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Figure 2.1 Nicola Watershed Site Location

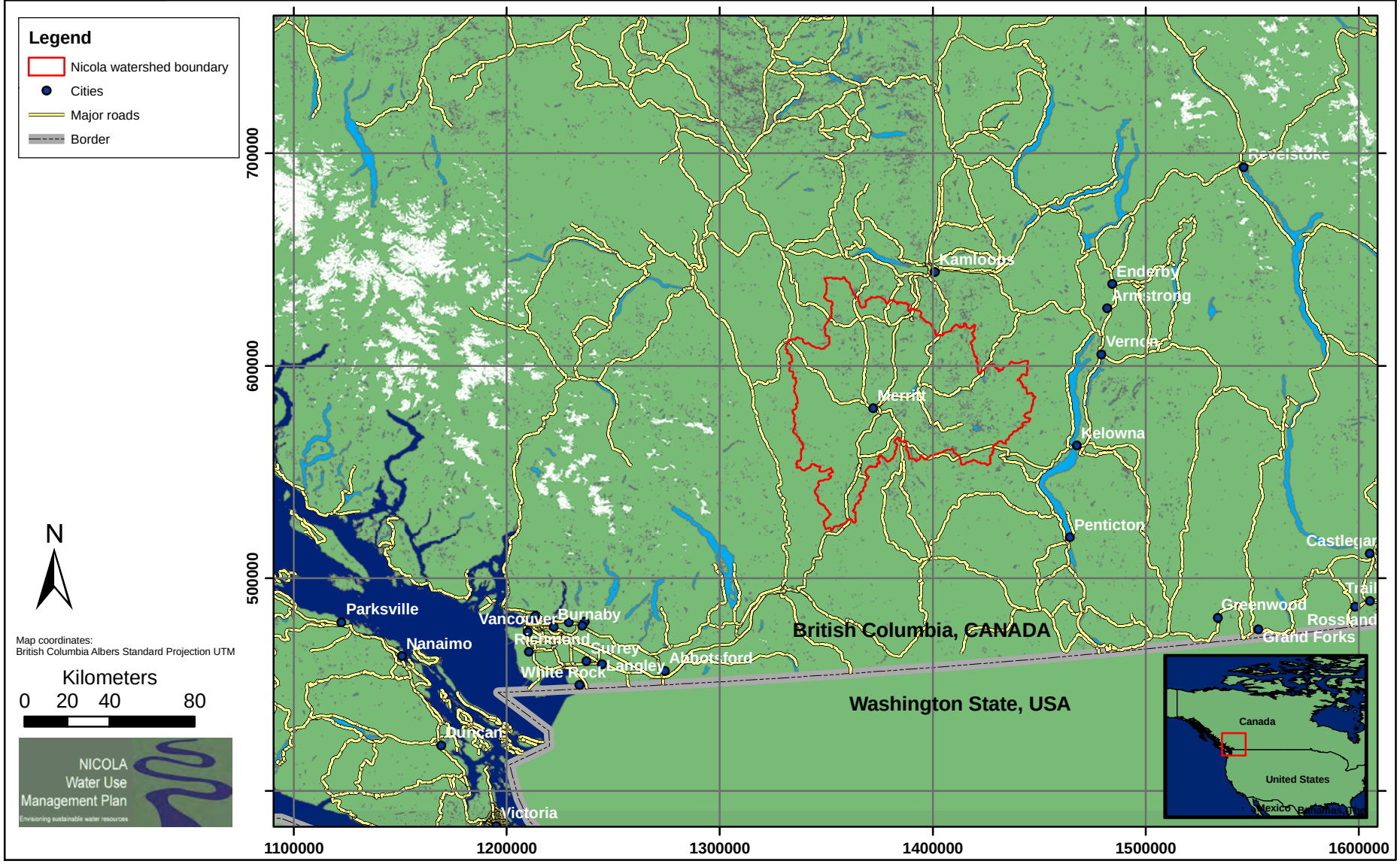

Figure 2.1 SiteLocation

7-173 / R1

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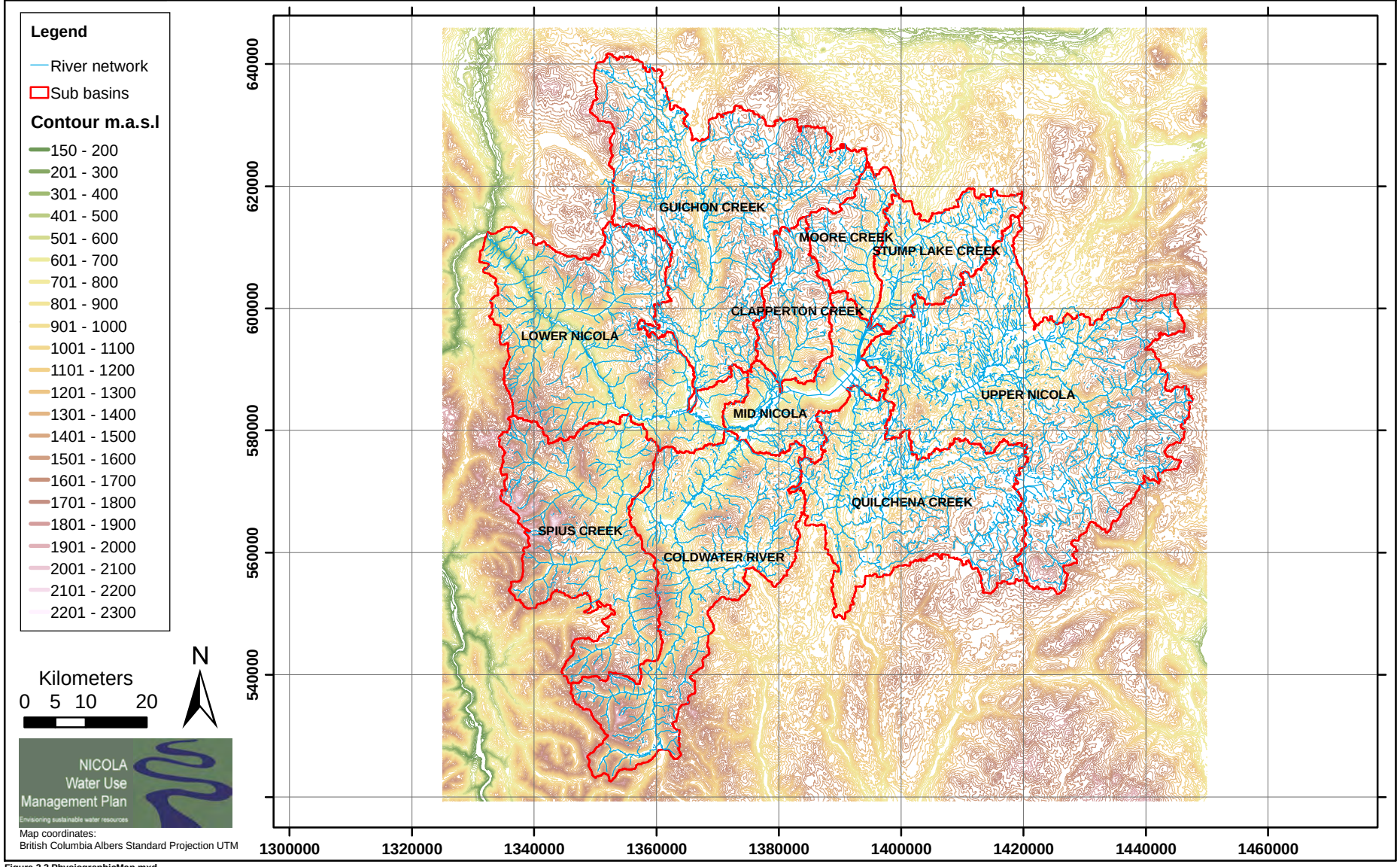
Figure 2.2 Physiographic Map of Nicola Watershed



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Map coordinates:
British Columbia Albers Standard Projection UTM

Figure 2.2 PhysiographicMap.mxd

7-173 / R1

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Figure 2.3 Nicola Watershed Site Plan

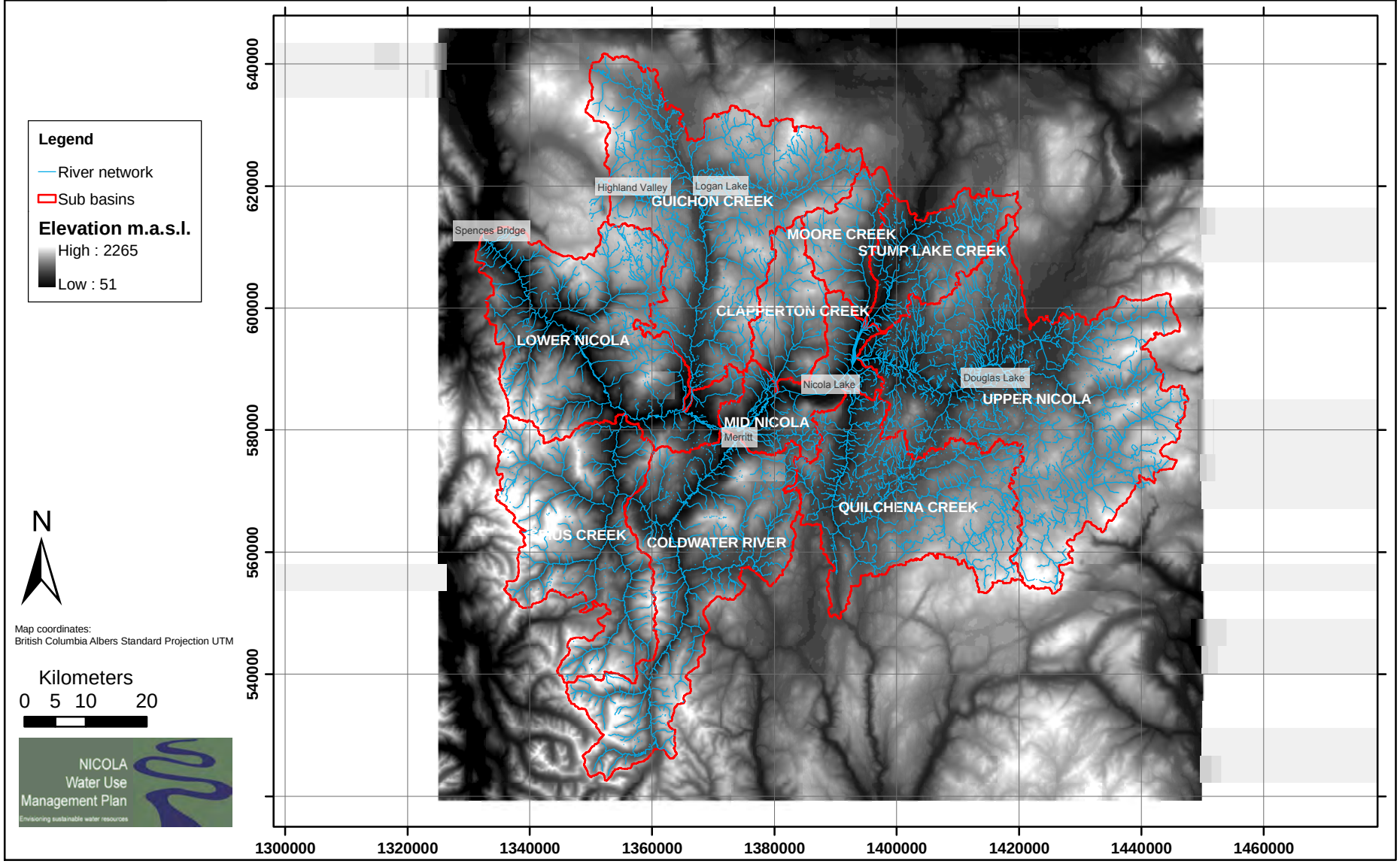

Figure 2.3 SitePlan.mxd

7-173 / R1

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Figure 2.4 Location of Meteorologic, Snow Course and Hydrometric Stations

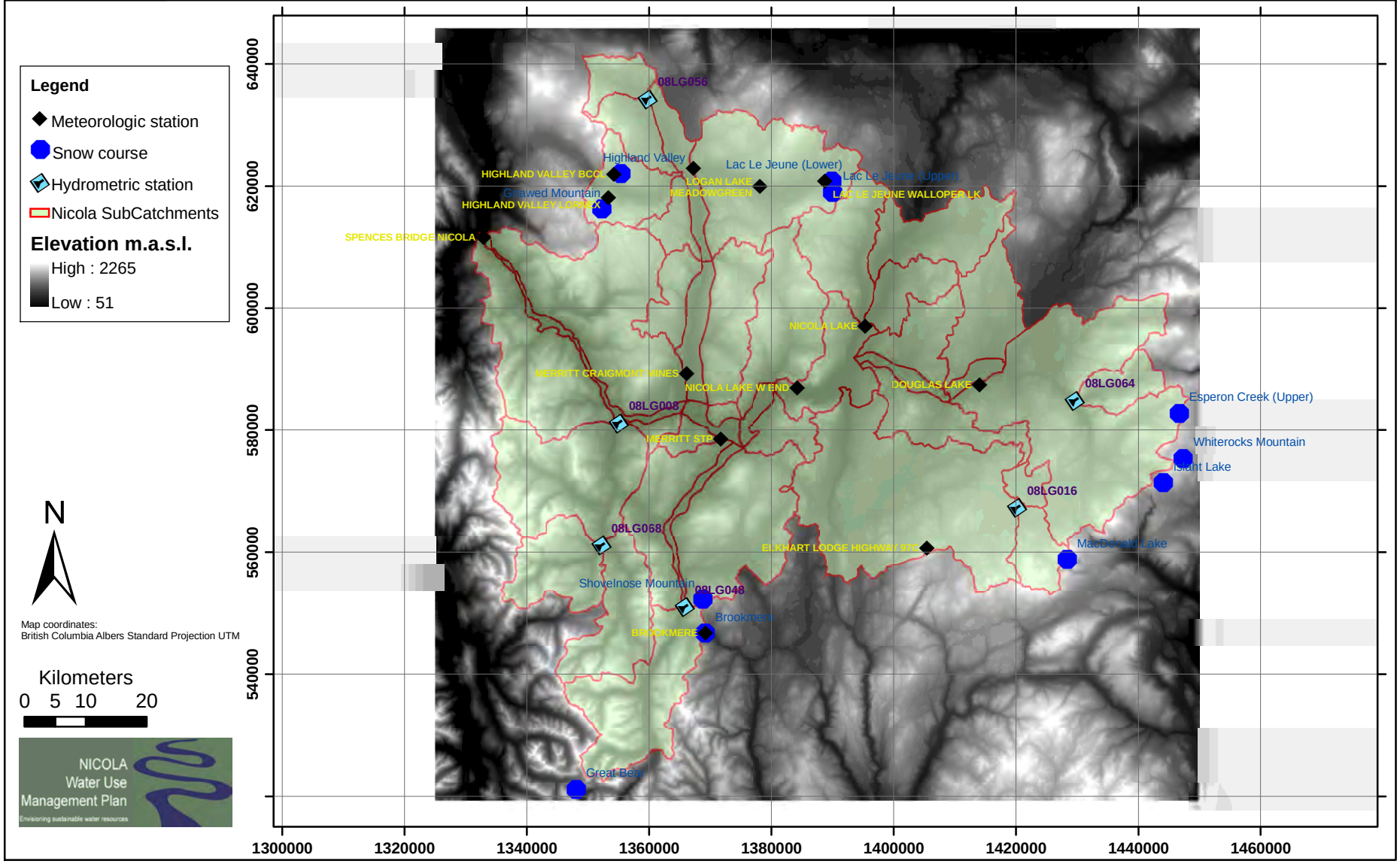

fig 2.4 MetSnowHydroStations.mxd

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Figure 2.5 Comparison of Merritt and Lornex Temperatures

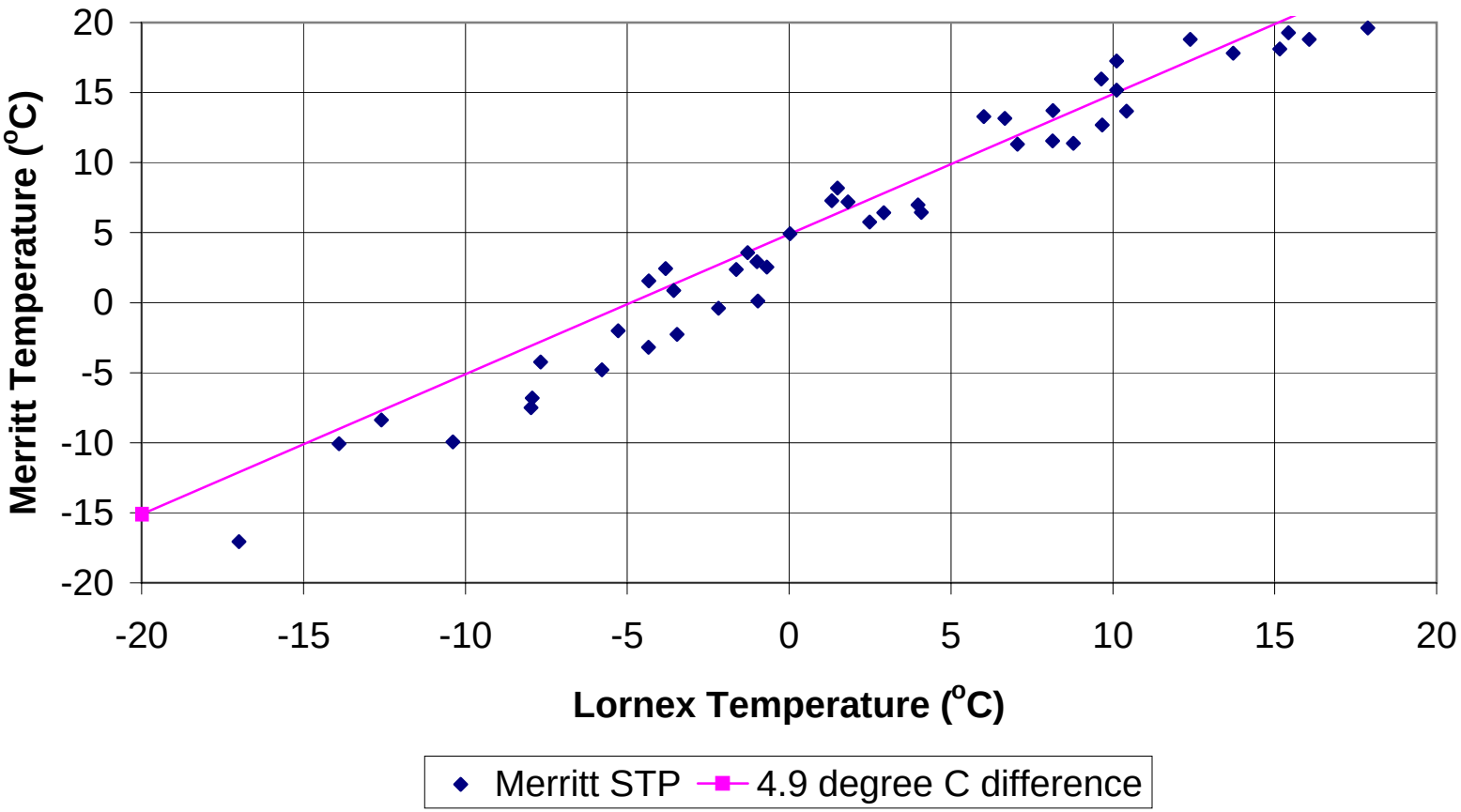

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Figure 2.6 Double Mass Precipitation Curves

