

ALBERTA FLOODS WEBSITE TUTORIAL

<https://floods.alberta.ca/>

Alberta Government Flood Awareness Map Application

Welcome!

Disclaimer
Flood maps and alluvial fan boundaries displayed in the Flood Awareness Map Application are based on provincial flood studies developed using the best data available when a study is conducted. Information is subject to change, and the Government of Alberta assumes no responsibility for discrepancies at the time of use.

- Hazard** Flood hazard maps define floodway and flood fringe areas.
- Inundation** Flood inundation maps show areas at risk for different sized floods.
- Likelihood** Flood likelihood maps illustrate cumulative flood risk over 30 years.
- Range** Flood range maps compare two different sized floods.
- Drafts** Draft flood maps from new studies in the finalization process.

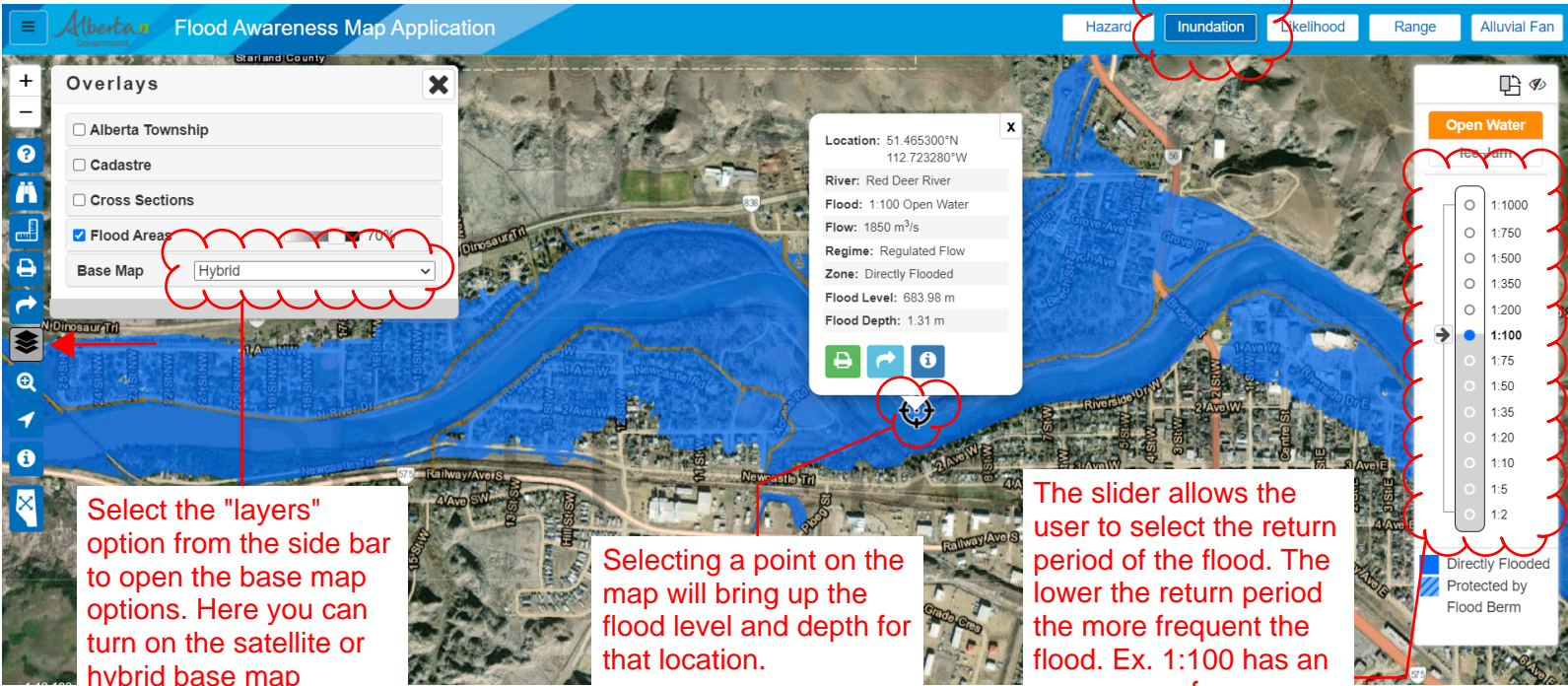
Select the Inundation option from the Welcome page

Zoom into Drumheller and select the "Drumheller Flood Study" icon

Map locations: Banff, Canmore, Calgary, Airdrie, Hanna, Brooks.

