

Provincial Runoff Highlights



Saskatchewan
Watershed
Authority

April 12, 2011

The warm temperature and wind accelerated snow melt in many areas over the past 24 hours.

Especially in the southeast local runoff is causing significant flooding of farmland, overtopping roads and threatening or flooding houses.

Flows are increasing at Swift Current. The City is well prepared and has sand bags and other flood barriers in place. Flows of approximately 120 m³/s are expected in Swift Current Creek at the city weir tonight with higher flows (in the range of 140 to 150 m³/s) forecast for tomorrow night.

Releases from Thompson Reservoir on the Wood River were increased last night to 113 m³/s from 82 m³/s, in response to sharp increases in inflows to 156 m³/s from 116 m³/s. The increased flow will cause flooding of low lying areas along the Wood River. Gravelbourg has started some preparatory sandbagging; no flooding has been reported.

High flows from the Moose Jaw River are backing water up the Qu'Appelle River to the control gates on the Buffalo Pound Lake Dam. The gates in the Buffalo Pound Lake dam remain closed to prevent flow into the lake but water in the river is continuing to be high enough that it is spilling over top of the gates into Buffalo Pound Lake. Buffalo Pound Lake is continuing to rise.

Flows on the Qu'Appelle River at Lumsden have increased to 140 m³/s and are continuing to increase with peaks expected to reach 300 m³/s.

Tributaries of the Qu'Appelle in the Regina area, such as Cottonwood Creek, are running at about 1:50 year flood events.

Runoff expectation for the lower Qu'Appelle is now expected to be a 1 in 25 year event, higher than previously forecast.

The outflow from Boundary Dam at Estevan was increased several times over the past 24 hours as flows into the reservoir continued to peak. Flows are expected to impact

some roads and stream crossing along the Souris and properties in low-lying areas may experience flooding.

Colder weather is forecast tomorrow. This will slow melt and may provide an opportunity for runoff to move away in some areas before the melt resumes, lowering peaks. However it also creates potential for a more rapid melt producing higher peaks later.

Provincial Watersheds

Southwest Region

Missouri Watershed

- The snow pack in the southern slopes of the Cypress Hills is continuing to melt very slowly with runoff barely started.
- Local runoff is increasing flow in the Frenchman River in the Val Marie area

Cypress Hills North Slope

- Peak flows have occurred with no out of channel flows reported.

Swift Current Creek Watershed

- Flows are increasing in Swift Current Creek. Flows of $91\text{m}^3/\text{s}$ are reported at the city weir this morning. Flows of approximately $120\text{m}^3/\text{s}$ are expected at the city weir tonight with higher flows (in the range of 140 to $150\text{m}^3/\text{s}$) forecast for tomorrow night .
- Duncairn Reservoir, which had been lowered to provide capacity for flood mitigation reached its full supply level at 1:00 AM today as is now being surcharged. Inflows to the reservoir are currently $125\text{m}^3/\text{s}$ and outflows have been increased to $56\text{m}^3/\text{s}$. A further increase in outflow is likely later today.
- Although the City of Swift Current is very well prepared for these high flow conditions, and has sand bags and other flood protections in place, some properties may be at risk of flooding.
- Watershed Authority, Agriculture Canada, Emergency Measures Organization and the City of Swift Current are working together to prepare for and manage this flood.

South Saskatchewan River Watershed

- Brightwater Reservoir is now spilling over the emergency spillway with peak outflows of 30 to 35 m³/s expected over the next couple of days. The reservoir is approaching its peak level with flows over the spillway expected to continue for several days.

Old Wives Lake Watershed

- Inflow to Thompson Reservoir on the Wood River rose sharply last night to 156 m³/s from 116 m³/s. Releases from the reservoir were increased last night to 113 m³/s from 82 m³/s, exceeding channel capacity.
- The reservoir is now at full supply level and is being surcharged to reduce downstream flooding.
- Gravelbourg has started some preparatory sandbagging; no flooding has been reported.
- Tributary streams downstream from Thompson Reservoir are adding to this flow.

Poplar River Watershed

- The release of water from Cookson Reservoir at Coronach was increased to 60 m³/s from 40 m³/s.