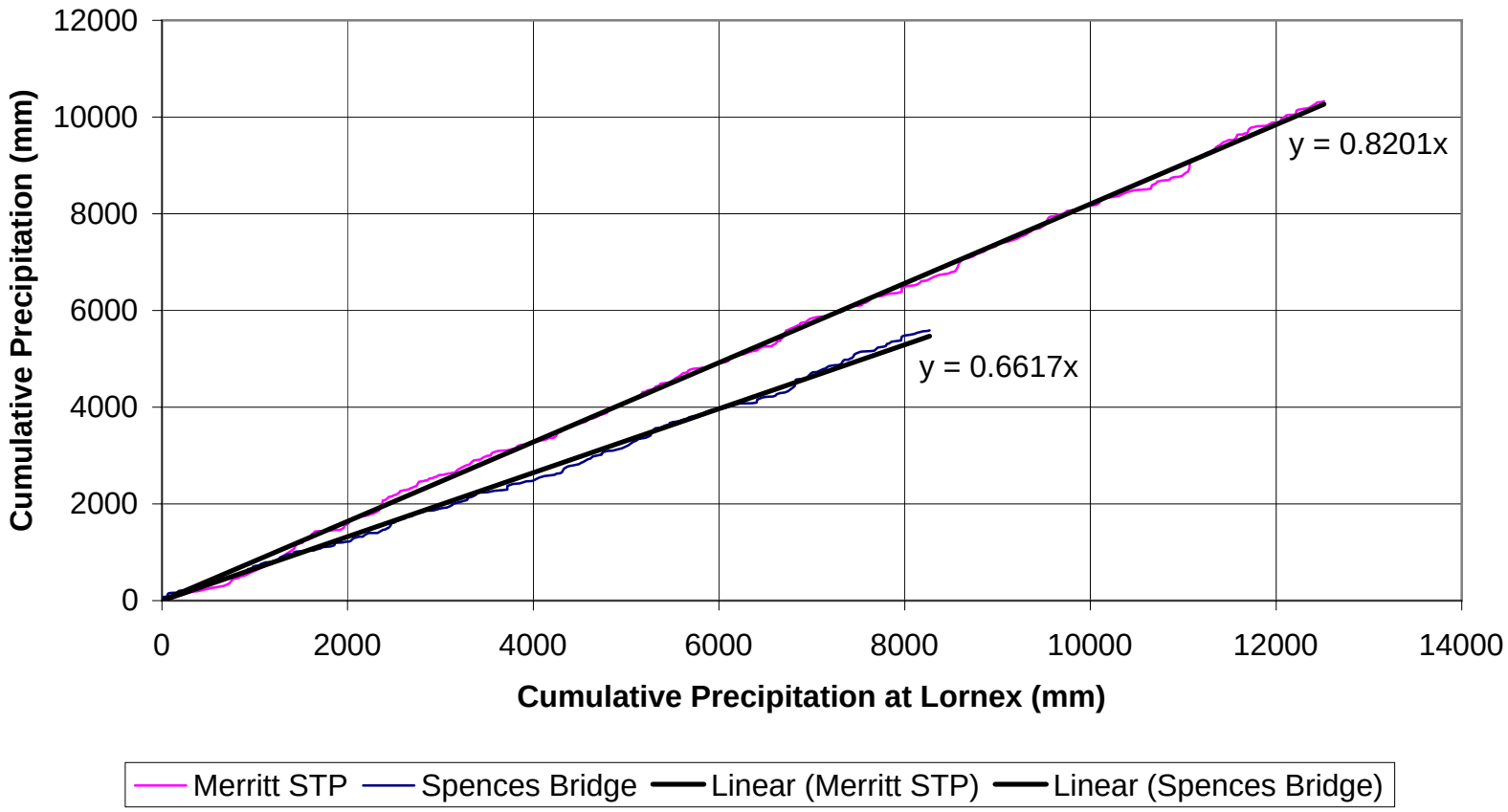

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Figure 2.7 Plot of Precipitation Multipliers and Curve Numbers

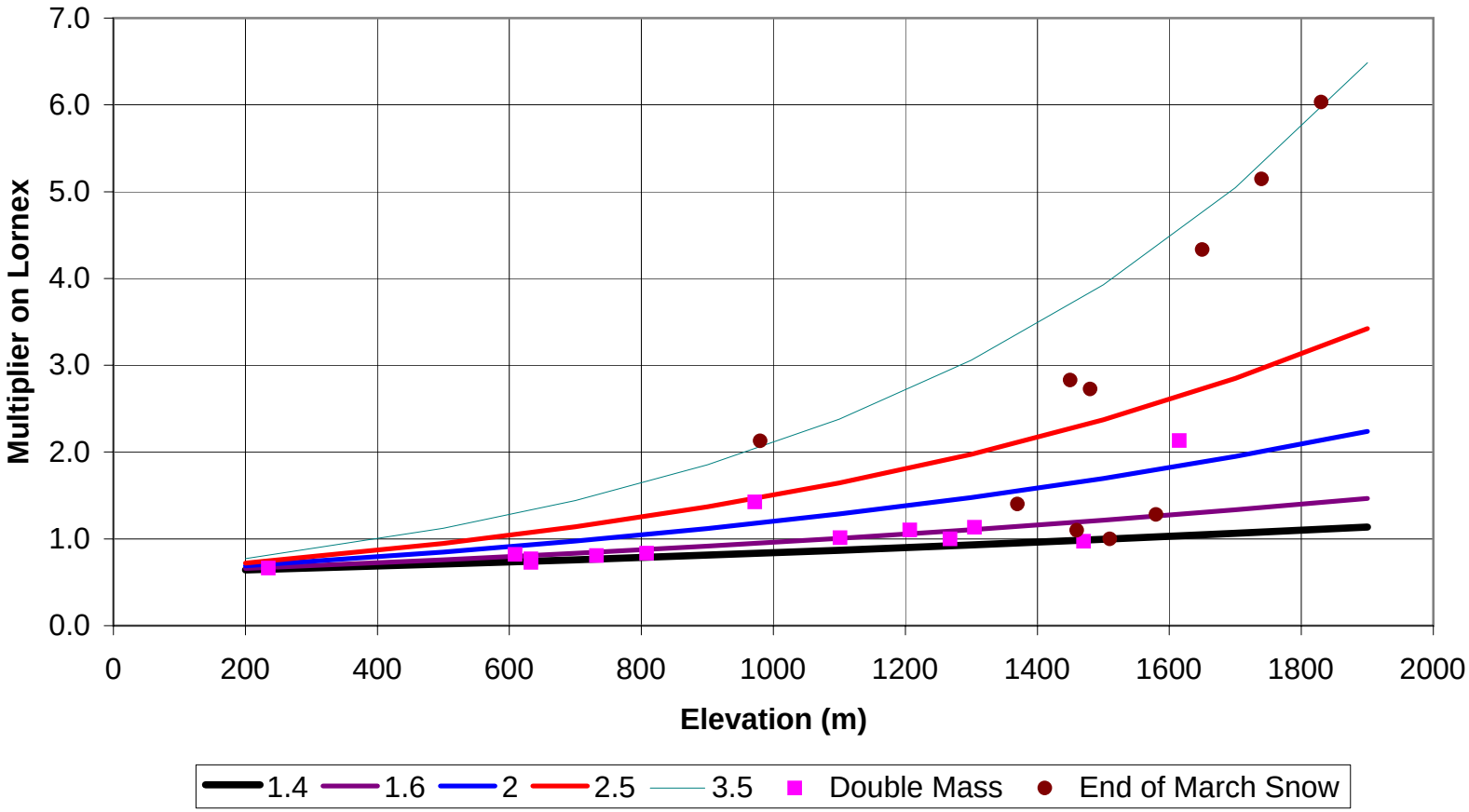

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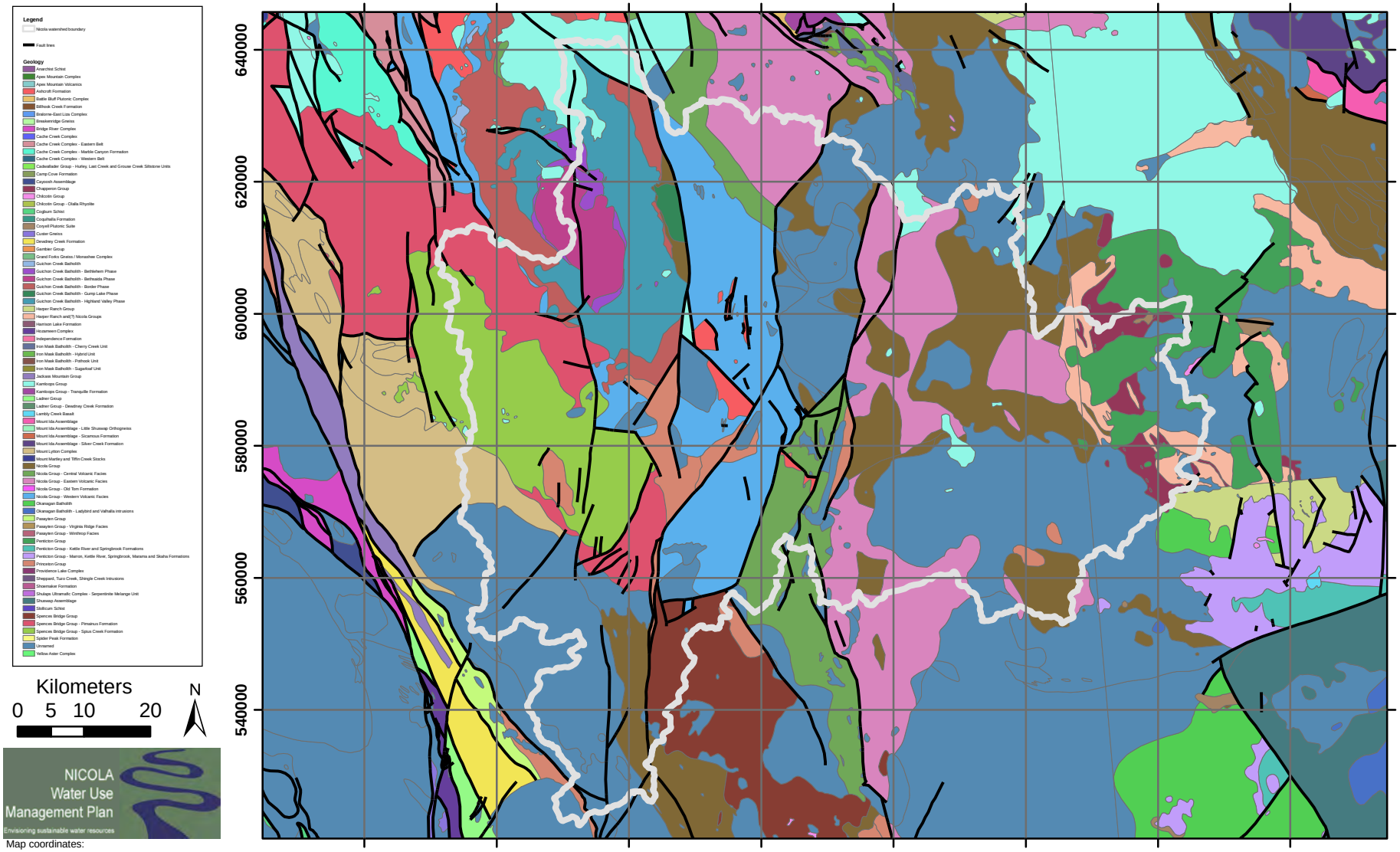
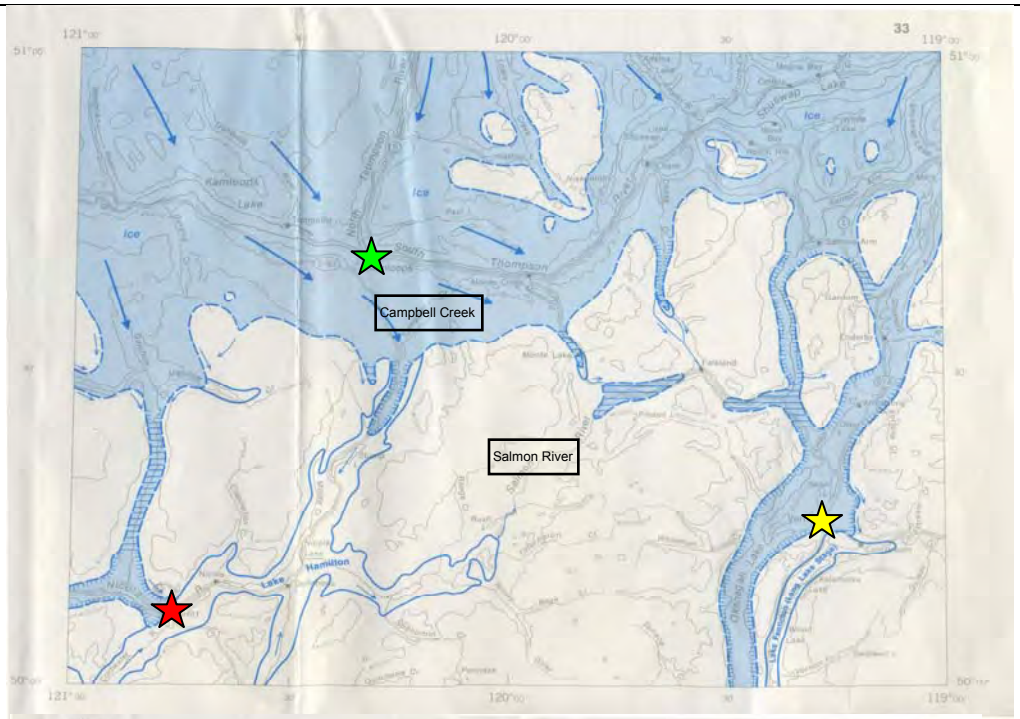
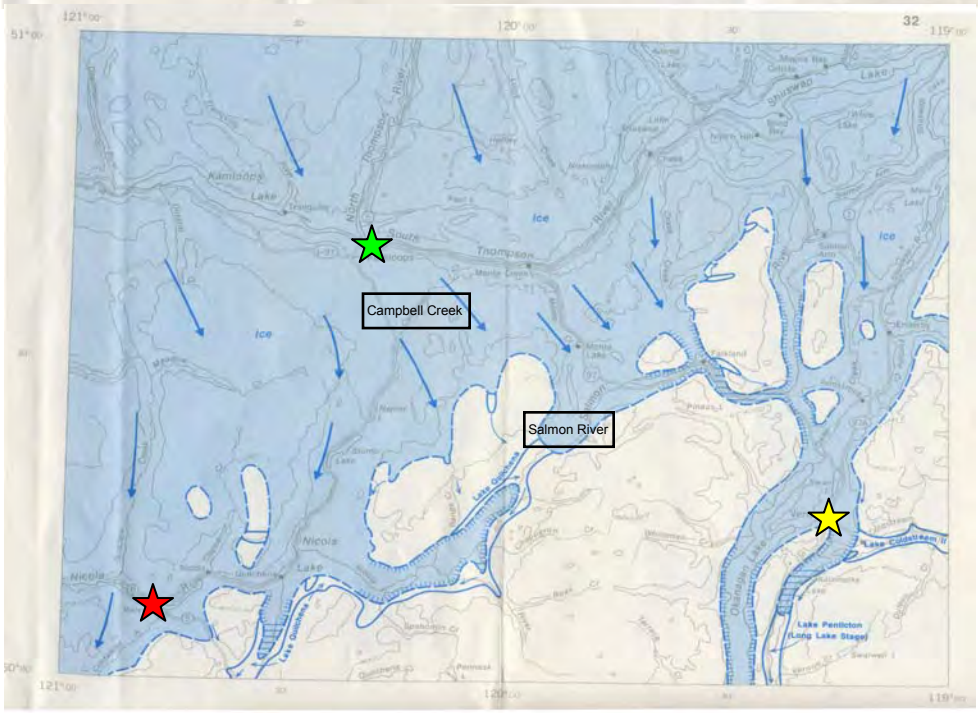
Figure 2.8 Geology of Nicola Watershed



Map coordinates:
British Columbia Albers Standard Projection UTM





Merritt Vernon Kamloops Arrows Imply Ice and Water Flow Directions

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Figure 2.9 Distribution of Glacial Lakes (Fulton 1975)

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Figure 2.10 Measured Witches Brook Flows