Inundation Mapping - Flood Extents

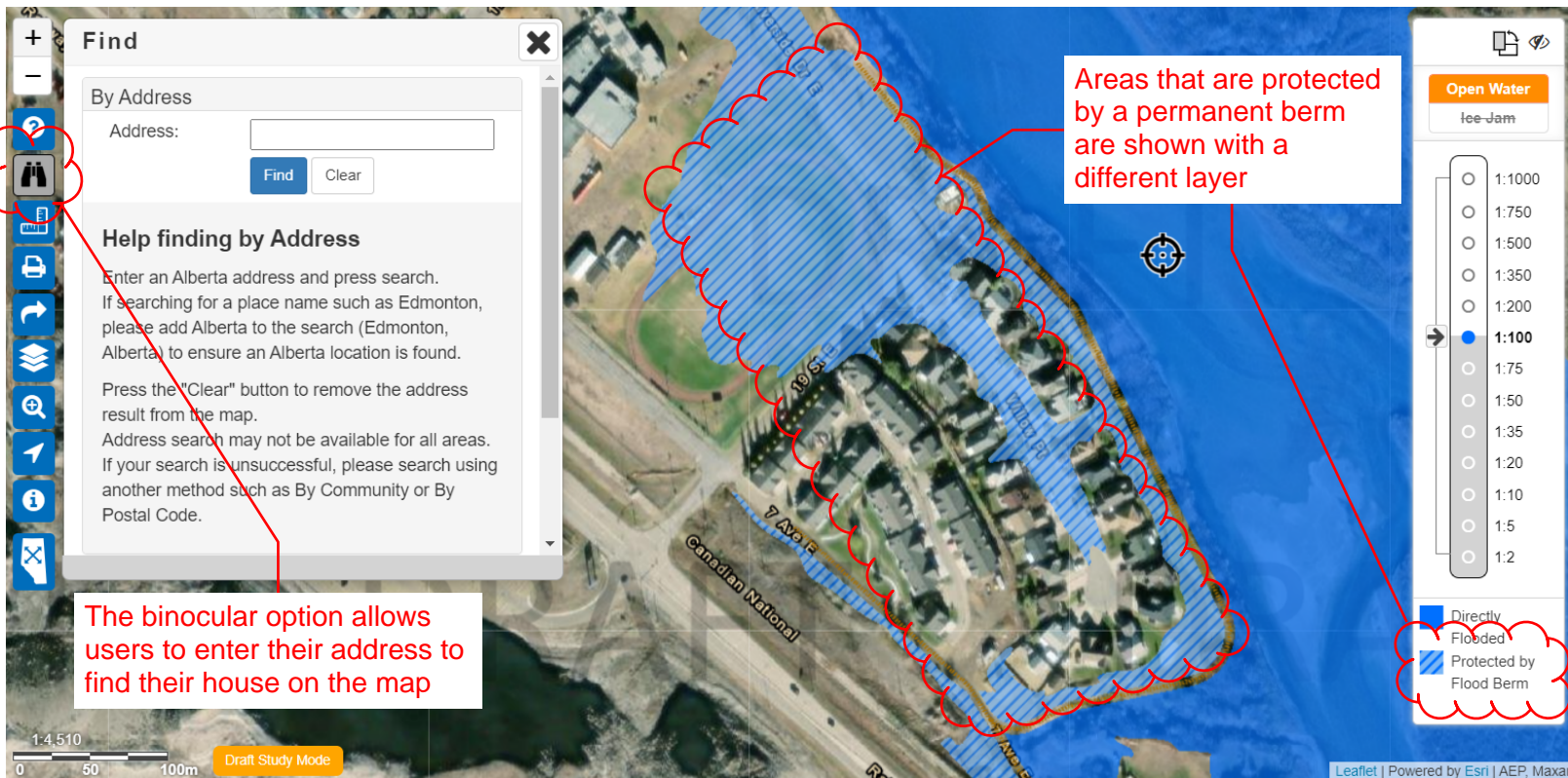
Select the "Inundation" option



Select the "layers" option from the side bar to open the base map options. Here you can turn on the satellite or hybrid base map options

Selecting a point on the map will bring up the flood level and depth for that location.

