x8 pieces of plywood. The men salvage sticks and branches which they use as stakes to secure the dam. Finally, they fill the layers of plywood with soil for added strength.

Since they started May 12, Jeffery and Randt have built seven new dams and upgraded 10 old ones in the raised peat bog, which occupies a quarter of Delta. Small dams take a day to construct, while larger structures can take up to a week.

Ditch-blocking has been going on since 2001 in an effort to restore the bog to its natural state. Steel barriers and wooden dams from previous years are still in tact.

Until the '80s, drainage ditches were dug throughout the bog to facilitate large-scale peat mining and cranberry farming. The ditches drained nearly 40 per cent of the original bog – a danger since precipitation is the dome-shaped area's only source of water.

Burns Bog is about half the size it once was because of agricultural and industrial land use. In 2004, the province, Metro Vancouver and the Corporation of Delta purchased 5,000 acres of the bog and created a plan to protect its unique ecosystem and the rare plants and animals living there.

Jeffery and Randt are two of the few people permitted on the bog. They lug their equipment to the dam sites on foot, since there are no roads and driving is a fire hazard.

Jeffery, 25, is studying forestry at BCIT and loves being able to work outside. Randt is studying geological engineering at UBC. The 19-year-old Delta resident is happy to lend an environmental hand in his own community. This is the second year Delta has employed summer students to restore the bog.

The pair runs into deer, owls, herons, hawks and eagles on a daily basis. They were pleased to discover the resident beavers are quick to patch up their faulty dams.

Project manager Sarah Howie explains beavers are attracted to the sound of running water.

"If one of the dams is leaking and water is going around or bypassing it, they'll hear that and they'll start adding onto the bypass until it stops flowing," she says.

Howie is an urban environmental designer for the Corporation of Delta and has been overseeing the hydrology aspect of the restoration project for almost four years.

"It's an engineering feat, what we're doing," she says, explaining the dams must be strategically placed and strongly built to hold back the water pressure. Water levels can rise two feet in winter.

Keeping water in the bog is the most important part of the restoration process because without water, a bog becomes a forest.

Peat, also known as sphagnum moss, is integral to maintaining the bog ecosystem since it releases acid and absorbs water. But peat regenerates very slowly compared to the rate it was harvested for horticulture in the 20th century.

Howie measures water and ground levels year round to determine whether or not the ditch-blocking efforts are worthwhile.

Data over the last three years has shown sphagnum moss is indeed expanding. That means the bog is starting to recover, thanks to a hard-working restoration crew and a few eager beavers.

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