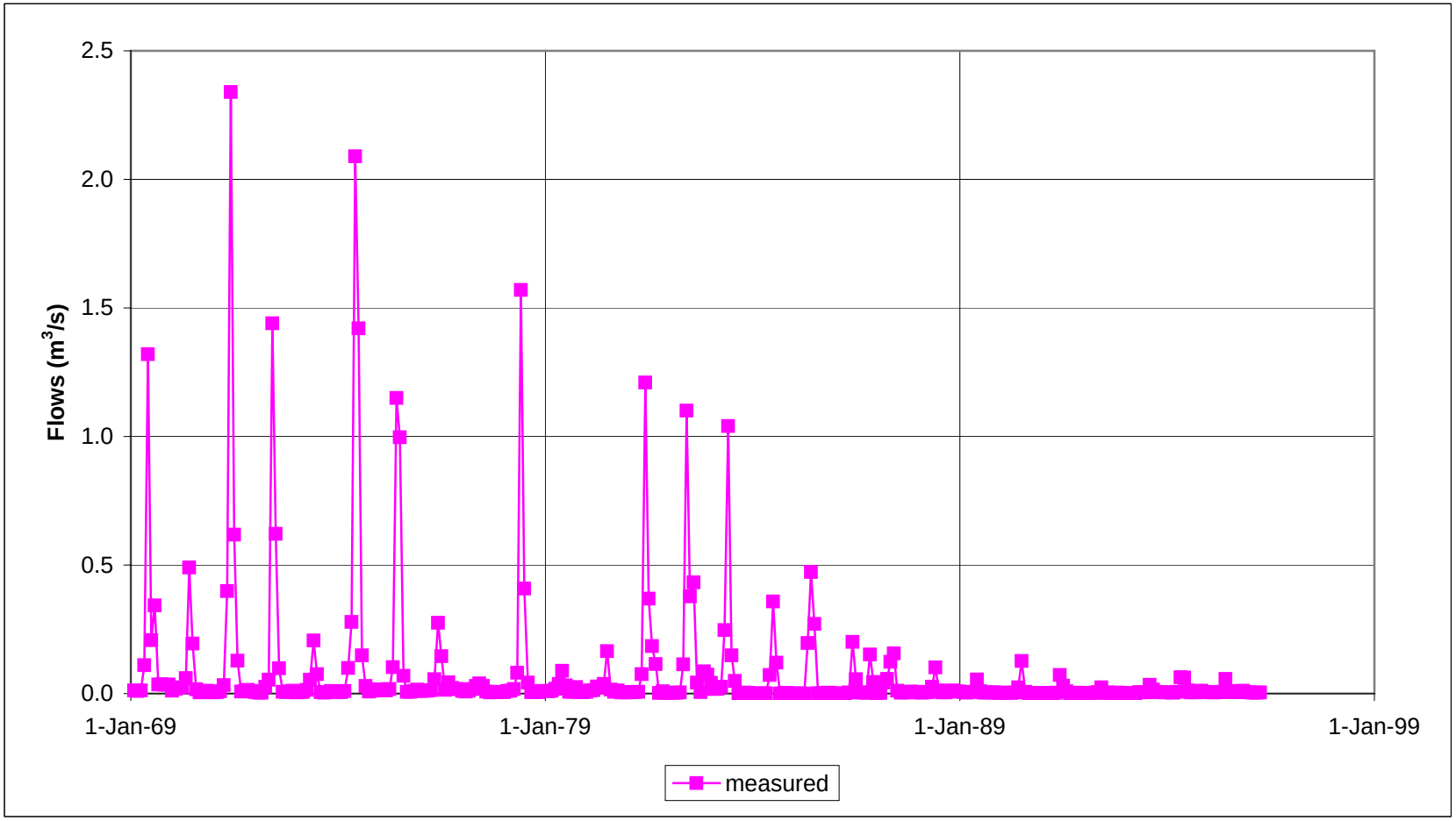

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Figure 3.1 Mapped Groundwater Aquifers

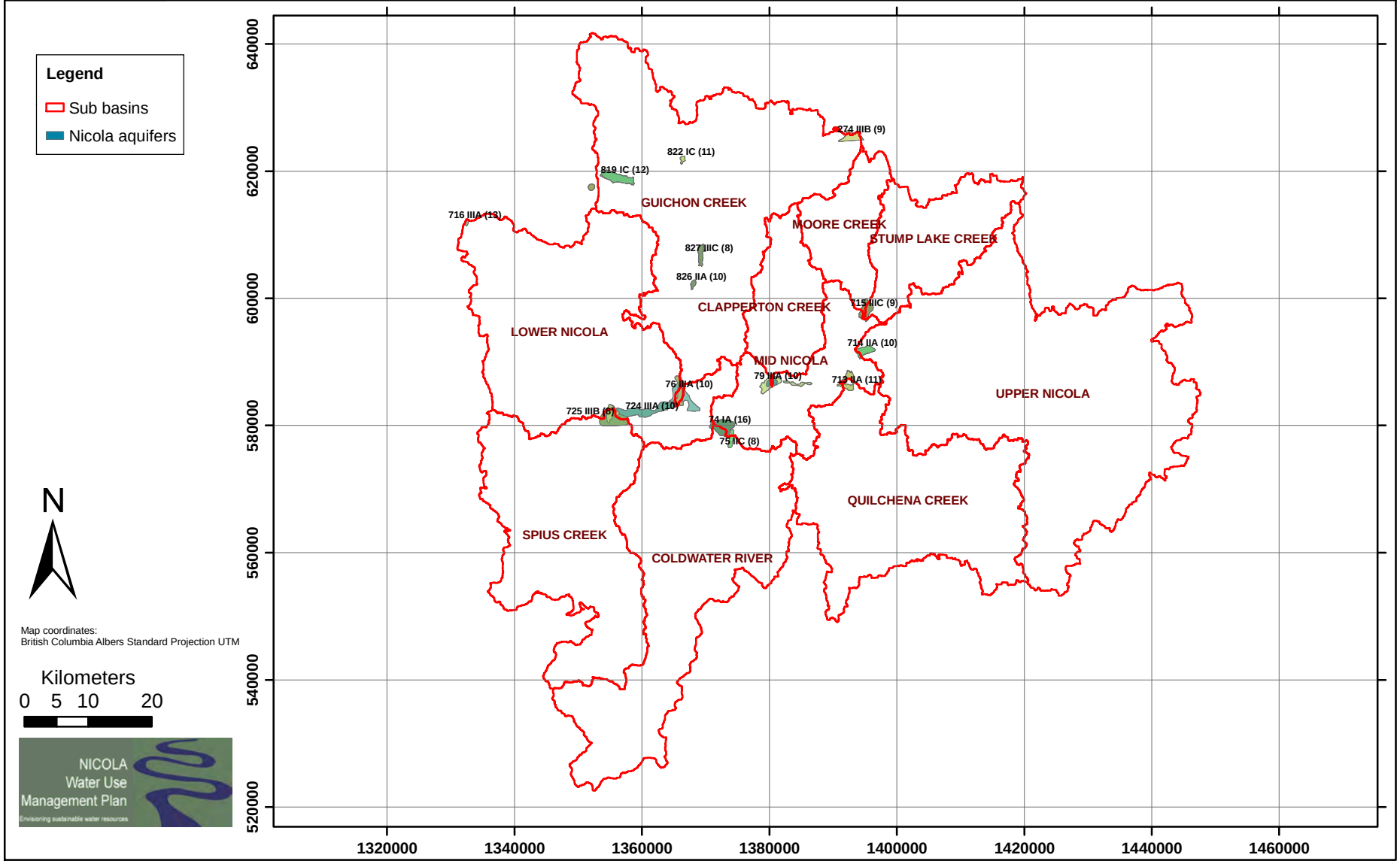

fig 3.1 MappedGWAquifers.mxd

7-173 / R1

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Figure 3.2 Major Aquifers within the Nicola Watershed

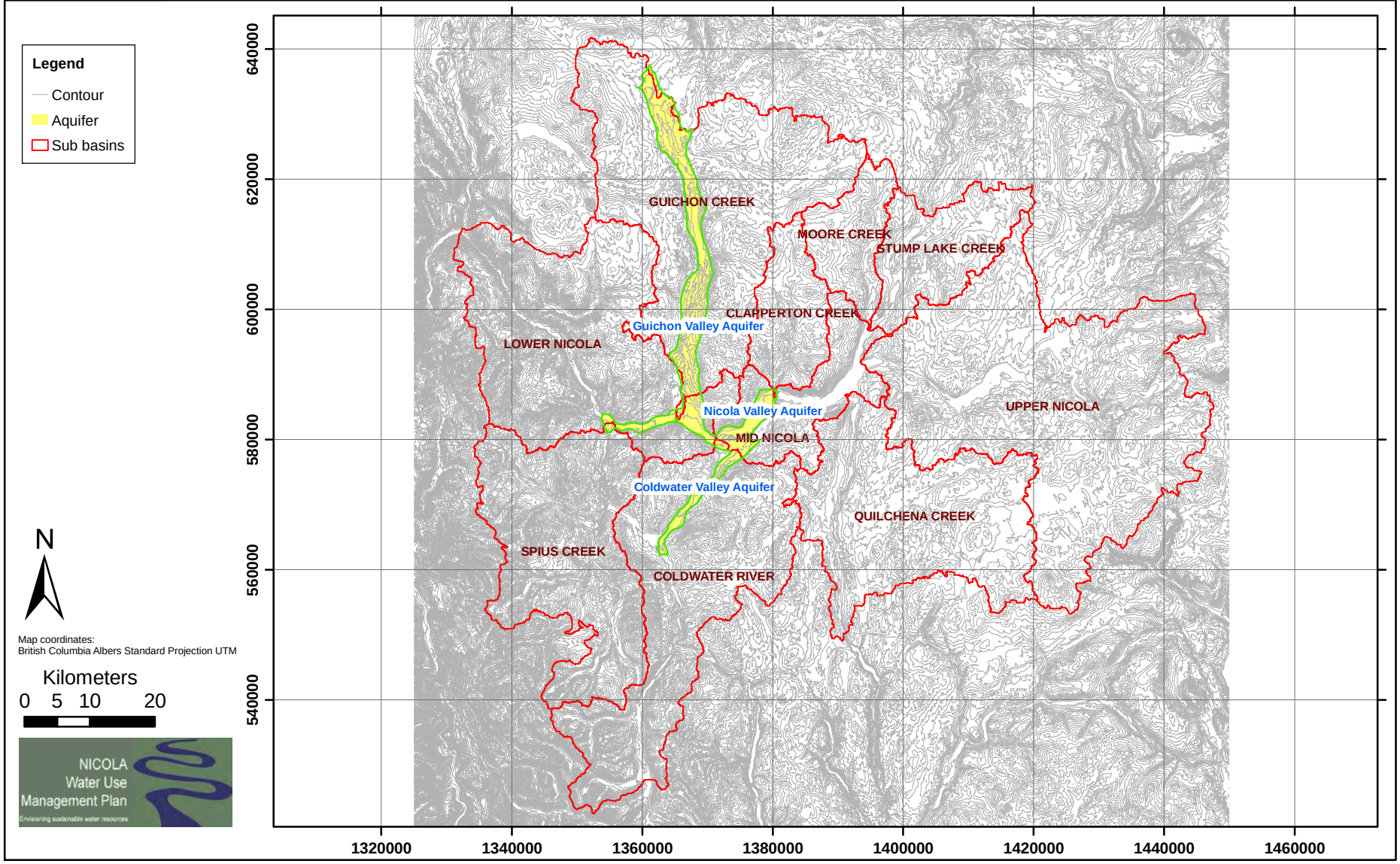

fig 3.2 ImportantAquifers.mxd

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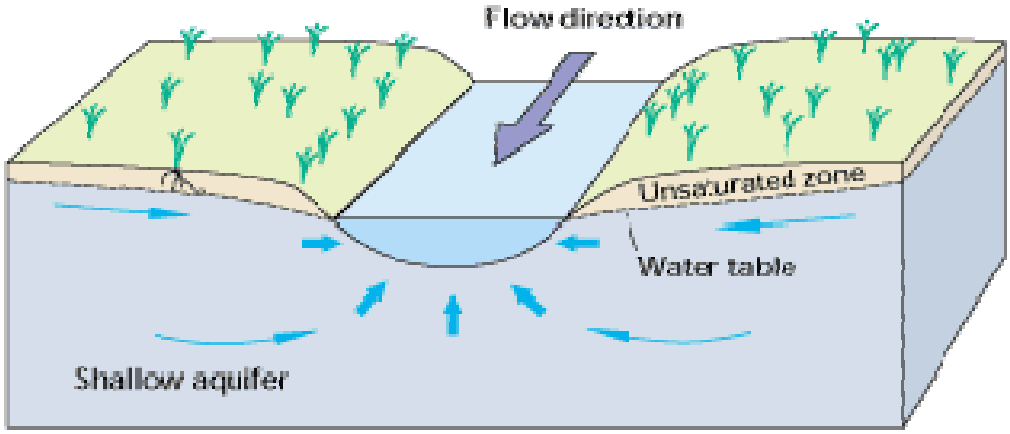
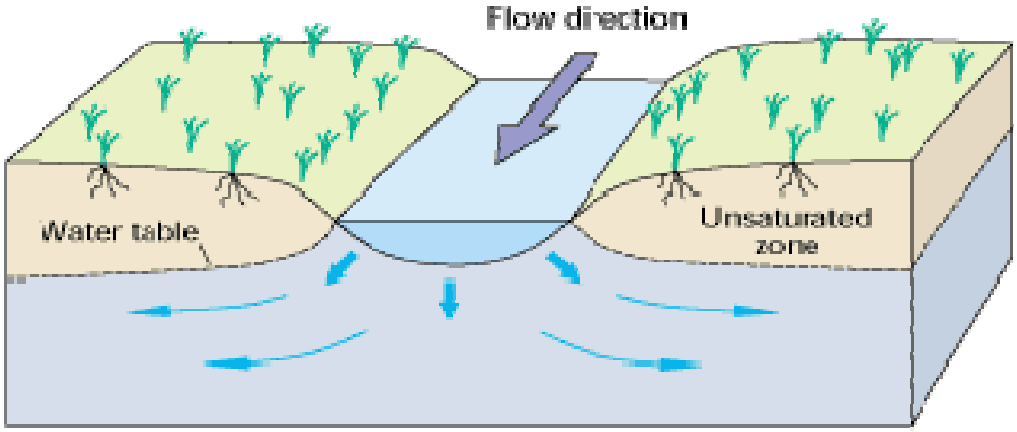
Gaining Stream



Losing Stream



Disconnected Stream

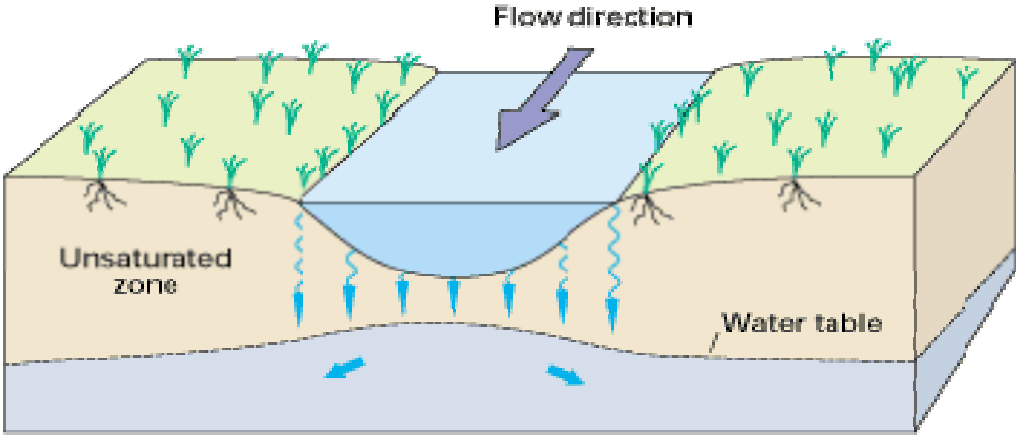


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Figure 4.1 Surface Water and Groundwater Interaction (USGS 2005)

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Figure 4.2 Schematic of Groundwater Discharge to Base Flow

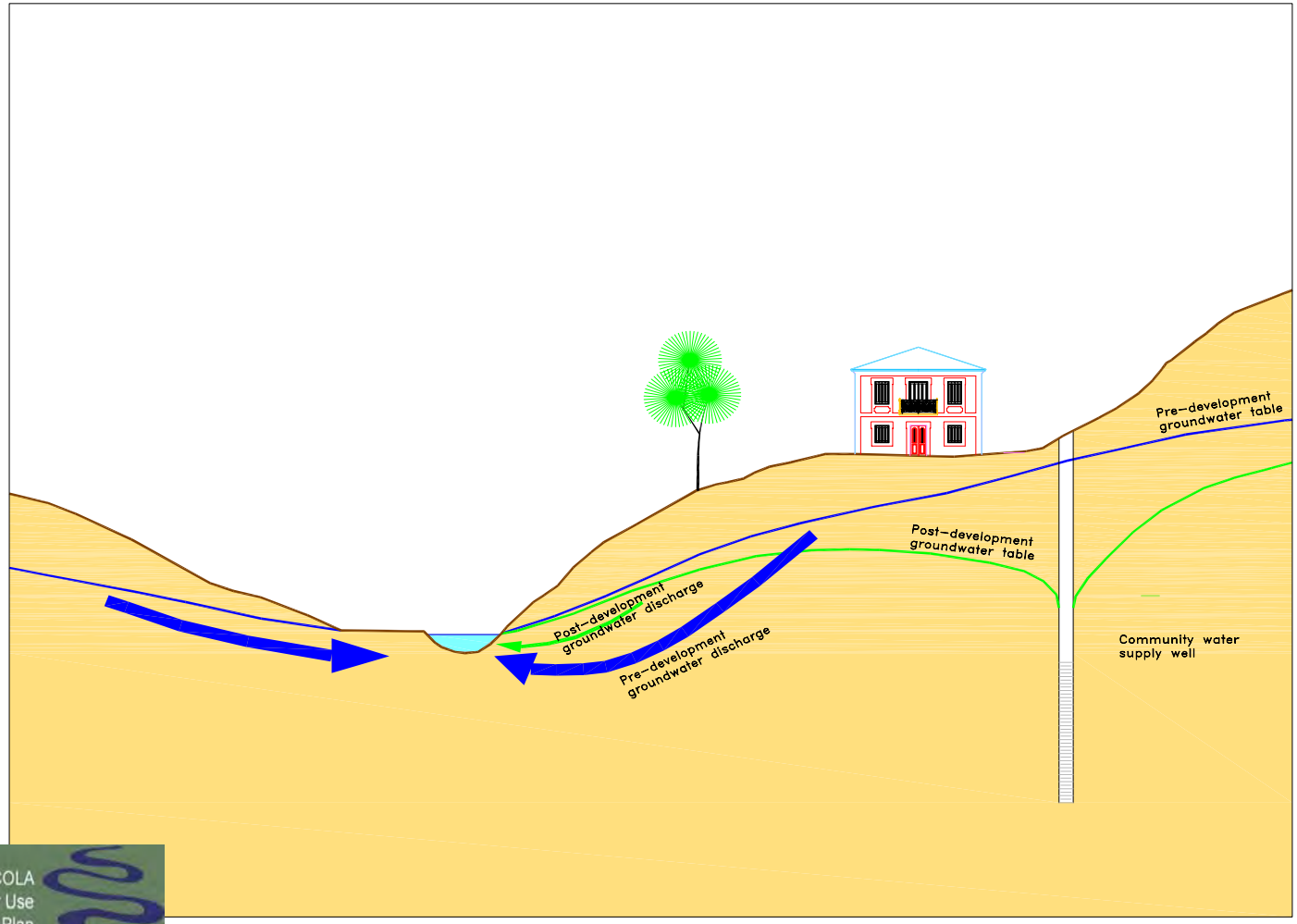

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Figure 4.3: Streamflow Response to Pumping from an Unconfined Aquifer