The slider allows the user to select the return period of the flood. The lower the return period the more frequent the flood. Ex. 1:100 has an occurrence of once every 100 years, or 1% chance per year. The 1:50 has a occurrence of once every 50 years, or 2% chance per year.

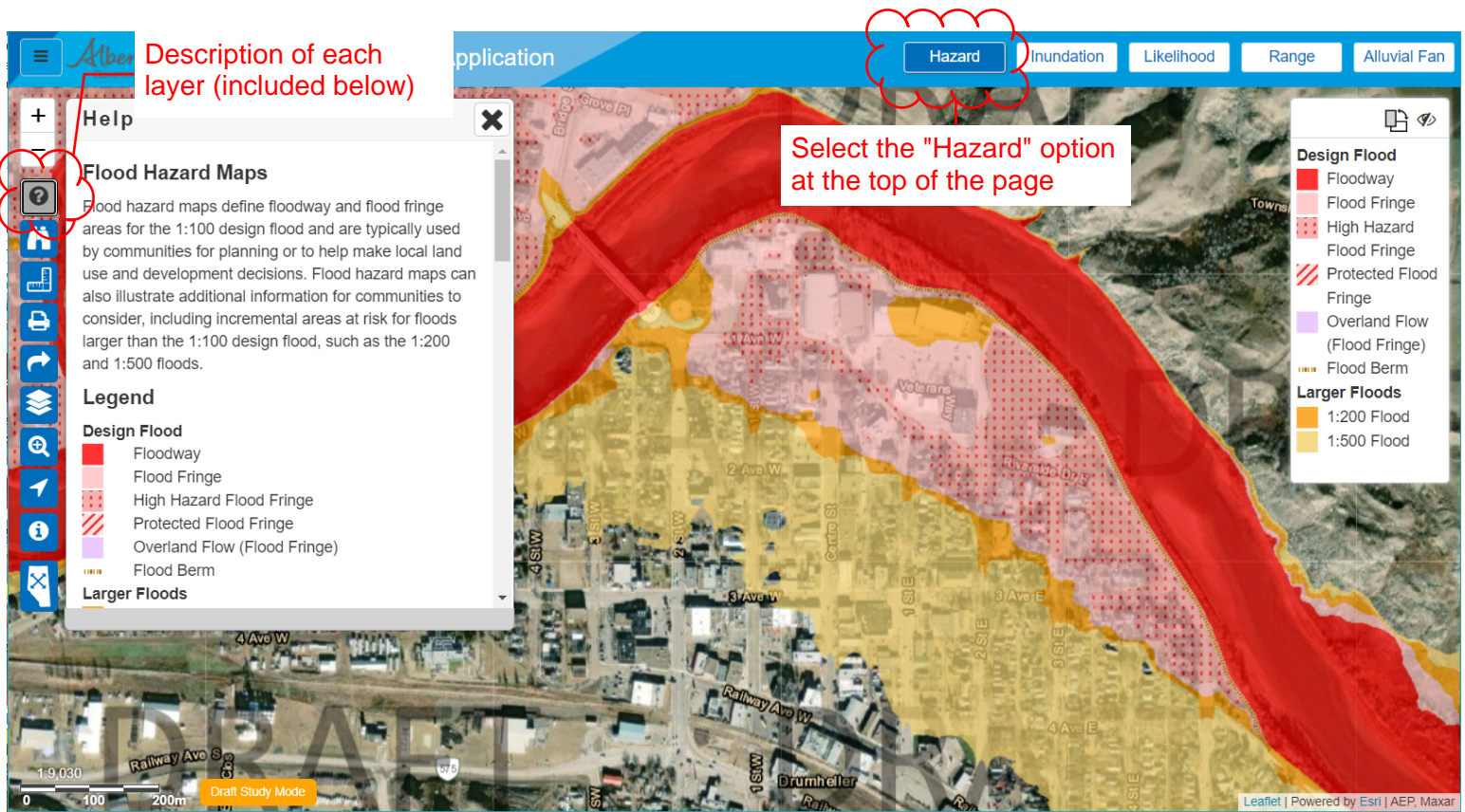


The binocular option allows users to enter their address to find their house on the map

Areas that are protected by a permanent berm are shown with a different layer

Flood Hazard Mapping - Land Use and Development Planning

The flood hazard mapping is used by the Town of Drumheller for land use planning and for development application reviews. The different flood hazard areas have different development regulations which are provided in the Land Use Bylaws here <https://www.drumheller.ca/public/download/files/226259>



Flood Hazard Area – The flood hazard area is the area of land that will be flooded during the 1:100 year return period design flood. The flood hazard area is typically divided into two main zones, the floodway and the flood fringe, and may include additional flood fringe sub-zones.

