

2015 QISES Drought Proofing Report

The droughtproofing program, begun in 2004, uses naturally stored winter and spring runoff in Mud Lake, Reed Lake and a large wetland to augment summer flow in Hyacinthe Creek when required. There are two sets of 5 cm diameter lines at three sites (Mud Lake outlet, the large Walcan Road culvert at Reed Lake outlet and the wetland outlet downstream of Reed Lake). Drawdown of these sources in sequence, or together, is intended to maximize water delivery to lower reaches of Hyacinthe Creek during dry periods, and thus provide higher quality rearing habitat for coho fry.

Waterlines were checked and primed at Mud Lake and Reed Lake in late spring. Emcon and QISES volunteers removed debris from the upper end of the two large culverts under Hyacinthe Bay Road. The intake box at Site #3 (large wetland) continued to be covered with sediment, so on May 11th, we dug into the old beaver dam and placed a long 4" pipe to draw water from the wetland.

There was very little rainfall in May and June, setting the streams up for an extraordinarily dry summer. By July 7th, both lines from Mud Lake had been partially opened. The beaver dam at the outlet of Reed Lake at the large Walcan Road culvert was holding back water nicely, allowing an adequate flow downstream. On July 7th, we lowered the 4" pipe at Site #3 another 8" to access more water from the wetland. A channel was dug along the short stream at the wetland outlet to allow fry to exit downstream, and trapped coho fry were moved to areas of deeper water.

Monitoring continued throughout the summer. At one point, both Mud Lake and Reed Lake intake boxes had less than 3" of water over top. Lower Hyacinthe Creek above the large road culverts was reduced to scattered pools and minimal flow under the gravel, and no flow through the culverts. Despite this, there remained a tiny flow from Little Morte Lake and McKercher Creek. Rainfall of 0.7" occurred on August 8th, which improved the flow slightly. By August 16th, there was virtually no flow anywhere along the creek above the Hyacinthe Bay Road culverts. The drought was broken when 2.7" of rain between August 29th and September 2nd helped to revive the system. By mid-September, rains were becoming more regular, and pinks returned to McKercher and Hyacinthe Creeks shortly after.

In conclusion, the droughtproofing system continues to be a useful tool for supporting coho fry in Hyacinthe Creek; the situation could have been much worse without it. The summer of 2015 saw the most difficult dry conditions for coho fry and trout, not only in Hyacinthe Creek but in other Quadra Island streams as well. The beaver in Reed Lake help out by metering out the flow from Mud and Reed Lakes. A special thank you to Doug Richardson and Al Beattie for their ongoing help with the droughtproofing system.
Janis McLean

2015 DP Timeline

May 4 – Doug, Janis, Al – removed logjams above Jackrabbit trail bridge and Hyacinthe Bay Road culverts, checked Reed Lake culvert and site 3 beaver dam.

May 11 – Doug, Janis, Al – put 4” pipe thru beaver dam at site 3.

June 3 - Doug, Frank, Al, Janis – Checked DP sites and beaver dams. Opened channel in gravel at site 3.

June 27 – Janis – checked all DP sites

July 7 – John, Al, Doug, Janis – checked lines, opened 2 lines ¼ at Mud Lake, Reed Lake still okay (trickle thru culvert). Dropped 4” pipe 8” deeper at site 3

July 17 – Janis – checked Hyacinthe Creek. Mud Lake getting low, closed one line a bit. Reed Lake still okay, trickle thru culvert. Little Morte Lake, site 3 and HB road culverts still trickle.

August 2 – Janis – checked Hyacinthe Creek. 3” left at Mud Lake intake and one line lost charge, other line ¼ open. 4” left at Reed Lake intake, tiny trickle under road. No flow at site 3, small beaver activity at outlet. No flow at HB road culverts but tinely flow underneath. Tiny flow at Little Morte Creek.

August 9 – Janis – checked Hyacinthe Creek. 0.7” of rain on Aug 7. Flow a bit better, all sites holding up.

August 16 – Janis - 0.1” rain on Aug 15. checked Hyacinthe Creek, only tiny flow thru Walcan culvert and HB road culverts. No flow from site 3. About 3” above intake at Mud Lake, and 4” at Reed Lake.

August 29 to September 2 – 2.7” of rain.