Hinton flood study details

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2021

This document provides answers to common questions about the Hinton flood study.

Flood study background

The Hinton flood study assesses and identifies flood hazards along 27 km of the Athabasca River, 6 km of Hardisty Creek, 15 km of Maskuta Creek, 4 km of Happy Creek, 3 km of Cold Creek and 1 km of Iron Creek through Hinton and Yellowhead County.

The study started in summer 2021 and technical work was completed in spring 2024. It includes a stand-alone survey data collection report and a main report that summarizes the hydrology assessment, describes the hydraulic model creation and calibration process, presents the flood modelling results used to create flood maps, illustrates the information used to define the floodway and flood fringe, and includes the flood hazard maps. Flood inundation maps are provided in a separate flood inundation map library.

When the draft flood study is finalized, it will replace the older Hinton flood study (which was completed in 1994) and expand coverage. The new study will replace 15 km of older mapping and add 41 km of new mapping through areas never mapped before.

Public engagement information

Draft reports and flood maps were provided to affected municipalities in May 2024, for information and to obtain feedback as the first step of the study finalization process.

This public engagement focuses on the draft flood inundation maps, which show areas at risk for different sized floods to help with emergency response, and the draft flood hazard maps, which define floodway and flood fringe areas to help with long term planning.

If you are interested in learning more, the "Floodway Determination" section of the main report documents how the draft flood hazard maps were created. Copies of the draft flood inundation and flood hazard maps are also included in reporting, but they are easier to explore using our online flood map viewer.

Causes of flooding in the study area

Flooding typically occurs because of high river flows driven by heavy rainfall, either alone or combined with snowmelt runoff, and are typically more of a risk in the spring and summer. This type of flooding is often called open water flooding. We are aware that there may be other sources of flooding in your community, including groundwater flooding or flooding caused by local drainage issues, but the focus of this study is on riverine flooding caused by high river flows.

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It would be unusual for a flood map to perfectly match a past flood, due to different river flows, variations in local conditions, and assumptions made for the study. Flood maps are based on theoretical floods with different chances of occurring, including the 1:100 design flood used for flood hazard mapping. Draft flood maps from the new study do not represent any specific recent or historic flood.

Climate change considerations

The potential effects of climate change were assessed as part of the hydrology assessment. In general, the effect of climate change on Athabasca River and tributary flood flows is uncertain. Given this uncertainty, various climate change scenarios were not explicitly modelled. However, the potential impact on flood levels from increasing 1:100 flood flows by 10% and 20% was assessed, and this information can be considered by communities if desired.

Learn more about provincial flood studies

Review our "General information about flood studies" fact sheet to learn more about provincial flood studies, including how flood maps are developed and how flood inundation and flood hazard maps are used.

Visit www.floodhazard.alberta.ca for more information about the Flood Hazard Identification Program.

The website includes more details on different types of flood maps and how to view them using our online flood map viewer, as well as individual web pages for listing our draft and final flood studies.

Contact

Email us at epa.flood@gov.ab.ca for more information about our public engagement for draft flood studies, or if you have questions about the Flood Hazard Identification Program.