Floodway – The floodway typically represents the area of highest hazard where design flood flows are deepest, fastest, and most destructive.

Flood Fringe – The flood fringe is the part of the flood hazard area outside of the floodway. The flood fringe is typically shallower and flows more slowly than in the floodway. Depending on when a flood study was conducted, the flood fringe can also include high hazard flood fringe, protected flood fringe, or overland flow (flood fringe) sub-zones.

High Hazard Flood Fringe – The high hazard flood fringe identifies areas within the flood fringe with deeper or faster moving water than the rest of the flood fringe.

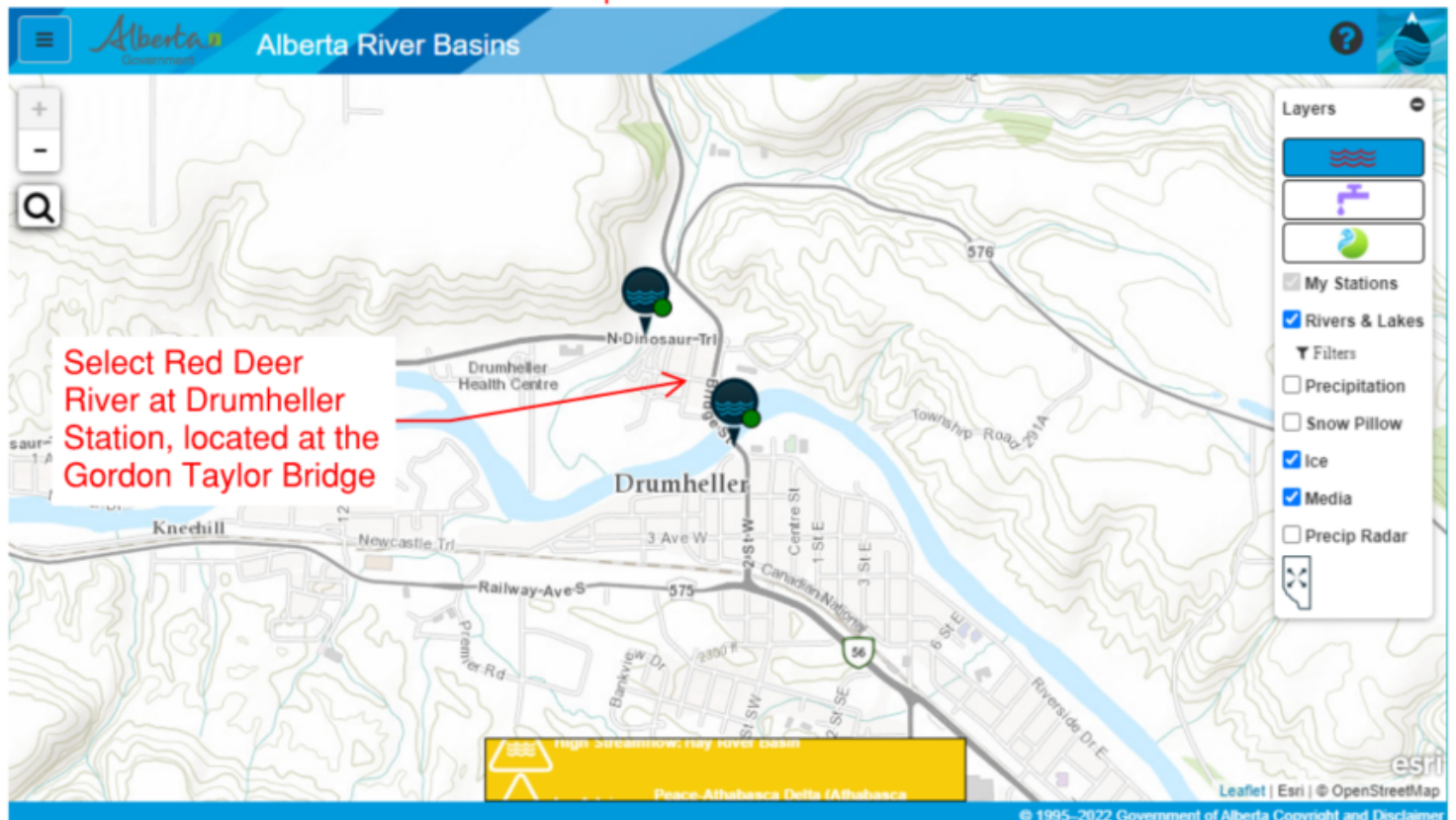
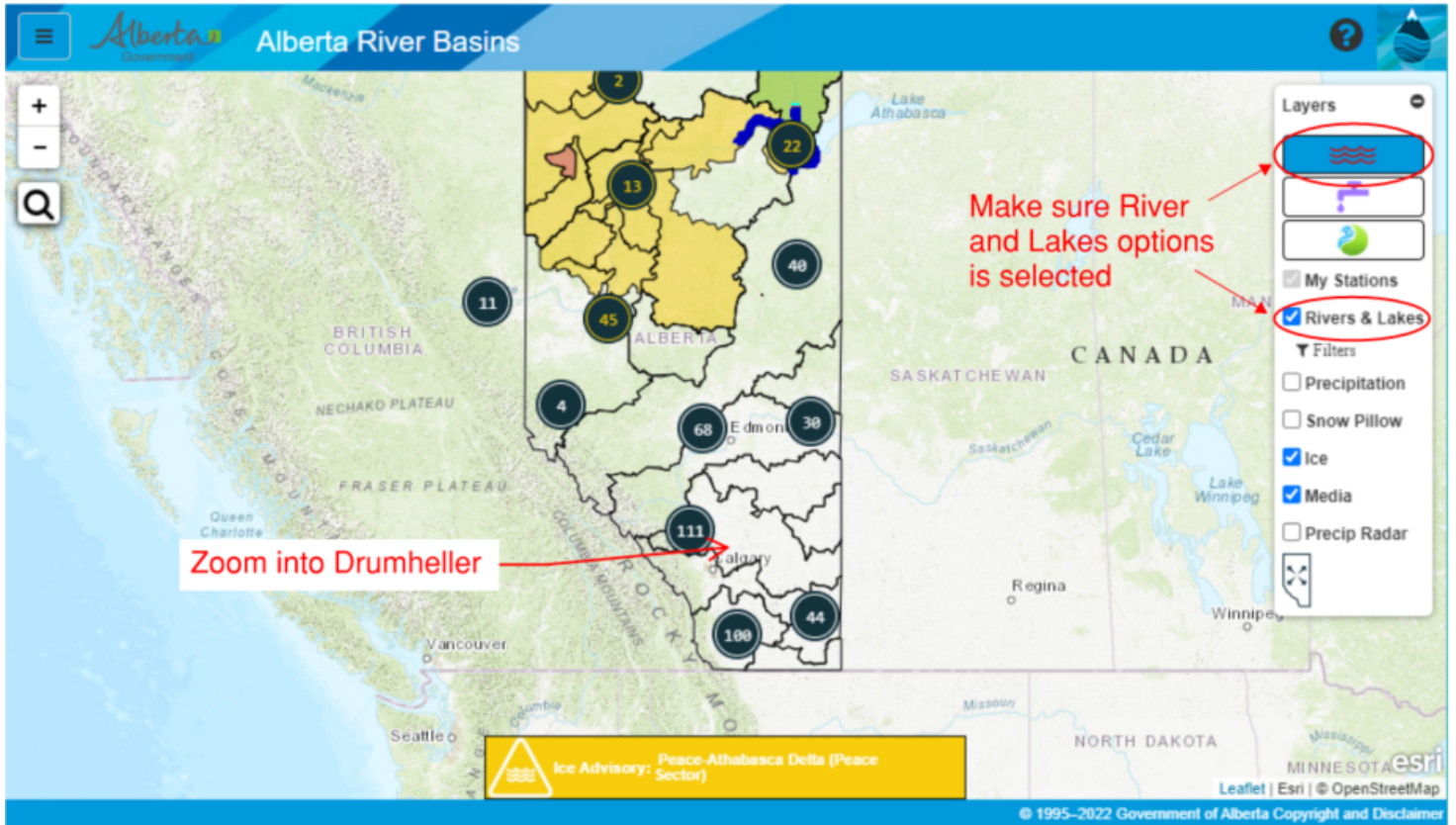
Protected Flood Fringe – The protected flood fringe identifies areas that could be flooded if dedicated flood berms fail or do not work as designed during the 1:100 year return period design flood. These areas are not expected to be flooded but reflect areas of residual risk. Protected areas can be different for floods smaller or larger than the design flood.

