

## **Pincher Creek Flood Hazard Study**

We would like to provide an update on the status of the Pincher Creek Flood Hazard Study.

Steady progress has been made since the study started in spring 2019. Survey and base data collection is complete and the hydrology assessment work is in late stages. The main focus of our consultant over the next months will be building the hydraulic model, which will form the basis of all flood mapping products. Technical work is expected to be complete by spring 2020.

We recognize there will be tremendous interest in any new flood mapping. Our study finalization process includes municipal review and public engagement for major components, as appropriate. Our goal is to provide useful tools to communities and the public as soon as possible.

The flood hazard study will be completed under the provincial Flood Hazard Identification Program, the goals of which include enhancement of public safety and reduction of future flood damages through the identification of river and flood hazards. The provincial study is being co-funded through the federal National Disaster Mitigation Program.

More information about the Alberta Flood Hazard Identification Program can be found at:

- [www.floodhazard.alberta.ca](http://www.floodhazard.alberta.ca)

If you have any questions regarding this work, the project engagement specialist, Julia Frohlich, can be contacted at:

- Email: [julia.frohlich@gov.ab.ca](mailto:julia.frohlich@gov.ab.ca)
- Telephone: 403 355-2494

## Project Background and Study Progress

The Pincher Creek Flood Hazard Study will assess and identify flood hazards along 13 km of Pincher Creek and 7 km of Kettles Creek through Pincher Creek and Municipal District of Pincher Creek No. 9.

The main study components outlined below include new hydraulic modelling and flood mapping, but all deliverables support local emergency response and land-use planning needs.

- **Survey & Base Data Collection – Complete**

Hydraulic models and flood maps require high-accuracy base data. Field surveys and LiDAR remote sensing are used to collect river and floodplain elevations, channel cross section data, bridge and culvert information, and dedicated flood control structure details.

- **Hydrology Assessment – Late Stages**

The hydrology assessment estimates flows for a wide range of possible floods along Pincher and Kettles Creeks, including the 2, 5, 10, 20, 35, 50, 75, 100, 200, 350, 500, 750 and 1000-year floods.

- **Hydraulic River Modelling – Early Stages**

A new hydraulic computer model of the river system will be created using new survey data and modern tools. The model will be calibrated using surveyed highwater marks from past floods to ensure that results for different floods are reasonable.

- **Flood Inundation Mapping – Early Stages**

Flood maps for thirteen different sized floods, based on the hydraulic model results and the hydrology assessment, will be produced. Flood inundation maps can be used for emergency response planning and to inform local infrastructure design. These maps identify areas of direct flooding and areas that could be flooded if local berms fail.

- **Flood Hazard Mapping – Early Stages**

Flood hazard mapping divides the 100-year floodplain into floodway and flood fringe zones, to identify where flooding is deepest and most destructive. These maps can be used to help guide long-term development planning.