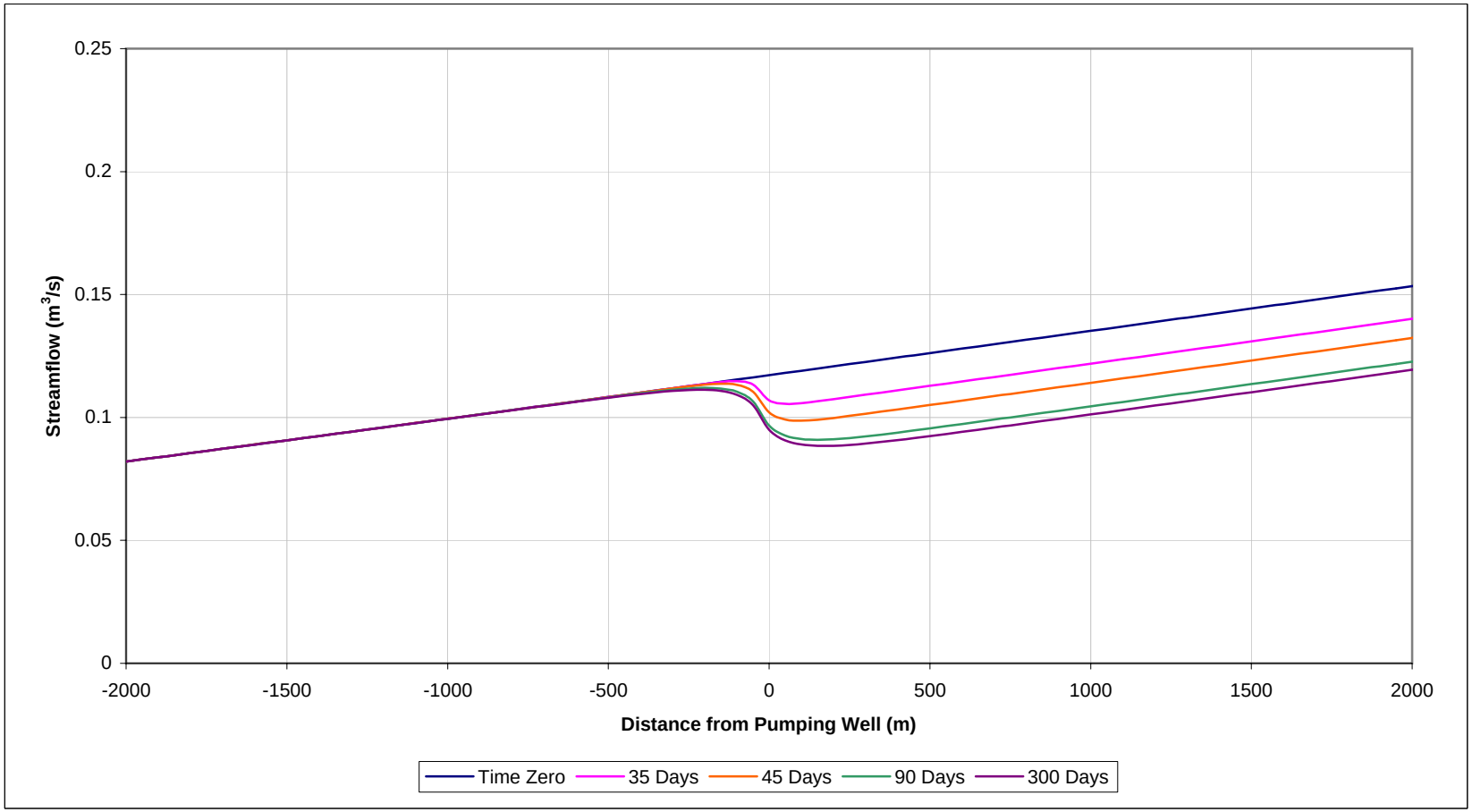

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Figure 4.4: Streamflow Response to Pumping from a Confined Aquifer

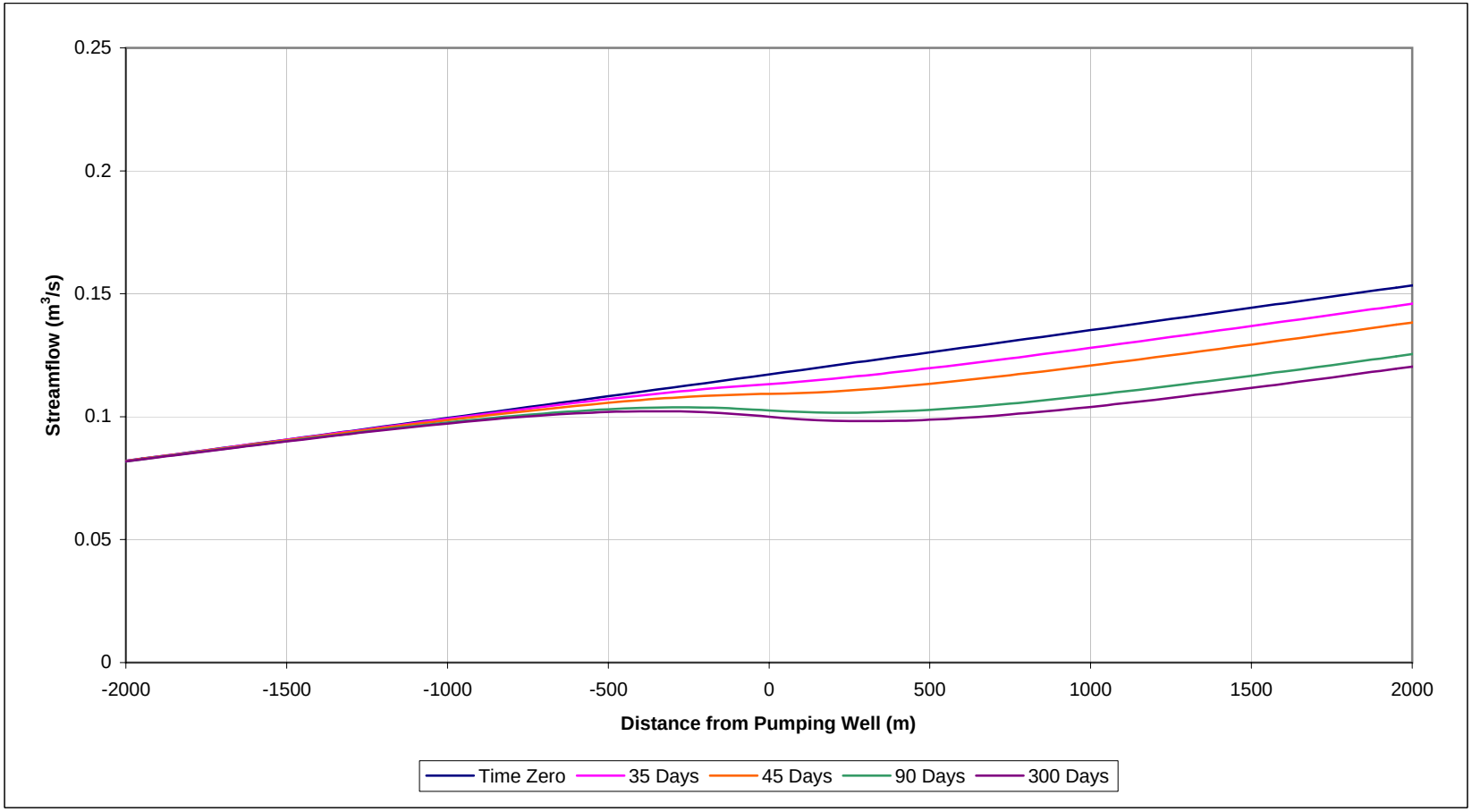

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Figure 4.5: Downstream Baseflow History from Pumping a Confined and Unconfined Aquifer

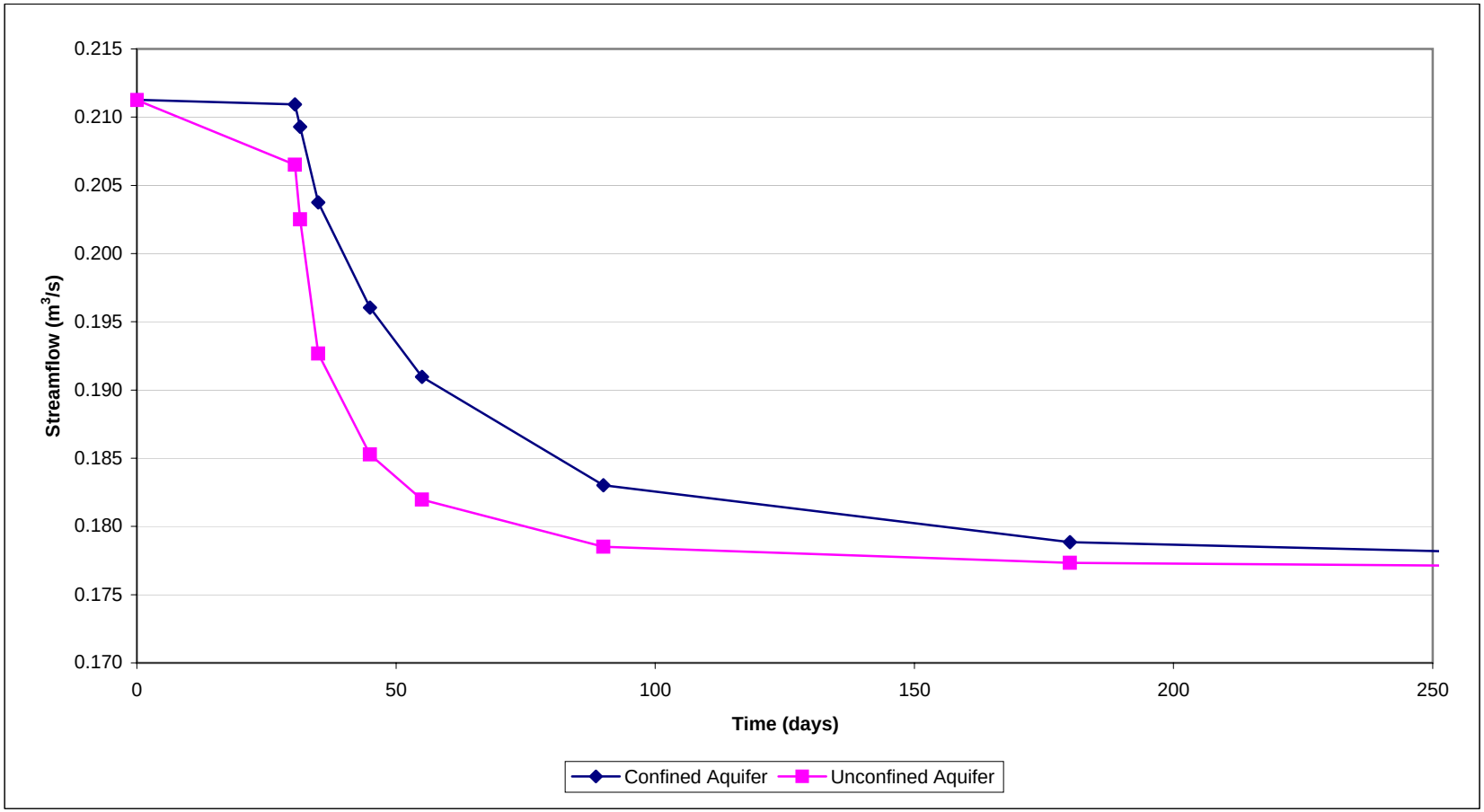

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Figure 5.1 Catchments in Watershed Model

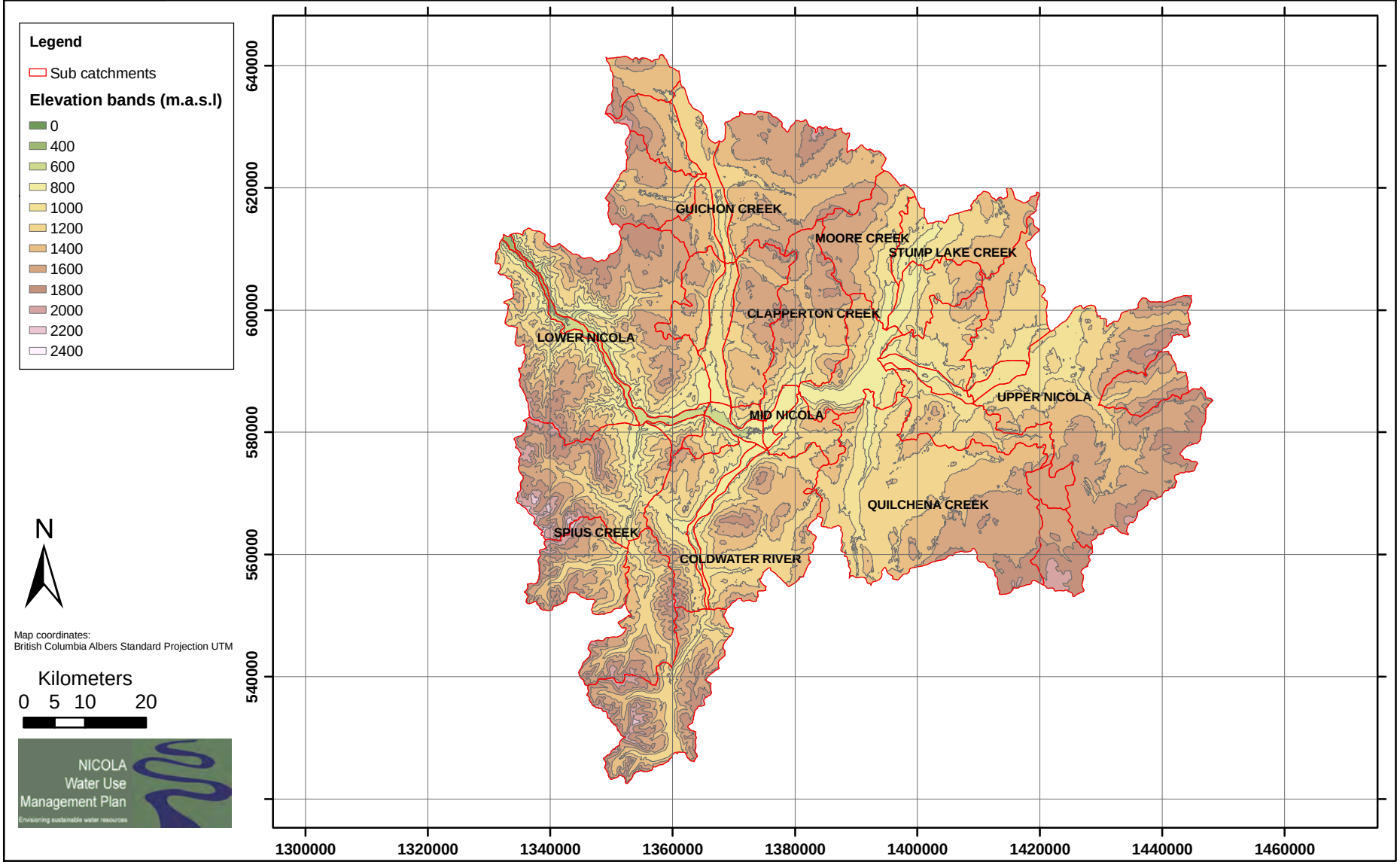

fig 5.1 ElevationBands.mxd

7-173 / R1

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Figure 5.2 MPB infestation in 2006

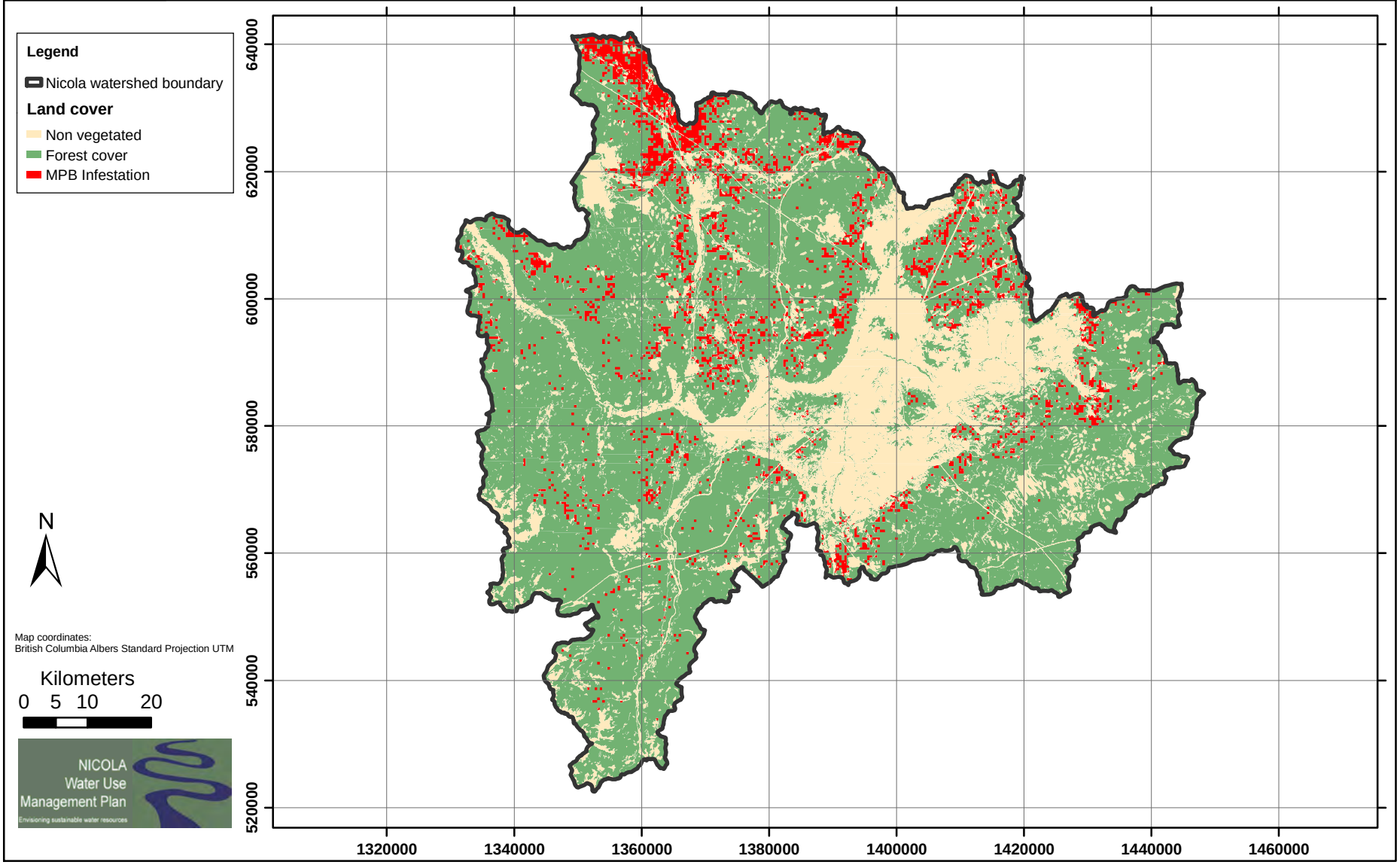

fig 5.2 MPBI 2006.mxd

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Figure 5.3: Beak Creek Calibration

