

# FLOOD FAQs



## 1 WHAT FLOOD MITIGATION HAS BEEN DONE TO PREVENT MY HOME FROM FLOODING?

We have done extensive geotechnical and environmental engineering to ensure there are no engineering concerns in Wolf Willow. Ultimately, more than 6 million cubic metres of dirt will prepare this site to make it less likely to flood than the natural land it was built on.

## 2 HOW MANY METRES ABOVE THE RIVER HAS THE LAND BEEN BUILT UP?

Depending on your home's location in the community and the level of the river, the levels vary. On average, the normal level of the river is approximately 7-8 metres below the level that a home is built. Check out the back of this sheet to see an example of some homes in the community.

## 3 DID THIS AREA FLOOD IN 2013?

2013 was a particularly large flood in Calgary's history, floods this large have only happened in 1879, 1897, 1902, 1929 and 1932. This area and Chaparral Valley did not flood during the 2013 floods. Since then we have done additional flood mitigation and engineering to protect your home at an even higher level.

## 4 IS THIS DEVELOPMENT BUILT IN THE FLOODWAY?

According to the Land Use Bylaw, no new buildings or other new structures are allowed in the floodway. Since Wolf Willow is a new development, rest assured that there are no homes being built in the floodway.

## 5 WHAT ELSE IS BEING DONE TO ENSURE PROTECTION FROM FLOODS?

The City of Calgary has committed to completing their flood resilience plan that was brought on post the 2013 floods. To find out more about all of the activities in the city going towards flood prevention, visit their website at [www.calgary.ca](http://www.calgary.ca)

## 6 HOW MUCH MITIGATION HAS BEEN DONE?

During our engineering for Wolf Willow we have built up land, roadways and footings of all buildings to be above the 1:100 flood level, and footings of all buildings flanking the river are also above the 1:350 and 1:500 year flood levels. We have placed and compacted 3-6m of engineered fill above the original elevation to raise the development and protect it from future flooding events.

All homes are built with sewer backup valve to prevent backflow into the residence and weeping tile to collect any water that accumulates around the foundation of a house conveying the water into the community's storm water system and away from any homes.

## 7 AT WHAT FLOOD LEVEL ARE BUILDERS LEGALLY REQUIRED TO BUILD ABOVE?

All buildings in the flood fringe must be designed in the following manner:

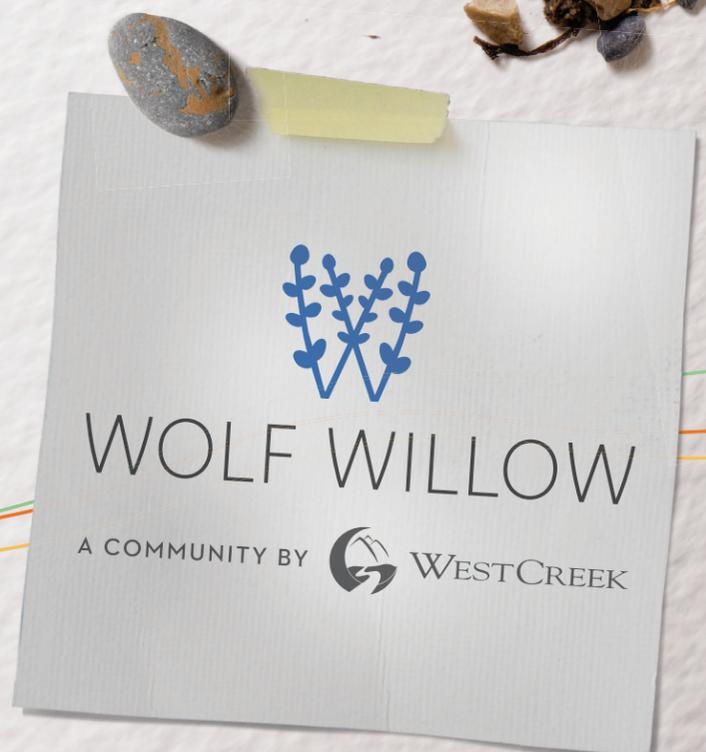
- To prevent structural damage by floodwaters
- The first floor of all buildings must be constructed at or above the designated flood level
- All electrical/mechanical equipment shall be located at or above the designated flood level
- A sewer back-up valve must be installed in the building

The development is being designed to be approximately 2.9m above the bylaw flood step elevations. In the area of Wolf Willow the flood step elevations are roughly 0.3-0.6m higher than the estimated 1:100 year flood (per data provided by the city).

## 8 WHAT DO FLOOD LEVELS MEAN?

The chance of a flood occurring is the probability that natural conditions (like rainfall and snowmelt) will produce this much flow in our rivers.

