

BC Environment

River Forecast Centre

Water Supply and Streamflow Conditions

Issued: August 4, 2009

Rivers in the South Interior and South Coast of British Columbia continue to experience low streamflow conditions for this time of year. Areas of concern are:

- **Extremely Dry** (near or below previously recorded low for the date)
 - Nicola River and tributaries, Chase Creek and tributaries, Salmon River and tributaries (Falkland and Salmon Arm), and adjacent basins in the lower Thompson River and mid-lower Fraser basin.
 - Vaseux Creek, Camp Creek and Trepanier Creek, and likely others rivers in the Okanagan basin.
- **Dry to Very Dry** (10-25 year return period low flow) – South Thompson/Shuswap, Okanagan, Kettle, Similkameen, Kootenay/Columbia (except south-east corner), South Coast, Vancouver Island.
- **Normal** - Upper Fraser, Peace, Liard, Stikine, Skeena

As a result of low snowpack, very dry weather for the past 8 weeks (rainfall has varied from less than one-quarter of normal to about one-half of normal), and record sustained heat last week, river levels across the southern quarter of British Columbia are well below median flows for the date, and are continuing to recede. Some rivers are currently experiencing record low flows for this time of year. River levels typically reach their absolute lowest levels of the year in late August and early September. The current low flow situation has a number of rivers on trajectories to approach or exceed these historic record low flows.

Central and northern British Columbia (North Thompson, Cariboo, Upper Fraser, Peace, Skeena, Liard) had normal or above normal snowpacks at the end of the winter, and has received periods of frontal rain during June and July. Rivers in these areas are near or above their median levels for the date and are not of concern at the present time.

Areas of Low Flow Concern:

South Thompson Basin: All gauged rivers are currently well below their median flows for the date.

- The Nicola River and Coldwater River are at or below their extreme low flows of record (40-50 year return period low flows). The extreme low flows on the Nicola and Coldwater rivers (and likely other ungauged streams in the Nicola basin) have them on a trajectory towards new record low flows in late August or early September.
- Chase Creek was at a record low flow last week, but its flow stabilized on Saturday (Aug 1), possibly as a result of reduced water withdrawals over the weekend.
- The Salmon River at Falkland is near its record low flow for the date.
- Other rivers in the South Thompson basin (e.g., South Thompson River at Chase, Eagle River, Seymour River, Bonaparte River) are near 10-20 year return period low flows. This likely includes other ungauged Shuswap Lake and Shuswap River tributaries.

BC Environment

River Forecast Centre

Similkameen River Basin: A drought was declared in May 2009 for Osoyoos Lake by the International Osoyoos Lake Board of Control, based on a forecast of well below normal runoff for the Similkameen River.

- The Similkameen River basin experienced a rain storm on Friday (Jul 31), helping to stabilize river levels at Princeton and Hedley near a 5-10 year return period low flow.
- The Tulameen River is currently near 20-30 year return period low flows.

Okanagan River and Kettle River Basin: Conditions in the Okanagan and Kettle basins are variable, but many gauged rivers are experiencing significant low flows. Inflows to Okanagan Lake have been well below normal for the past 12 months, and are ranked as the 5th lowest since measurement began in 1918.

- Vaseux Creek (in the southern Okanagan, east of Oliver) is extremely dry, and is below its record low flow for the date.
- Camp Creek and Trepanier Creek (on the west side of the Okanagan valley) are extremely dry, and are near their record low flows for the date.
- Most other gauged rivers in the Okanagan basin are near 10-20 year return period low flows for the date.
- Coldstream Creek (near Vernon) and Shatford Creek (near Penticton) are somewhat better, and are near 2-year return period low flows, possibly as a result of receiving some localized rain.
- The Kettle River (Westbridge, Grand Forks) is at a 10-20 year return period low flow.

South Coast: Conditions across the South Coast are variable, but many gauged rivers are experiencing significant low flows, depending on local factors and locations of rainfall in early July.

- Many gauged rivers are near 10-20 year return period low flows. These include the upper Seymour River, the Chilliwack River, the Stave River, and the Coquihalla River.
- Low relief, valley bottom rivers in the Fraser Valley appear to be experiencing significant low flow. The Nicomekl River in Surrey and Langley is currently near its record low flow for the date.
- Interestingly, glacier-fed rivers such as the Squamish and Elaho rivers are currently experiencing very high flows as a result of accelerated glacier and high snow field melt.

Vancouver Island: Conditions across the Vancouver Island are variable, but many gauged rivers are experiencing significant low flows, depending on local factors and scattered rainfall in early July.

- Some gauged rivers are near their low flow of record for the date, and are near 20-30 year return period low flows. These include: Tofino Creek, Harris Creek near Lake Cowichan, the Oyster River near Campbell River, and the Cruikshank River (upper Campbell River basin)
- Other rivers are near 10-20 year return period low flows, including Chemainus River, Browns Creek near Courtenay, and the Salmon River near Sayward.
- Regulated rivers such as the Nanaimo and Englishman rivers have higher flows relative to other rivers, and are near their median flows for the date as a result of releases from storage.

Outlook: The high pressure ridge produced last week's record heat has broken down, and a couple of frontal systems appear to be poised to push into interior BC from the south and north. Temperatures have cooled to near seasonal normals, and will likely remain so for the

BC Environment

River Forecast Centre

week. Environment Canada is forecasting rainfall for the interior for Thursday and Friday, with the heaviest amounts in the Kootenay. The Thompson-Nicola-Okanagan-Kettle is in the transition zone of the systems and is currently expected to receive only scattered and/or light rain showers. Some convective thunder storms may occur as well. No notable rain is evident in the forecast for the South Coast or Vancouver Island.

River levels will continue to drop through early August.

Implications: The low water levels will likely result in such things as diminished water supply, lower than normal lake and reservoir levels, and reduced groundwater levels. There is potential in some areas and some rivers for significant effects on fish and aquatic organisms.