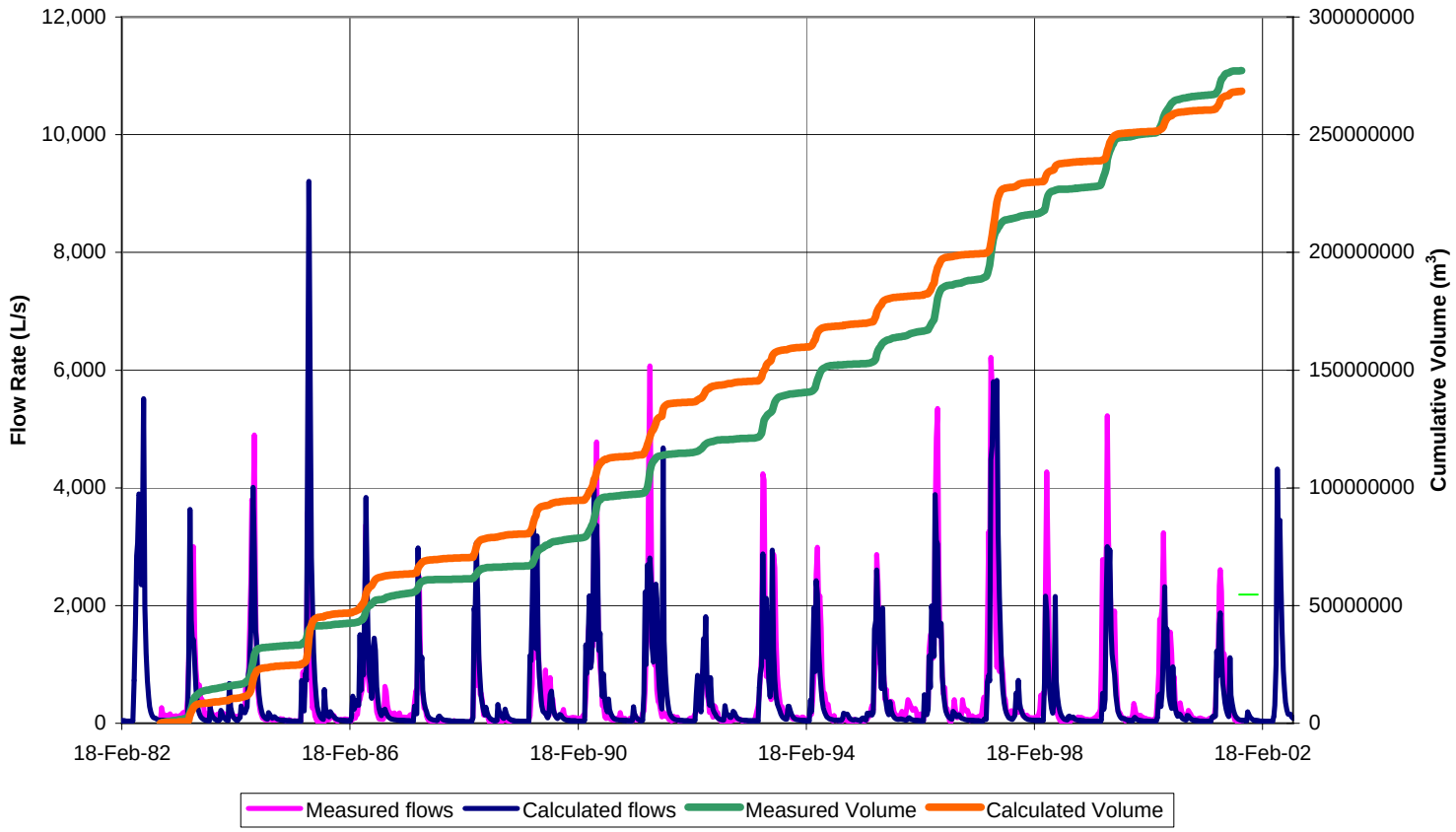

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Figure 5.4: Pennask Creek Calibration

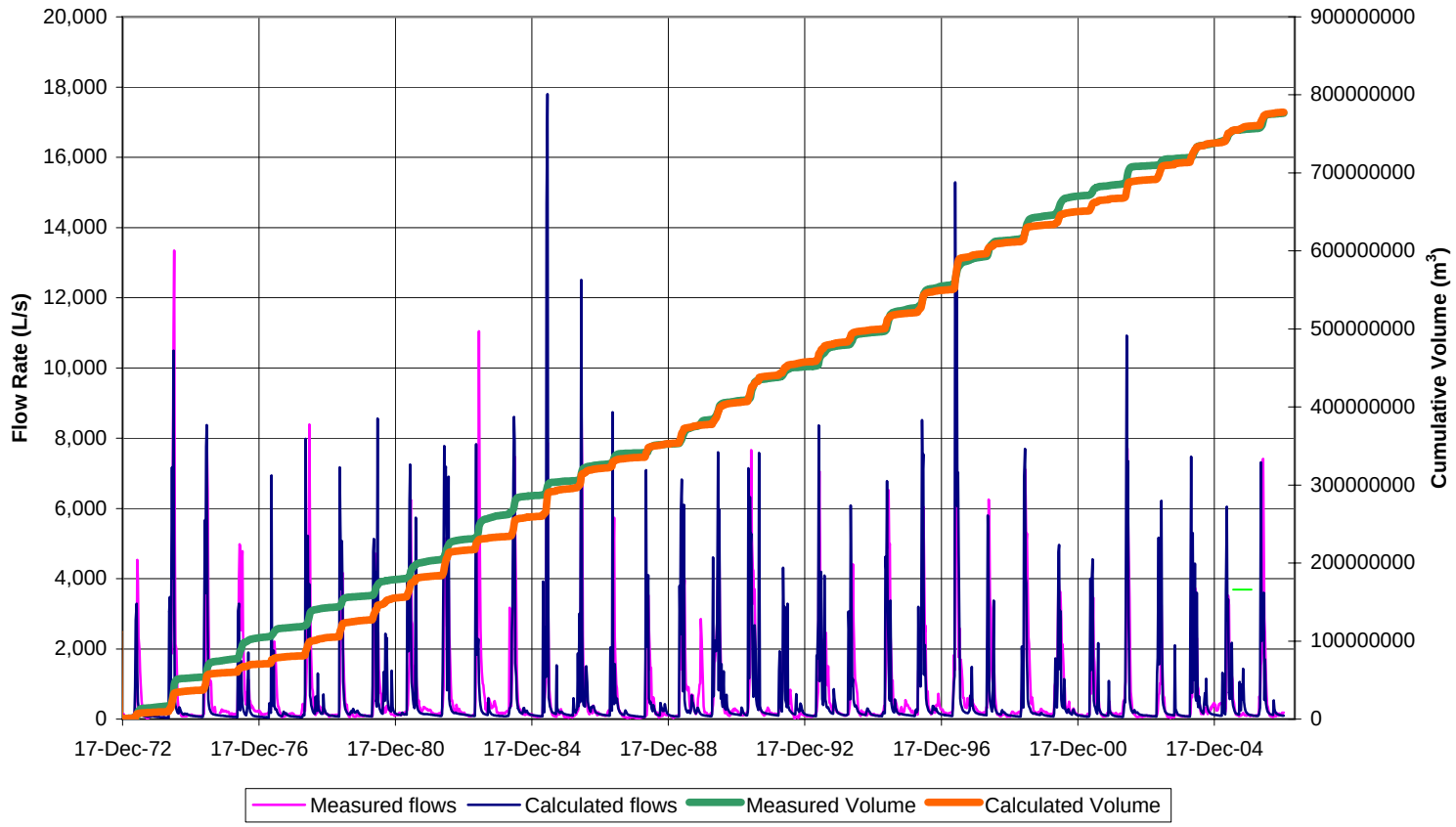

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Figure 5.5: Upper Coldwater River Calibration

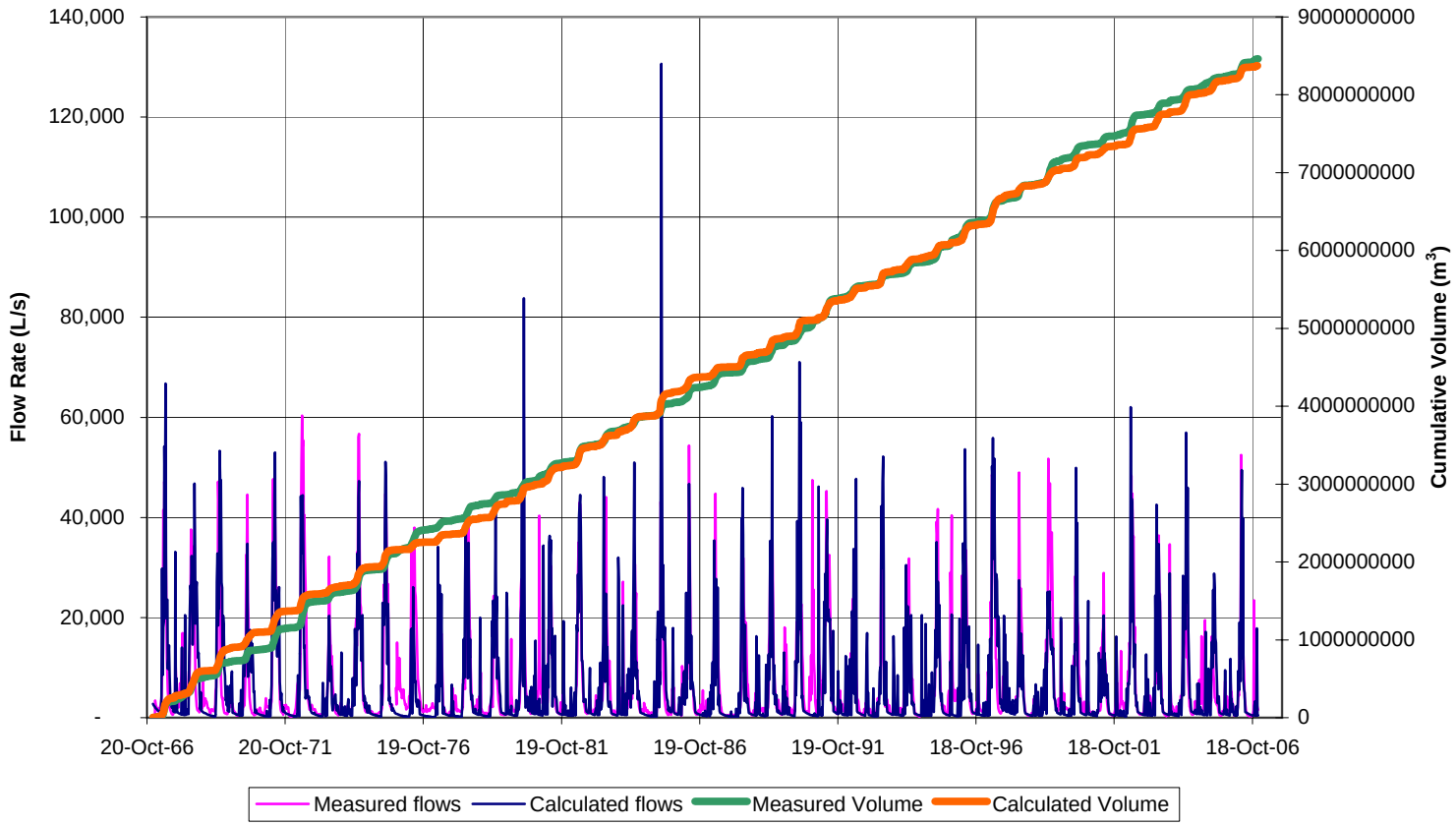

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Figure 5.6: Upper Spius Creek Calibration

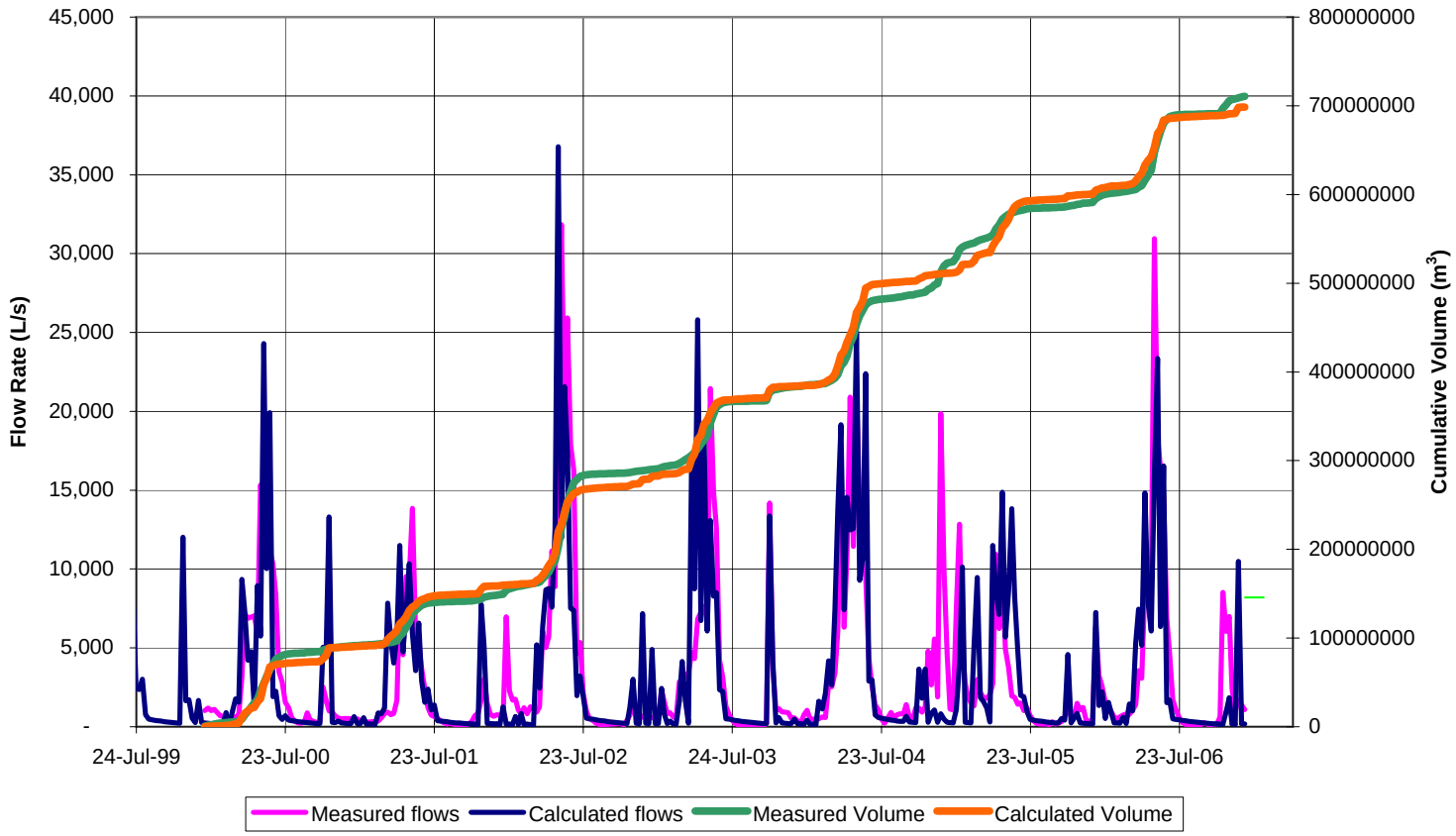

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Figure 5.7: Lower Spius Creek Calibration

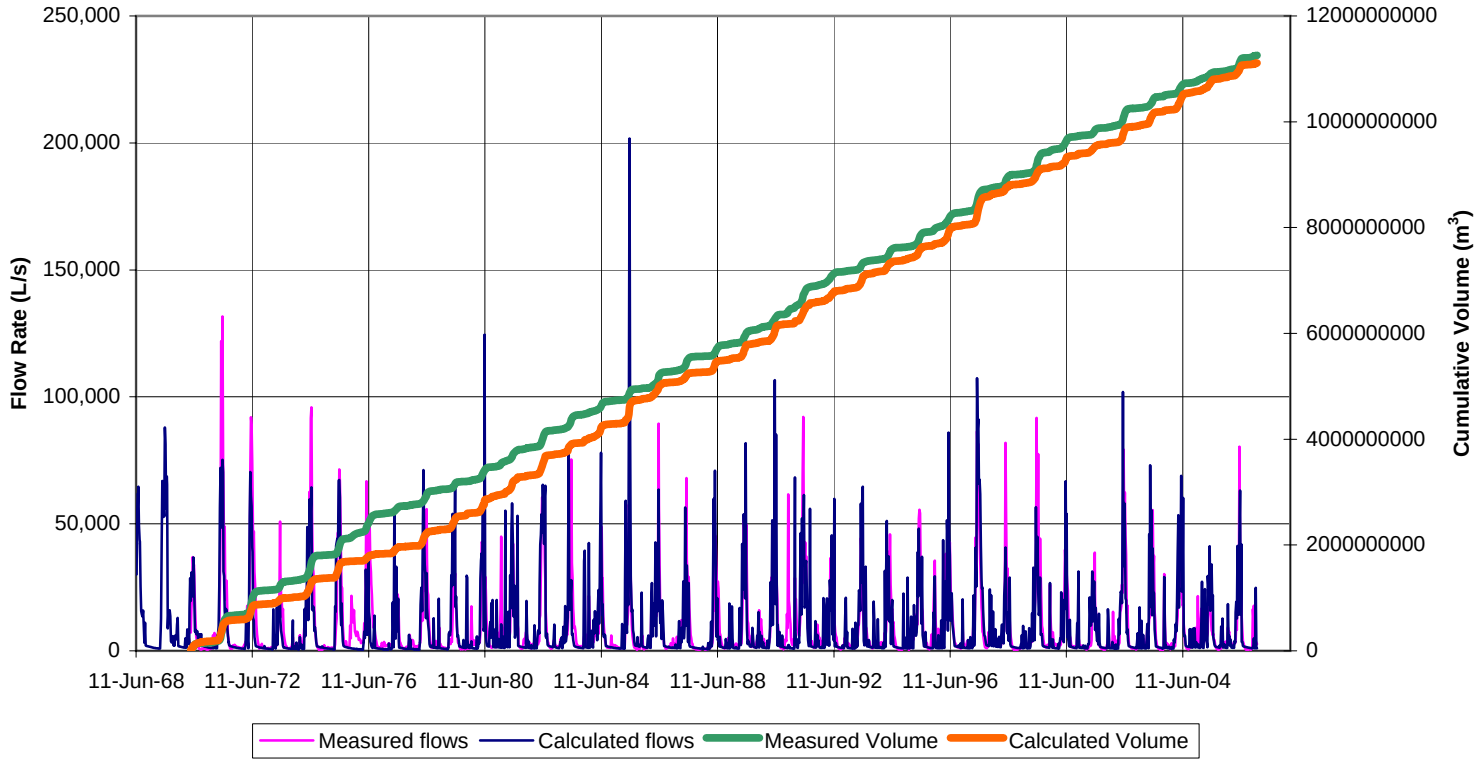

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Figure 5.8: Upper Guichon Creek Calibration