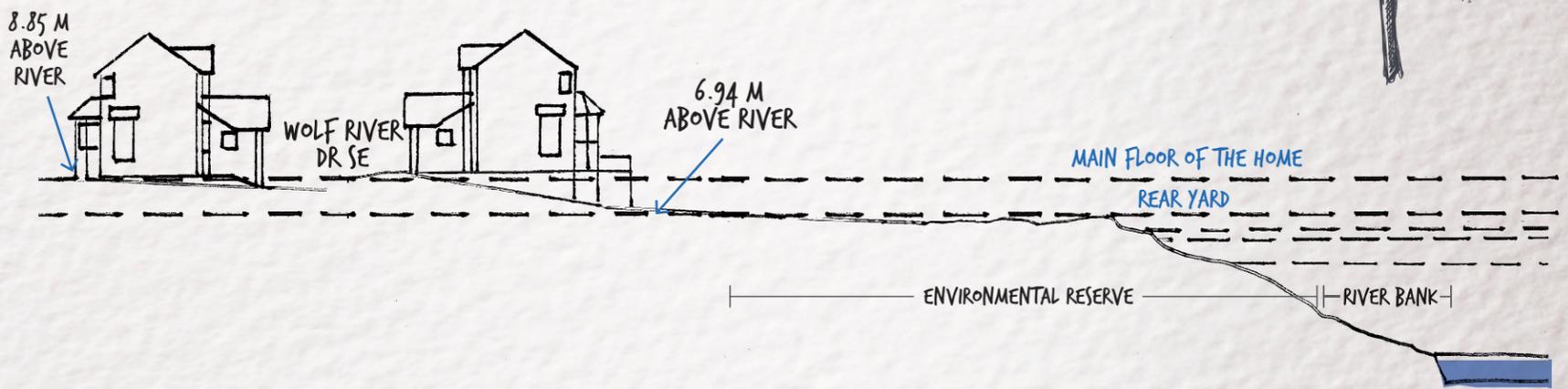
This probability is shown as a % chance of flooding in a time period ("1% chance in any given year"), or a "one-in-X" chance of flooding ("1 in 100 chance in any given year"). This size flood is sometimes called a "one-in-one-hundred flood", or "1:100 flood".



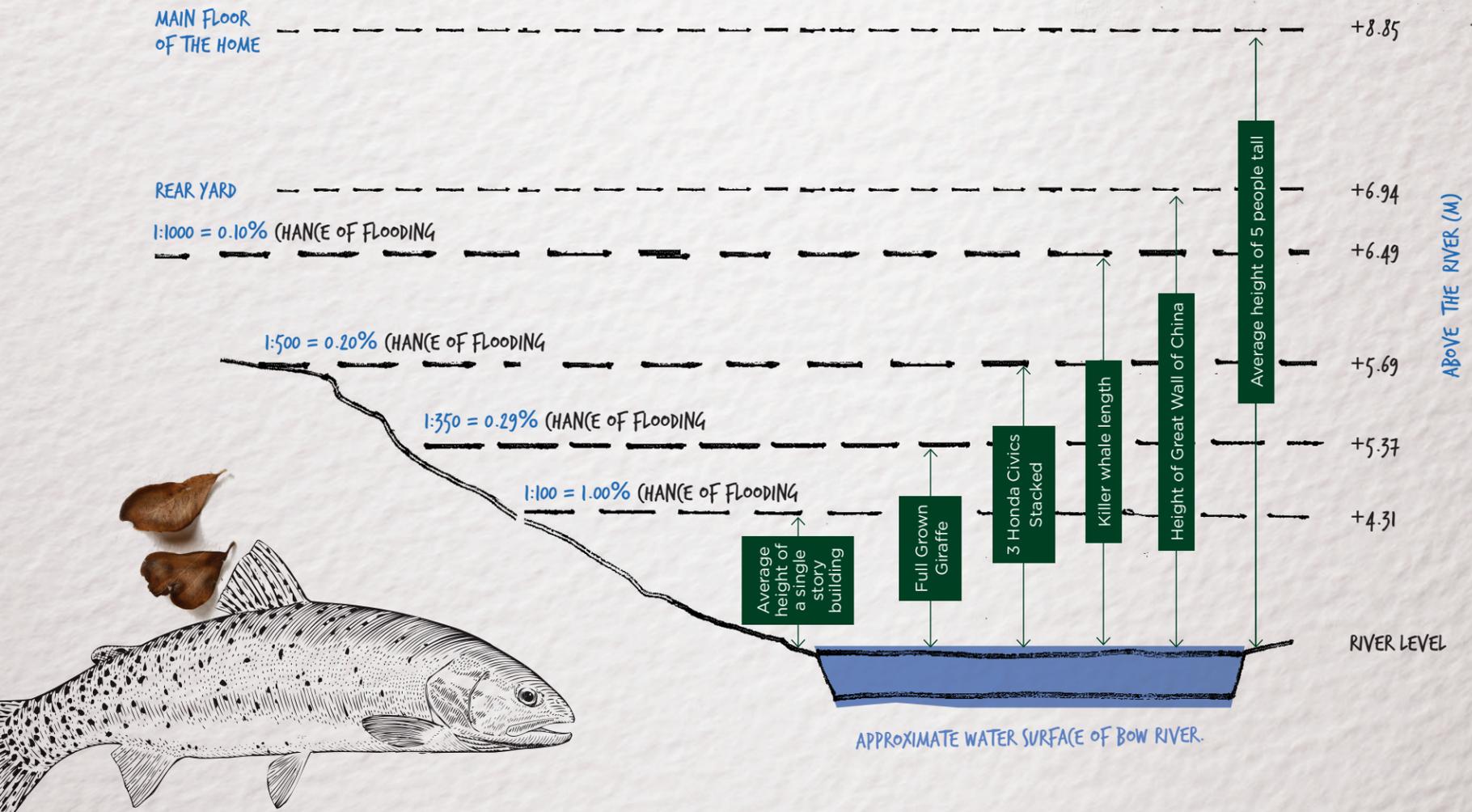
Wolf Willow would have fallen in a 0.5-1.0% natural chance of a property flooding in any given year without mitigation given as a “% chance”. With the additional engineering efforts done in Wolf Willow, the example below is a typical street in the community. The front of this home falls 8.85m above the river, making it **2.36m above the 1:1000** year flood level.



### FLOOD CROSS SECTION\*



### TAKE A CLOSER LOOK\*



\*Drawings provided are to scale from engineering done by Stantec.