Southeast Region

Souris River Watershed

- Inflow into Boundary Reservoir increased rapidly yesterday and the outflow from Boundary Dam was increased over the night to 140 m³/s.
- Some roads and stream crossing along the Souris will be impacted and properties in low-lying areas may experience flooding.
- Flows in the Souris are expected to be similar to those last seen in 1979.
- The diversion channel between Boundary and Rafferty reservoirs is currently carrying flows of approximately 50 m³/s into Rafferty to reduce the potential for flooding at Estevan.
- Releases from Rafferty Dam have been stopped.
- A high flows advisory has been issued.
- Flow in the upper Souris at Weyburn are increasing.
- At Radville local flooding has over topped all roads into town except the highway. Gibson Creek, which flows through Radville, is flowing at 52.3 m³/s which is the second highest flow ever recorded.

Moose Jaw River Watershed

- Moose Jaw River though Moose Jaw is flowing at about 190 m³/s and is increasing. Ice jams have cleared and this flow is not causing flooding problems in the city.
- Moose Jaw River near Rouleau is flowing near 80 m³/s with significant snow left to melt.
- High flows in the Moose Jaw River are expected to continue through the week.

Wascana Creek Watershed

- Wascana Creek is starting to rise in upper reaches.
- One gate on the control structure on Wascana Lake was fully opened April 8 to increase outflow. The lake has risen about .5 metres above its full supply level
- The City of Regina is removing stop logs from the Wascana Lake structure this morning to facilitate passing runoff.
- Major inflows have not yet reached Regina

East Central Region

Qu'Appelle Watershed

- High flows from the Moose Jaw River are backing water up the Qu'Appelle River to the control gates on the Buffalo Pound Lake Dam. The gates in the Buffalo Pound Lake dam remain closed to prevent flow into the lake but water in the river is continuing to be high enough that it is spilling over top of the gates into Buffalo Pound Lake. Buffalo Pound Lake is rising quickly. When the lake levels exceed the downstream river water levels the dam will be opened, allowing the release of water from Buffalo Pound Lake.
- Diversions from Lake Diefenbaker to Buffalo Pound have been stopped.
- Tributary streams like Cottonwood Creek and Flying Creek are running vigorously. Cottonwood Creek, at 41 m³/s, is experiencing a runoff seen about 1 in 50 years.
- Flows on the Qu'Appelle River at Lumsden have increased to 140 m³/s and are continuing to increase. Flows at Lumsden are expected to reach 300 m³/s.

- The dam below Craven and the Valeport Dam at the outlet of Last Mountain Lake remain wide open, allowing the Qu'Appelle River to split naturally. Part of the Qu'Appelle River flow enters into Last Mountain Lake, and part proceeds downstream on the Qu'Appelle River.
- Channel capacity is exceeded and water is spread across the flood plain.
- Lanigan Creek is flowing well.
- Water levels on Last Mountain Lake are continuing to rise.
- Expect runoff in the Lower Qu'Appelle will now be at least a 1 in 25 year event.
- Control gates at Katepwa structure are being fully opened to pass high flows.

Assiniboine Watershed

- Flows at Kamsack increased from 20 to 40 m³/s over the last day, Runoff is varied across the watershed, underway in some areas and still very early in others.

Quill Lakes Watershed

- Stream flows have increased and flooding is occurring in some areas.

Northeast Region

- Warmer weather has started flow moving in some areas and caused local flooding impacted some roads.

Carrot River Watershed

- Flows on the Carrot River increased rapidly over the past 24 hours. Flows at Armlee increased from 70 to 151 m³/s. Tributaries in the upper parts of the watershed such as Goose Hunting Creek and Melfort Creek are flowing and beginning to cause some off channel areas.
- Runoff is still at an early stage
- Water is flowing from Deadmoose Lake into Waldsea Lake. This flow is approximately matching the inflow to Deadmoose Lake.
- Cooler weather tomorrow and forecast low of -15 degrees will slow runoff

Northwest Region

- Local flooding issues are wide spread in the RM of Corman Park from local snow melt
- Local flooding also reported in the Aberdeen and Blaine Lake areas

North Saskatchewan Watershed

- Tributary streams are flowing.
- Ice is breaking on the North Sask River
- An ice jam formed on the Battle River at Battleford and backed water up but the ice jam broke over night without significant flooding
- No flooding issues reported.

Update

Watershed Authority will update this status on April 13.