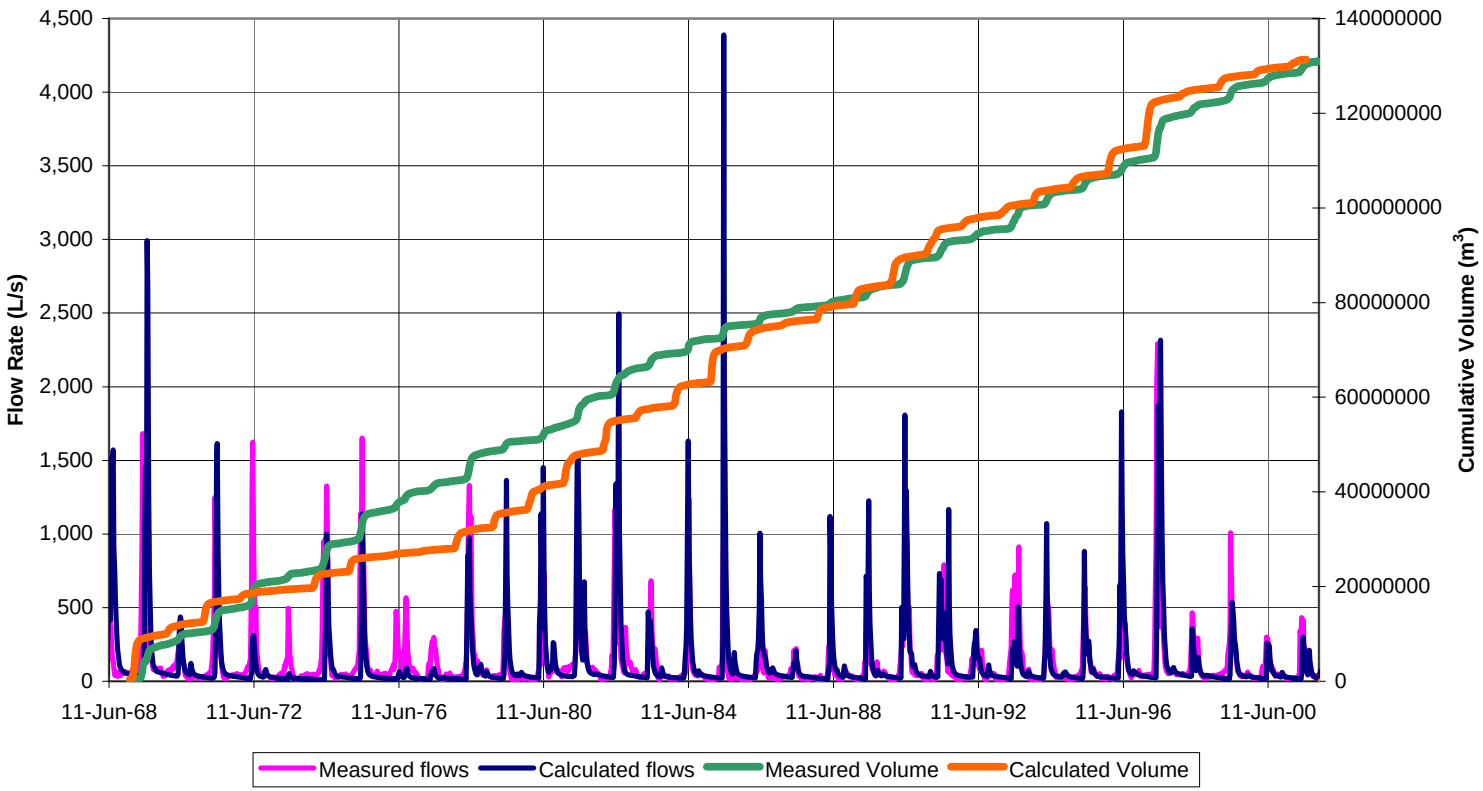

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Figure 5.9: Cumulative Volume of Flows at Spences Bridge

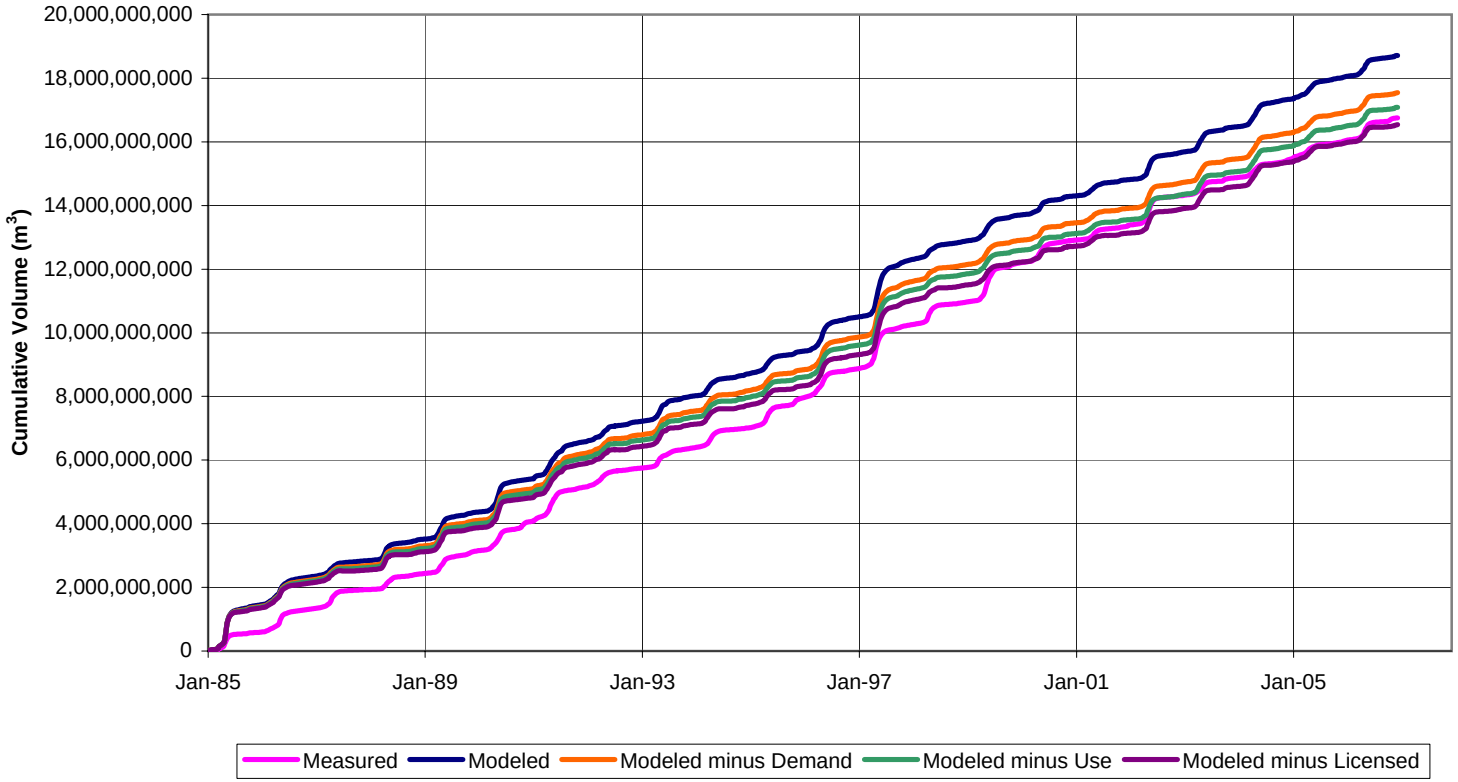

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Figure 5.10: Cumulative Volume of Flows Downstream of Nicola Lake

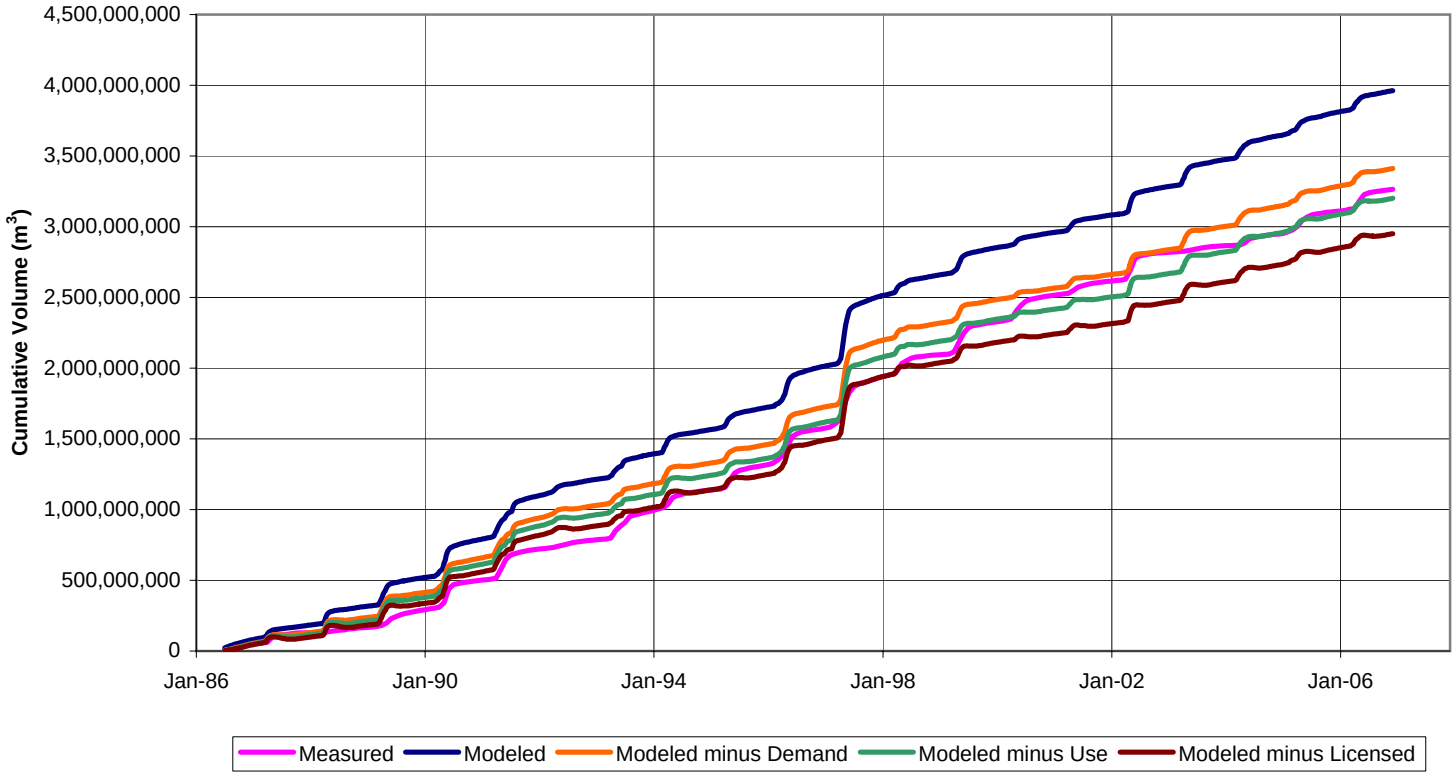

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Figure 6.1 Estimated extent of MPB infestation in 2015

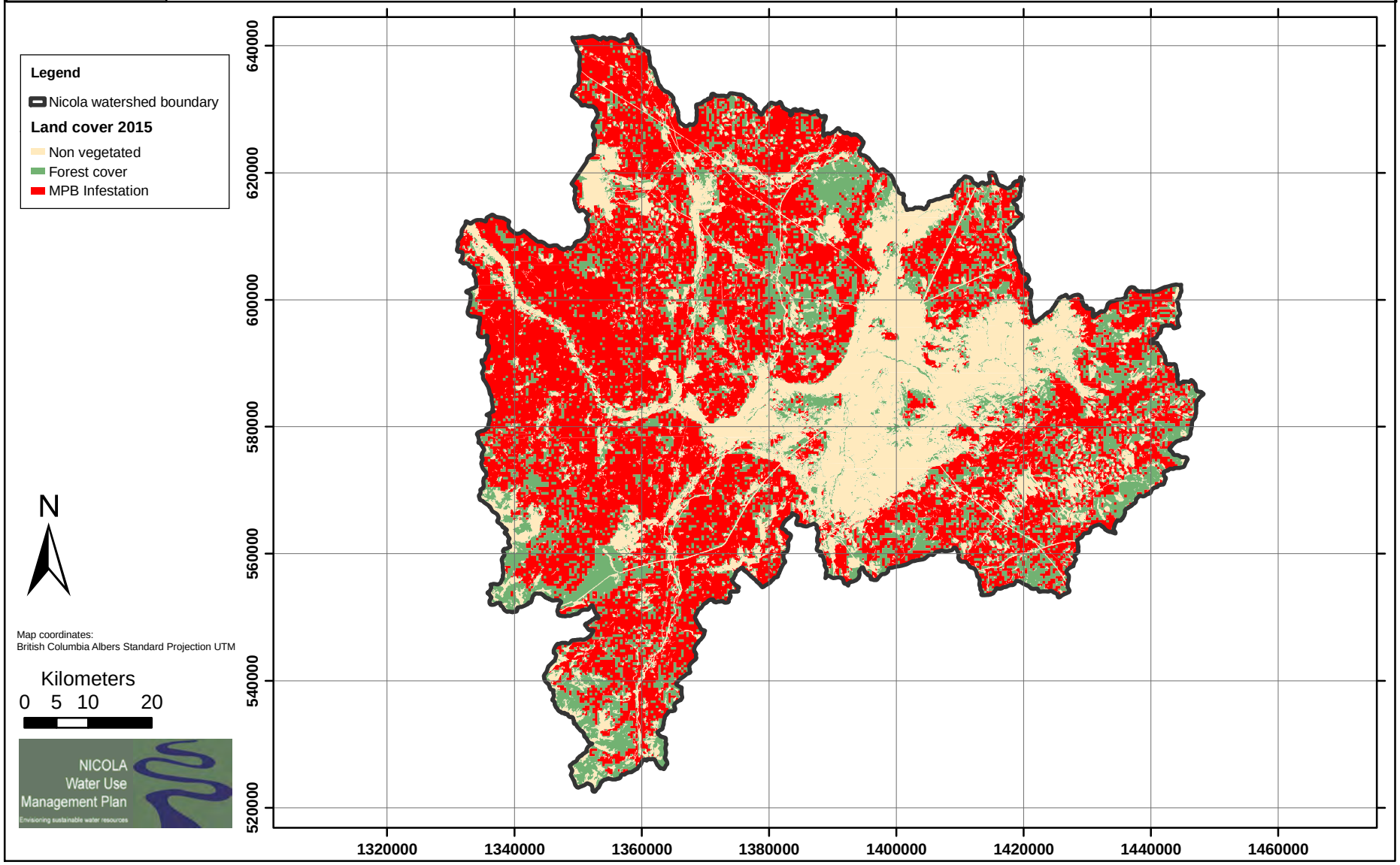

fig 6.1 MPBI 2015.mxd

7-173 / R1

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Figure 6.2 Scenario 1: Average annual natural flow in L/s/km^2

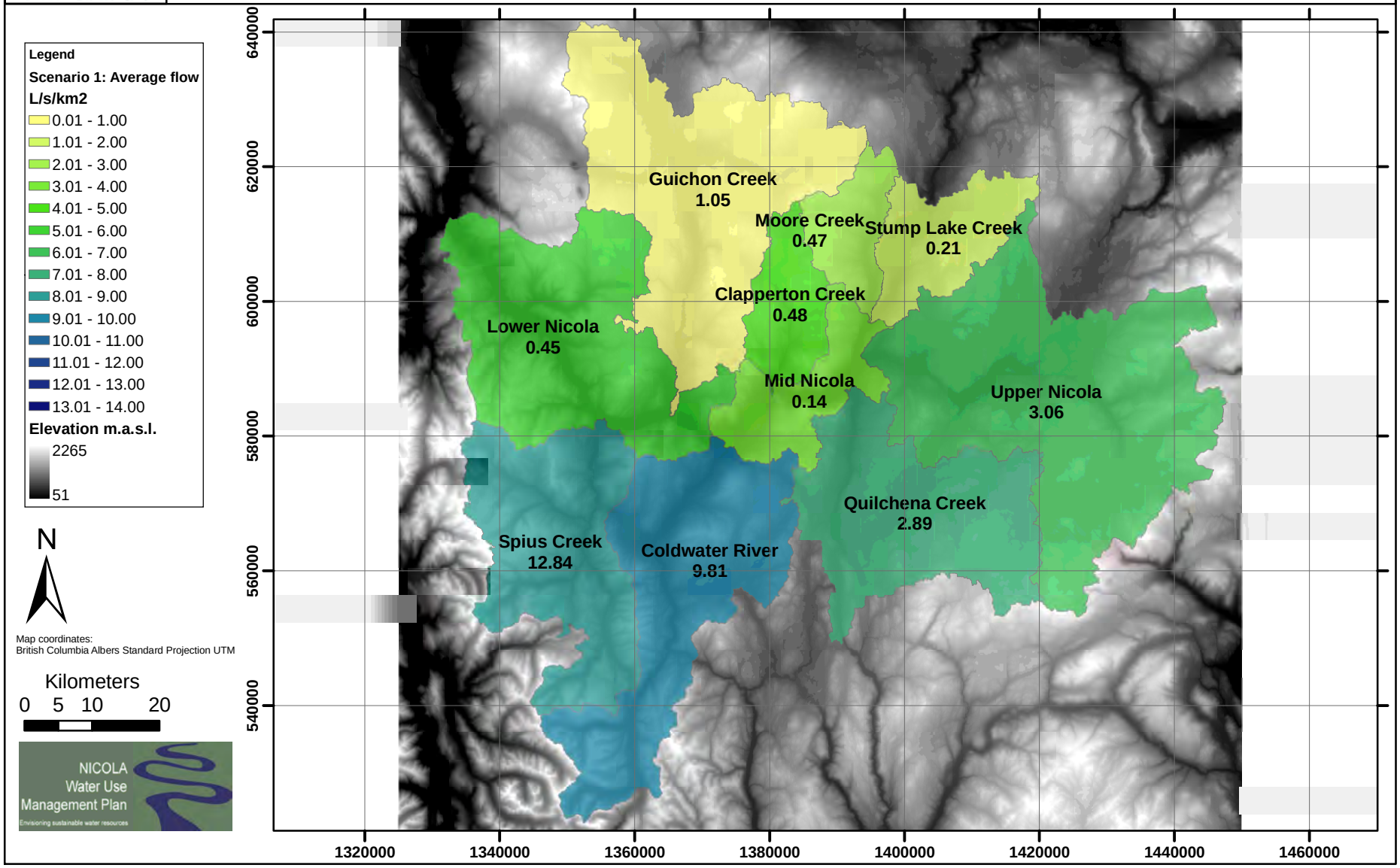

fig 6.2 S1 Average flow.mxd

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Figure 6.3 Scenario 2: Average annual natural flow in L/s/km^2