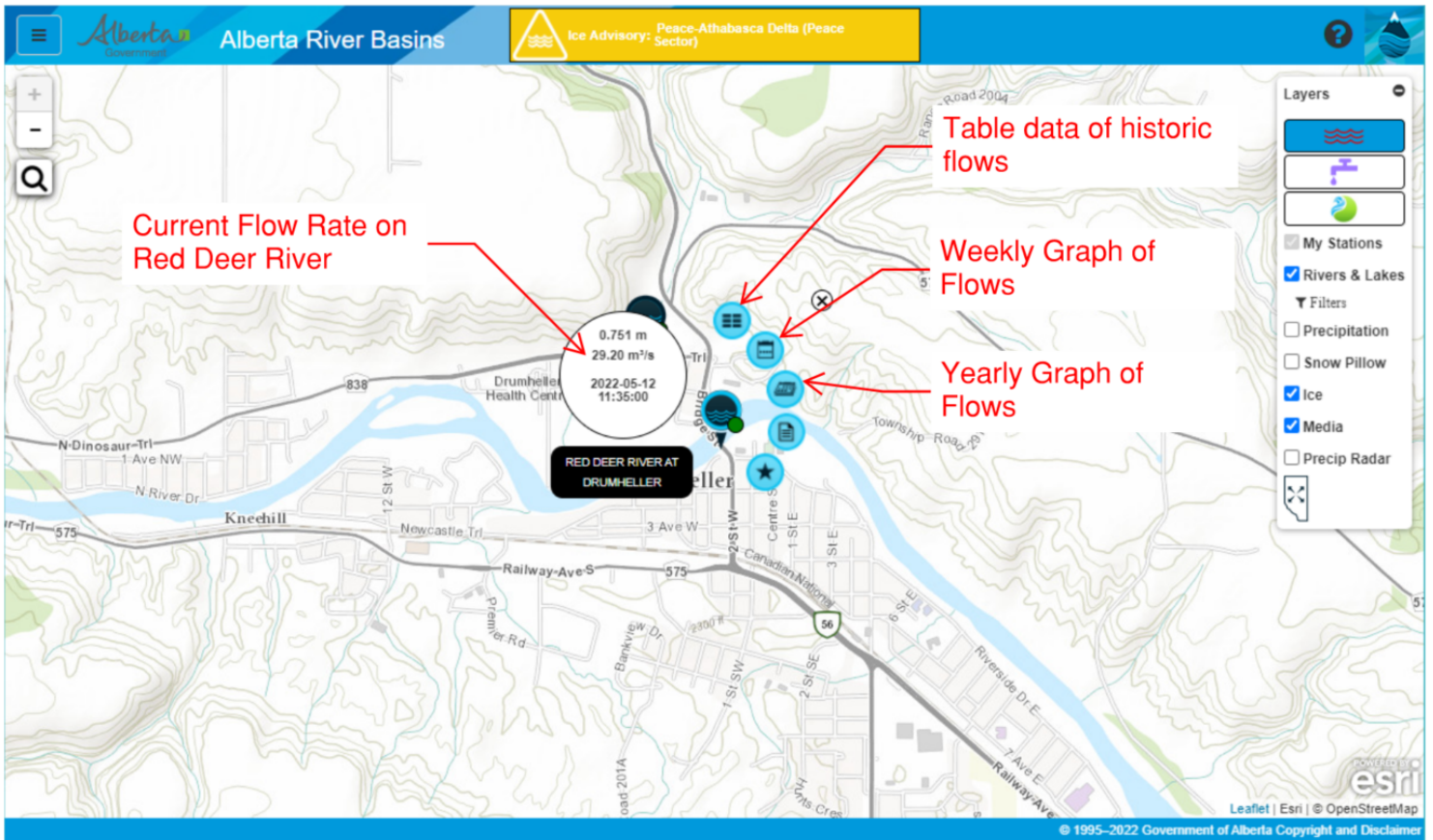
Design Flood – The minimum design flood standard in Alberta is the 1:100 year return period flood, which is defined as a flood whose flow has a 1% chance of being equaled or exceeded in any year. The design flood can also reflect 1:100 year return period ice jam flood levels if they are more severe than 1:100 open water flood levels or be based on a historical flood. For Drumheller, the design flood is 1850 m³/s.

