

December 10, 2008

BC Environment
1259 Dalhousie Drive
Kamloops
BC
V2C5Z5

Attention: Alan Caverly, R.P. Bio.,
Ecosystem Biologist

Dear Alan

Re: **Nicola Watershed Daily Naturalized Hydrographs**

As requested, daily synthesized hydrometric data was developed for the following three watersheds in the Nicola Watershed using the EnSim HBV modeling software; Spahomin Creek, Skuhun Creek, and Nuaitch Creek.

Model calibration

previous report. The same methodology was used this time for Lower Spius Creek until the calculated and measured flows were in agreement.

Extension of model to ungauged catchments

Using the parameters developed from the calibration catchments the model was extended to Nuaitch Creek, Skuhun Creek, and Spahomin Creek. The catchment areas are shown in Figure 1. The calibration catchments used for each ungauged catchment are listed as follows.

Table 1: Catchments and Catchment Areas

Catchment	Area km²	Calibration Catchment
Nuaitch	82.9	Lower Spius
Skuhun	235.6	Upper Guichon
Spahomin	109.3	Pennask

Results

The attached Excel spreadsheet provides daily flows for each sub catchment for a period of 40 years from 1967 to 2006. Figure 2 shows the calibration for Lower Spius Creek used to calibrate Nuaitch Creek. G

Table 2.
Nicola Watershed Daily Naturalized
Hydrographs (m³/s)
(sample month)

	Nuaitch Creek	Spahomin Creek	Skuhun Creek
4/1/1968	0.067574	0.336201	0.004054
4/2/1968	0.075219	0.32698	0.003939
4/3/1968	0.081031	0.446895	0.004044
4/4/1968	0.074465	0.535561	0.004243
4/5/1968	0.076356	0.541197	0.004419
4/6/1968	0.077527	0.522499	0.004472
4/7/1968	0.071589	0.455037	0.004329
4/8/1968	0.06673	0.569726	0.004573
4/9/1968	0.088486	0.928828	0.00522
4/10/1968	0.105699	1.061125	0.005451
4/11/1968	0.094409	0.919008	0.005236
4/12/1968	0.085278	0.796673	0.005036
4/13/1968	0.079451	0.693824	0.004851
4/14/1968	0.074598	0.605177	0.00468
4/15/1968	0.06915	0.526514	0.00452
4/16/1968	0.064684	0.458793	0.004372
4/17/1968	0.08376	0.559636	0.004442
4/18/1968	0.100722	0.639401	0.004581
4/19/1968	0.092262	0.556069	0.004508
4/20/1968	0.090547	0.489976	0.004366
4/21/1968	0.090064	0.574894	0.004626
4/22/1968	0.083087	0.711931	0.005144
4/23/1968	0.076023	0.706651	0.005405
4/24/1968	0.092337	0.978644	0.006392
4/25/1968	0.122314	1.365147	0.007704
4/26/1968	0.157177	1.490964	0.008724
4/27/1968	0.298286	1.686012	0.011262
4/28/1968	1.187033	2.048874	0.015909
4/29/1968	2.315897	2.318038	0.020168
4/30/1968	2.333901	2.24853	0.021189

If you have any questions on this information please contact us. Thank you for this opportunity to provide services to BC Environment.

Yours truly,



C. David Sellars, P. Eng.
 Project Manager

Figure 1 Nicola Basin Sub Catchments and Calibration Catchments