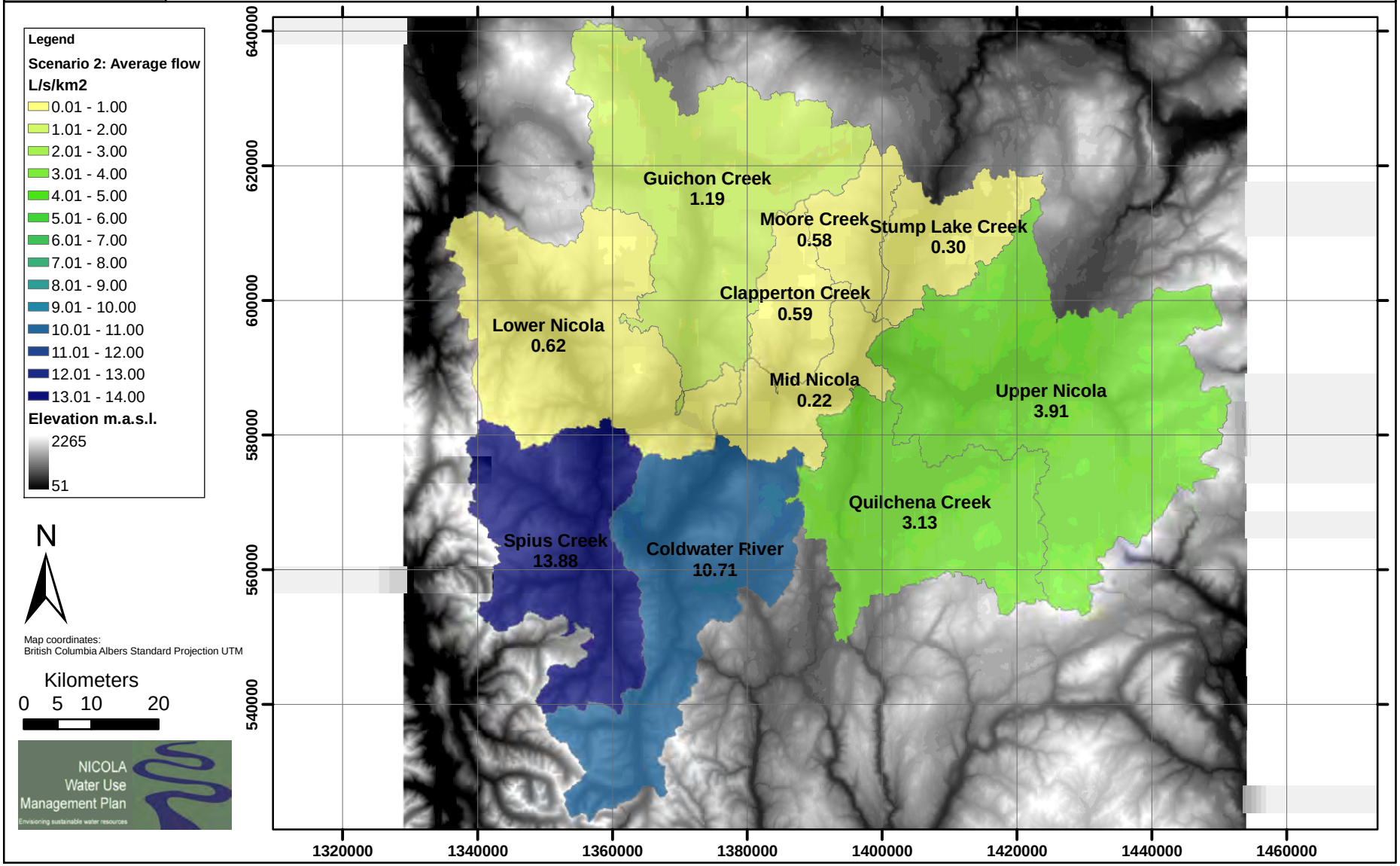

fig 6.3 S2 Average flow.mxd

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Figure 6.4 Scenario 3: Average annual natural flow in L/s/km^2

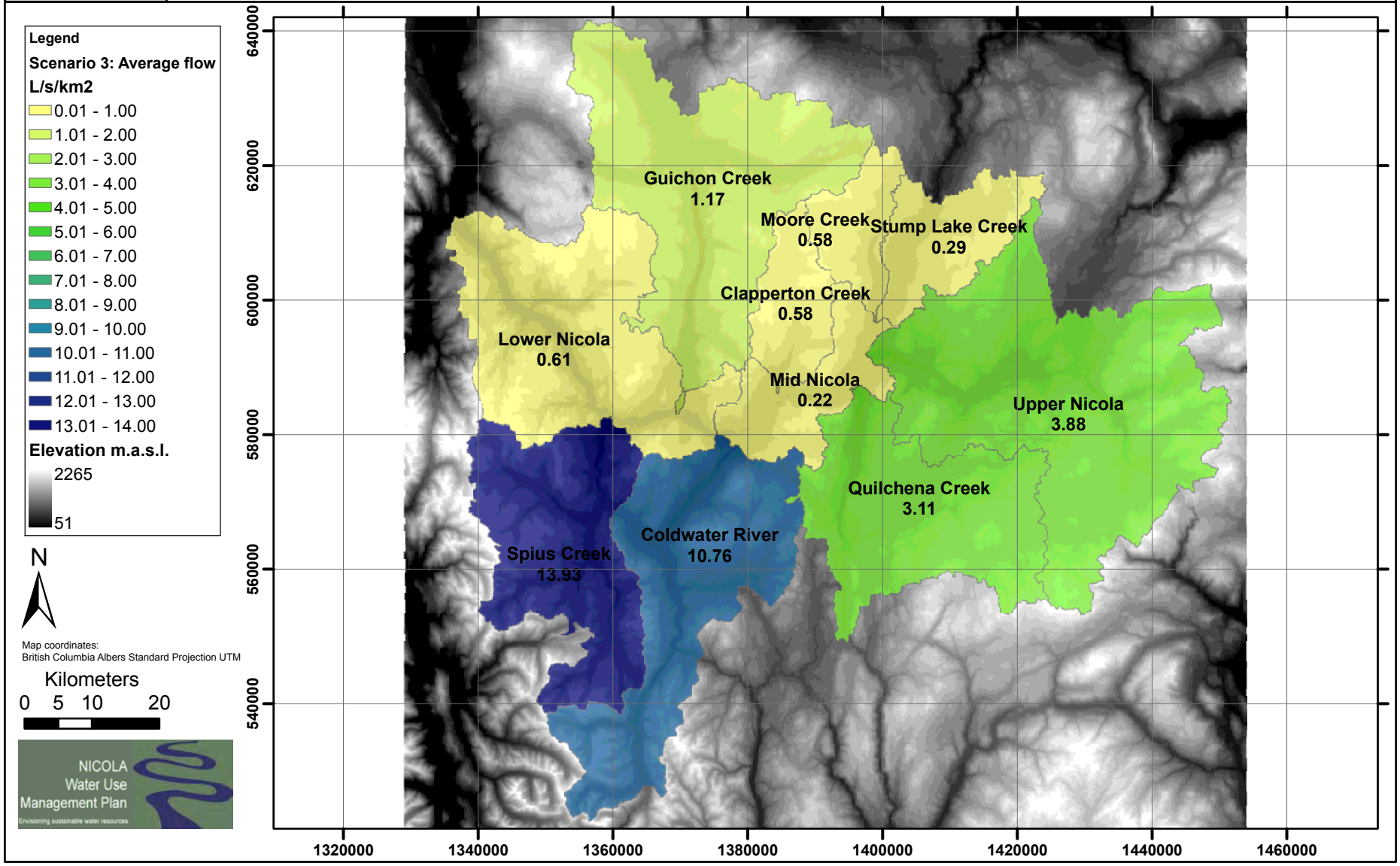

fig 6.4 S3 Average flow.mxd

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Figure 6.5 Scenario 4: Average annual natural flow in L/s/km^2

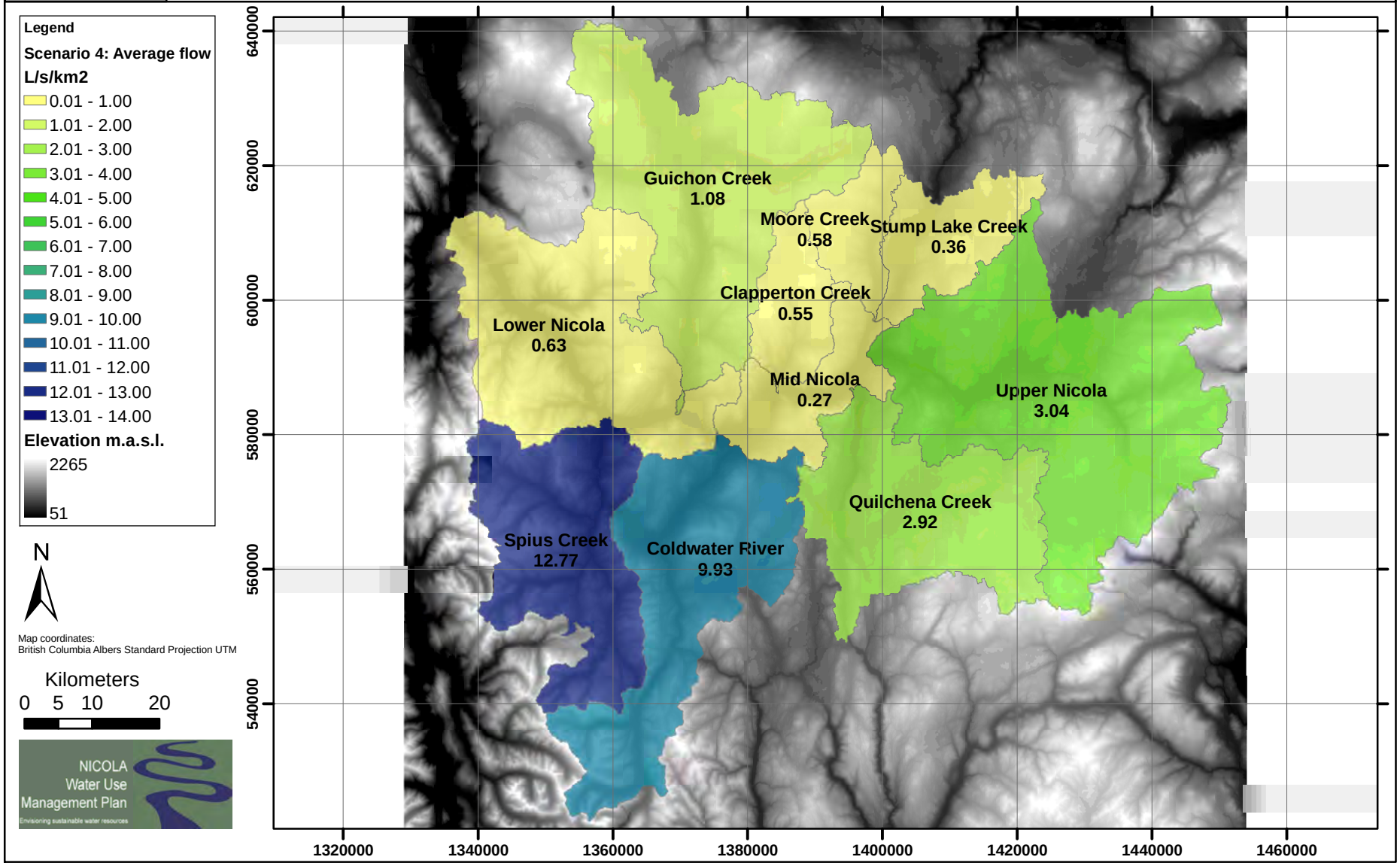

fig 6.5 S4 Average flow.mxd

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Figure 6.6 Scenario 5: Average annual natural flow in L/s/km^2

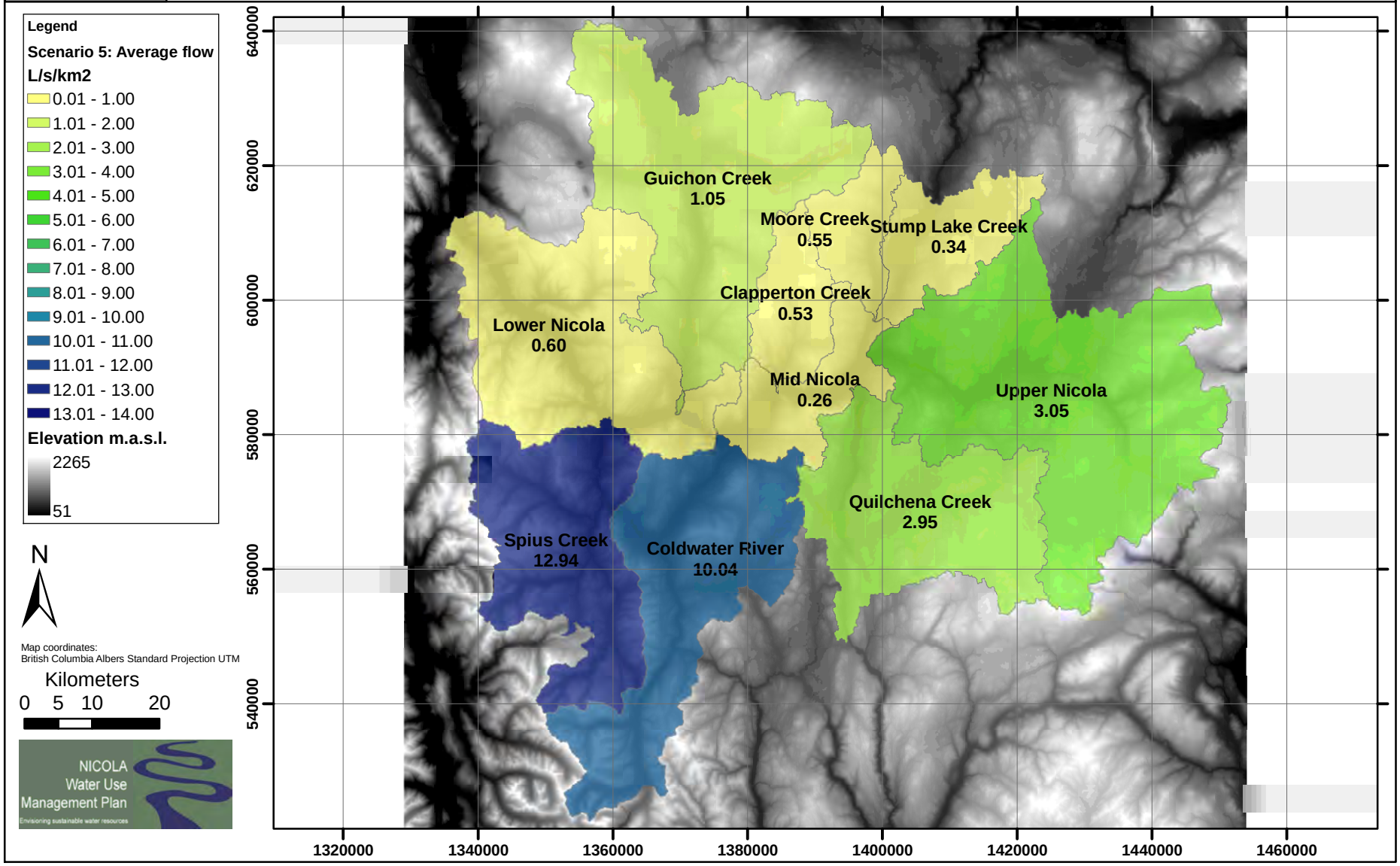

fig 6.6 S5 Average flow.mxd

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Figure 6.7 Scenario 1: Minimum annual weekly flow in L/s/km^2 for 1 in 15 year drought