ALBERTA RIVERS WEBSITE TUTORIAL

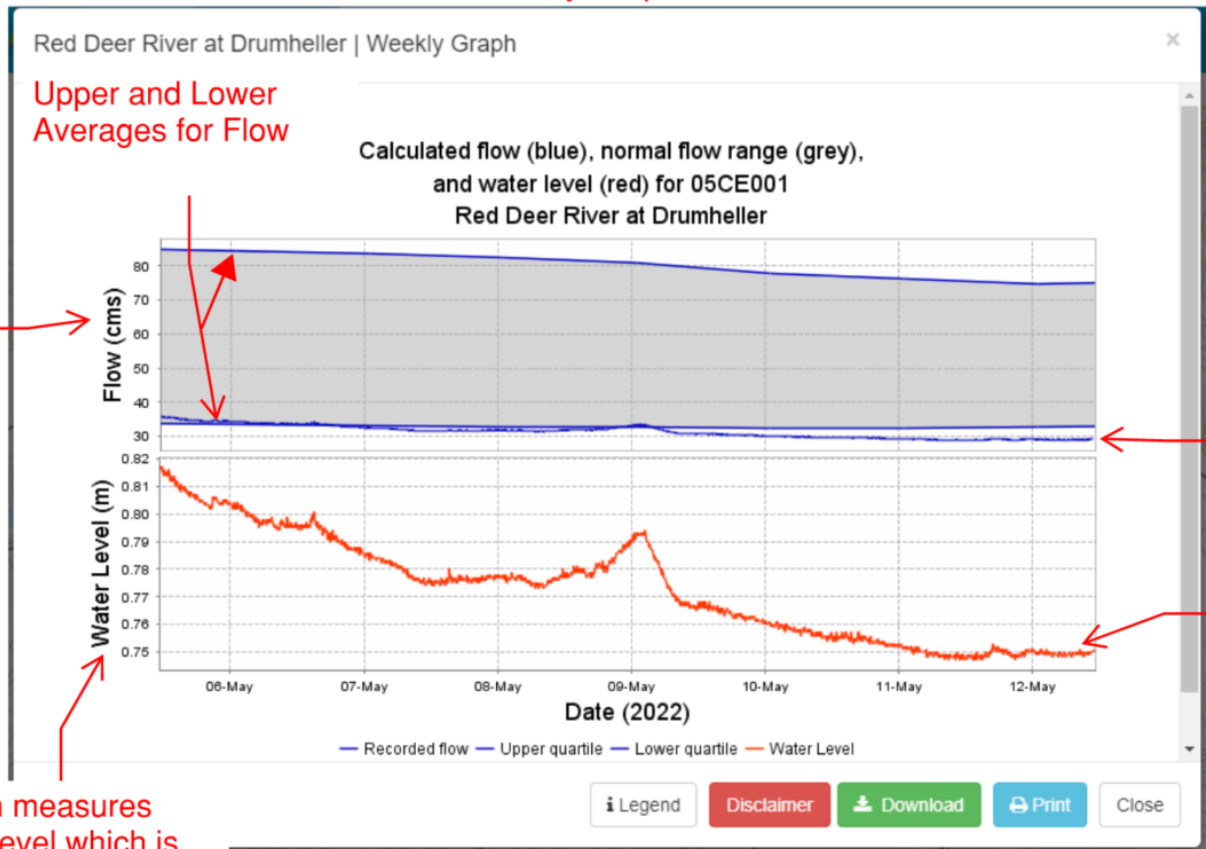
How do I see what the current flow rate is on the Red Deer River??