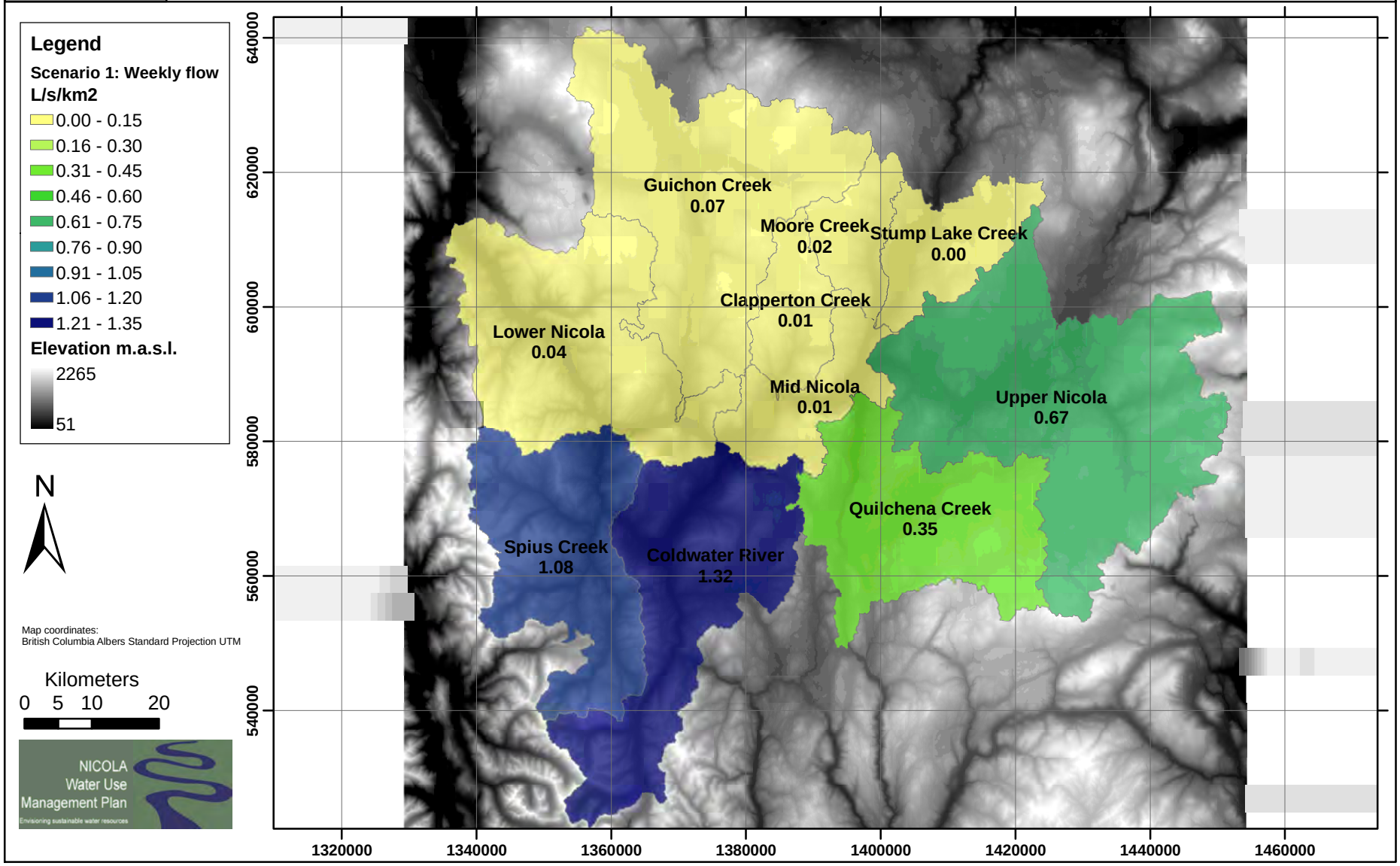

fig 6.7 S1 1 in 15 drought.mxd

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Figure 6.8 Scenario 2: Minimum annual weekly flow in L/s/km^2 for 1 in 15 year drought

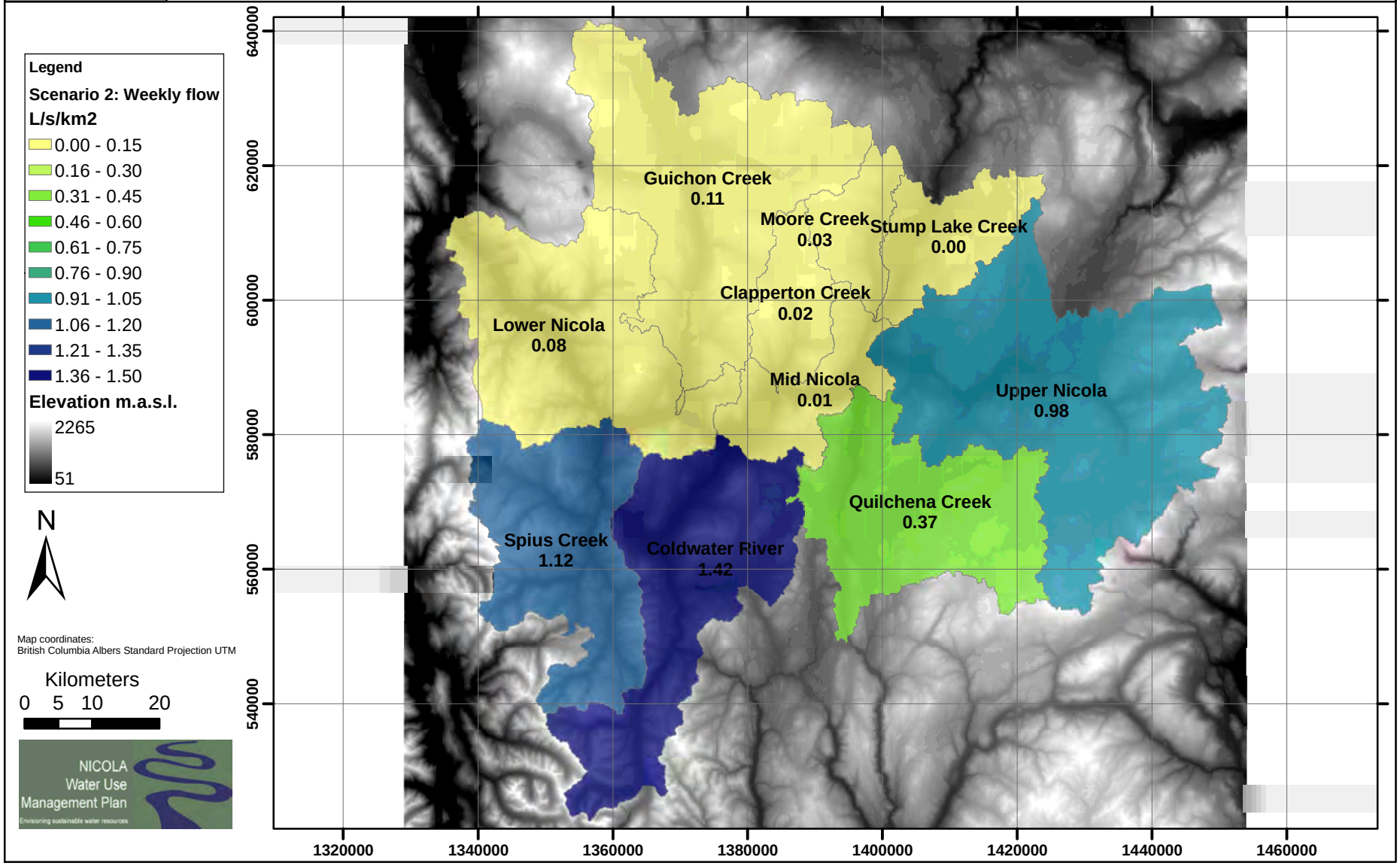

fig 6.8 S2 1 in 15 drought.mxd

7-173 / R1

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Figure 6.9 Scenario 3: Minimum annual weekly flow in L/s/km^2 for 1 in 15 year drought

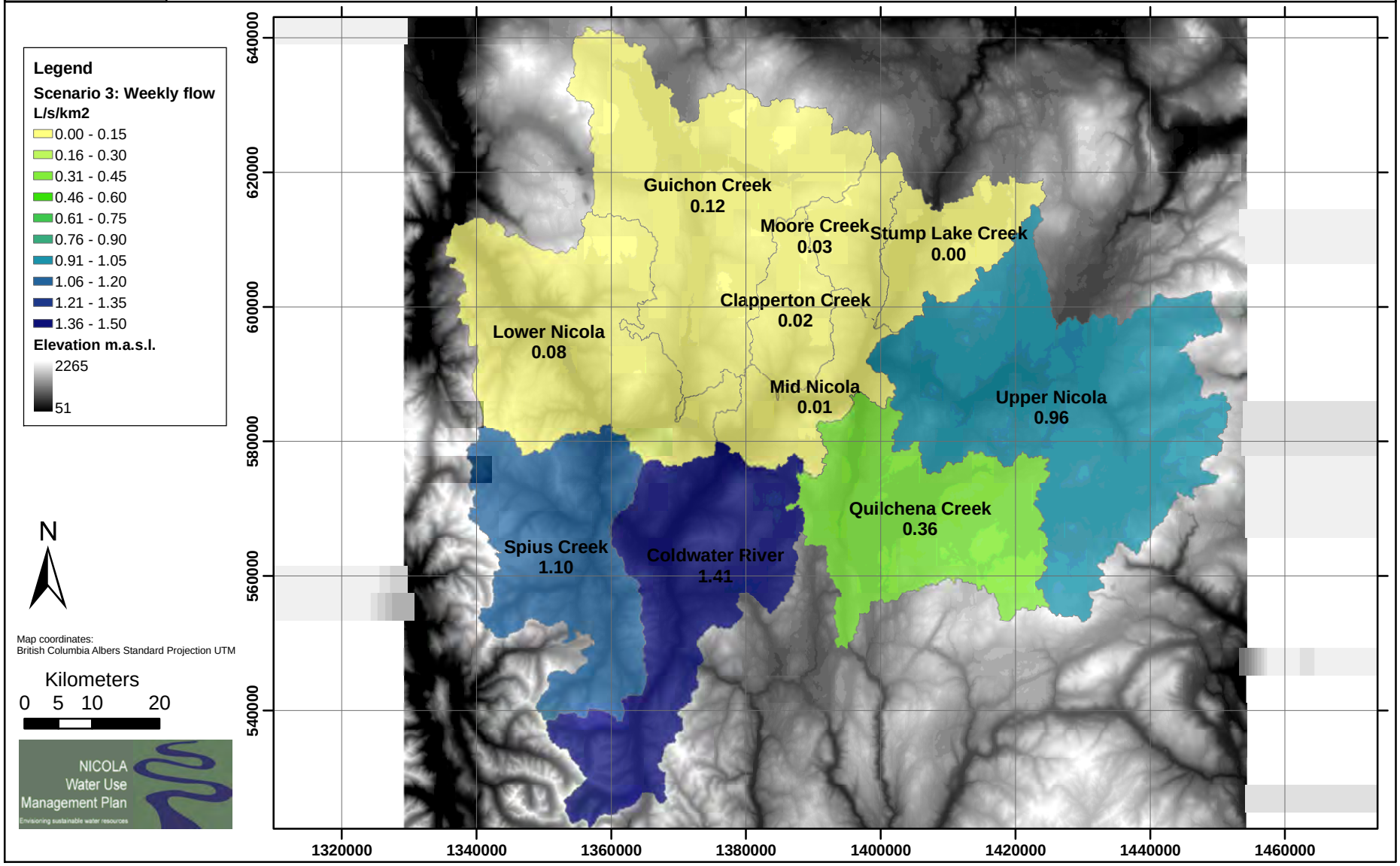

fig 6.9 S3 1 in 15 drought.mxd

7-173 / R1

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Figure 6.10 Scenario 4: Minimum annual weekly flow in L/s/km^2 for 1 in 15 year drought

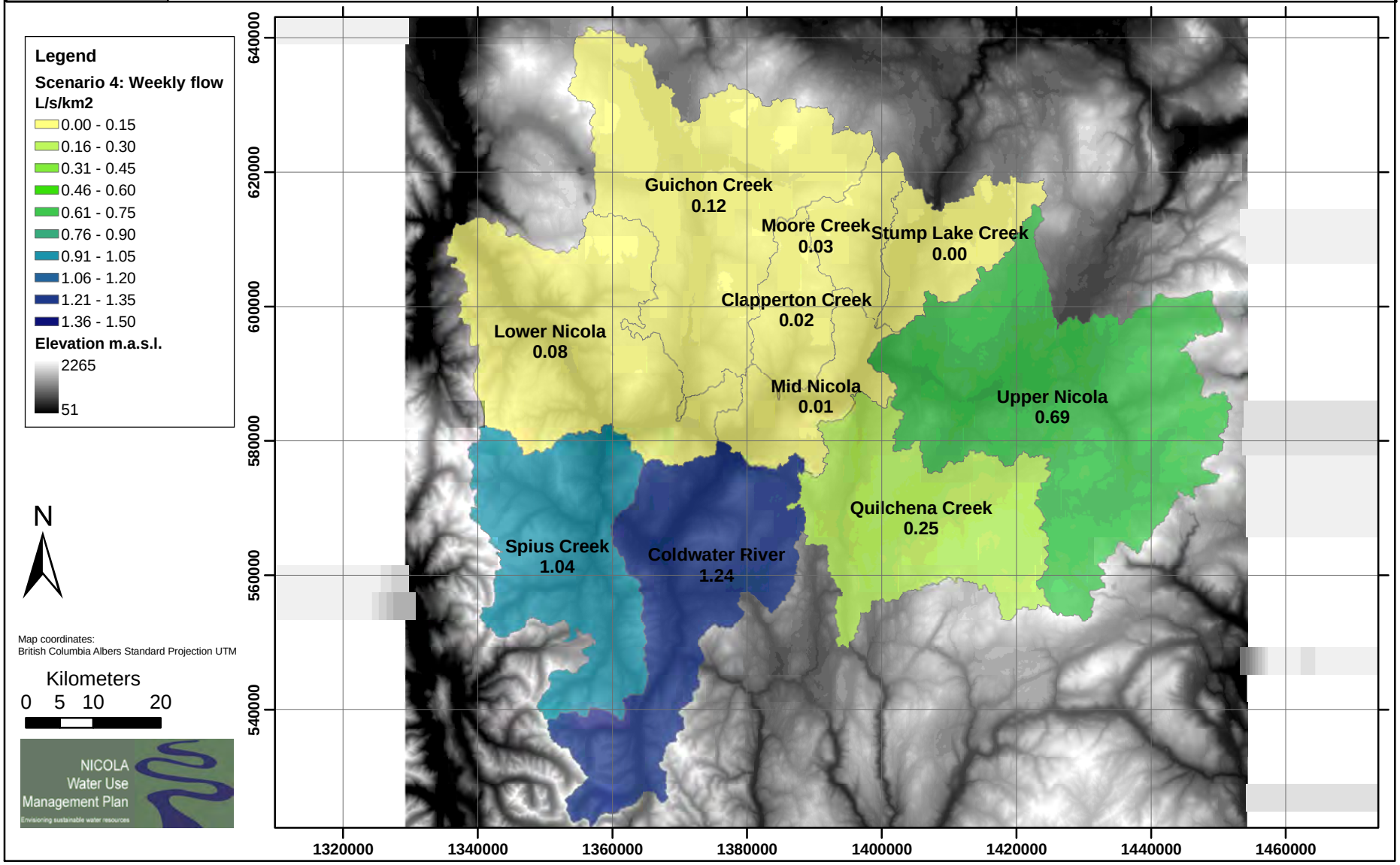

fig 6.10 S4 1 in 15 drought.mxd

7-173 / R1

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Figure 6.11 Scenario 5: Minimum annual weekly flow in L/s/km^2 for 1 in 15 year drought

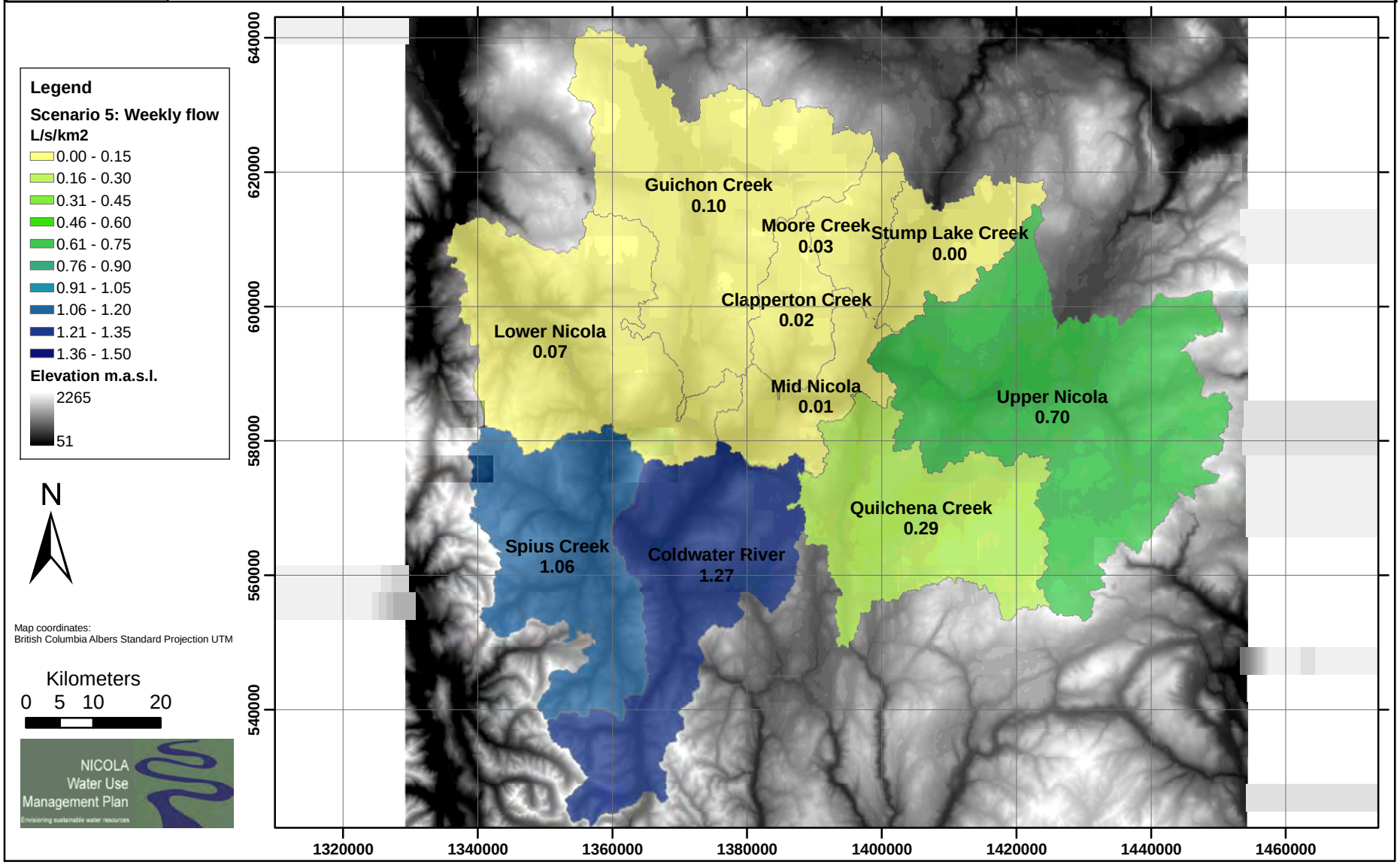

fig 6.11 S5 1 in 15 drought.mxd

7-173 / R1