Visit → <https://rivers.alberta.ca/>





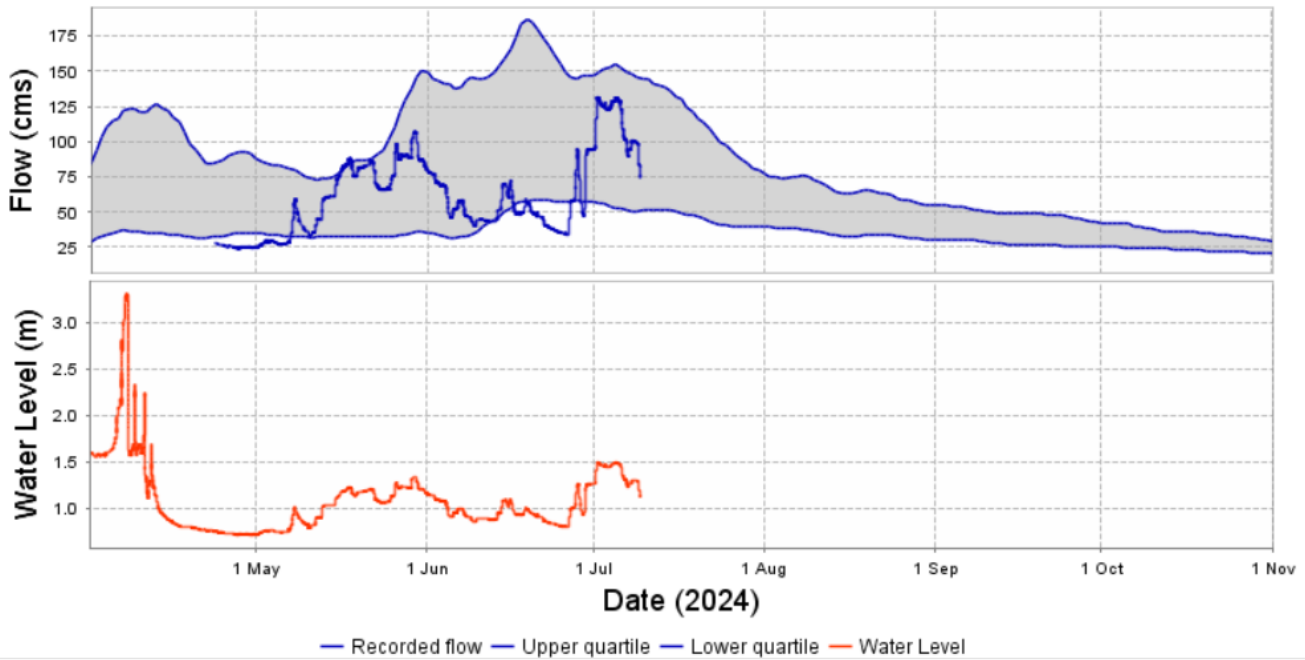
Weekly Graph



cms refers to cubic meters per second (m³/s)

Station measures water level which is applied to a rating curve to find flow rate

Calculated flow (blue), normal flow range (grey),
and water level (red) for 05CE001
Red Deer River at Drumheller - WSC



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Timestamp	Level (m)	Flow (m³/s)
2024-07-09 16:25:00	1.128	73.86
2024-07-09 16:20:00	1.127	73.72
2024-07-09 16:15:00	1.129	74.01
2024-07-09 16:10:00	1.128	73.86
2024-07-09 16:05:00	1.130	74.15
2024-07-09 16:00:00	1.129	74.01
2024-07-09 15:55:00	1.130	74.15
2024-07-09 15:50:00	1.128	73.86
2024-07-09 15:45:00	1.131	74.29
2024-07-09 15:40:00	1.131	74.29
2024-07-09 15:35:00	1.130	74.15
2024-07-09 15:30:00	1.131	74.29
2024-07-09 15:25:00	1.130	74.15
2024-07-09 15:20:00	1.132	74.43
2024-07-09 15:15:00	1.132	74.43
2024-07-09 15:10:00	1.133	74.57
2024-07-09 15:05:00	1.132	74.43
2024-07-09 15:00:00	1.134	74.71

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