

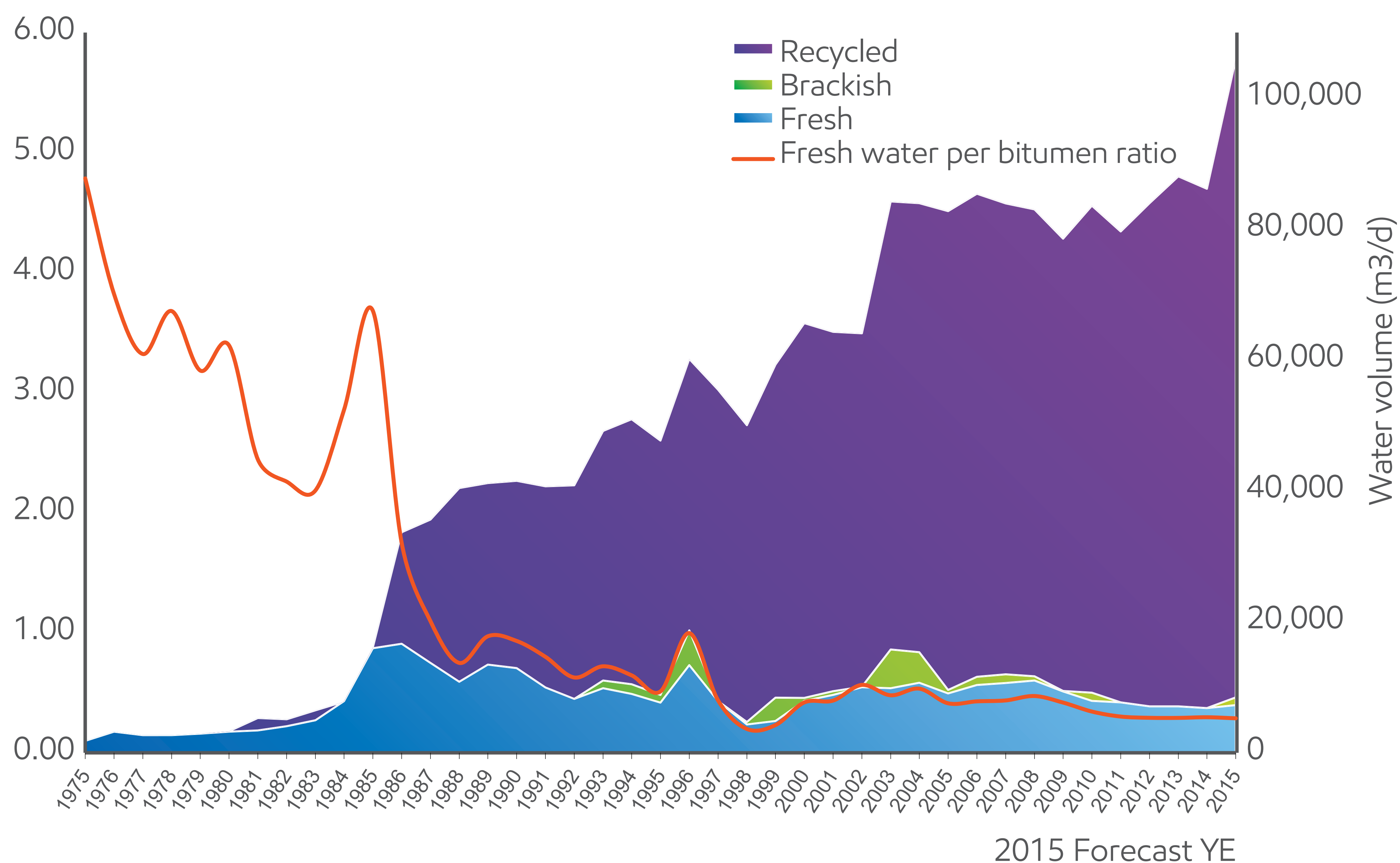
# Water

## Conserving fresh water

- Over the current water act licence, operational improvements reduced non-saline water consumption by 30 percent.
- Water use for steam generation at sites designed for commercial production for Cold Lake operations are managed, given the capabilities of the processing equipment, according to the following hierarchy:
  - reuse on-site produced water;
  - transfer in produced water from another site (when surplus water is available);
  - use brackish water as make-up water; and
  - use non-saline water as make-up water
- Imperial will be submitting a water act licence renewal in 2016.

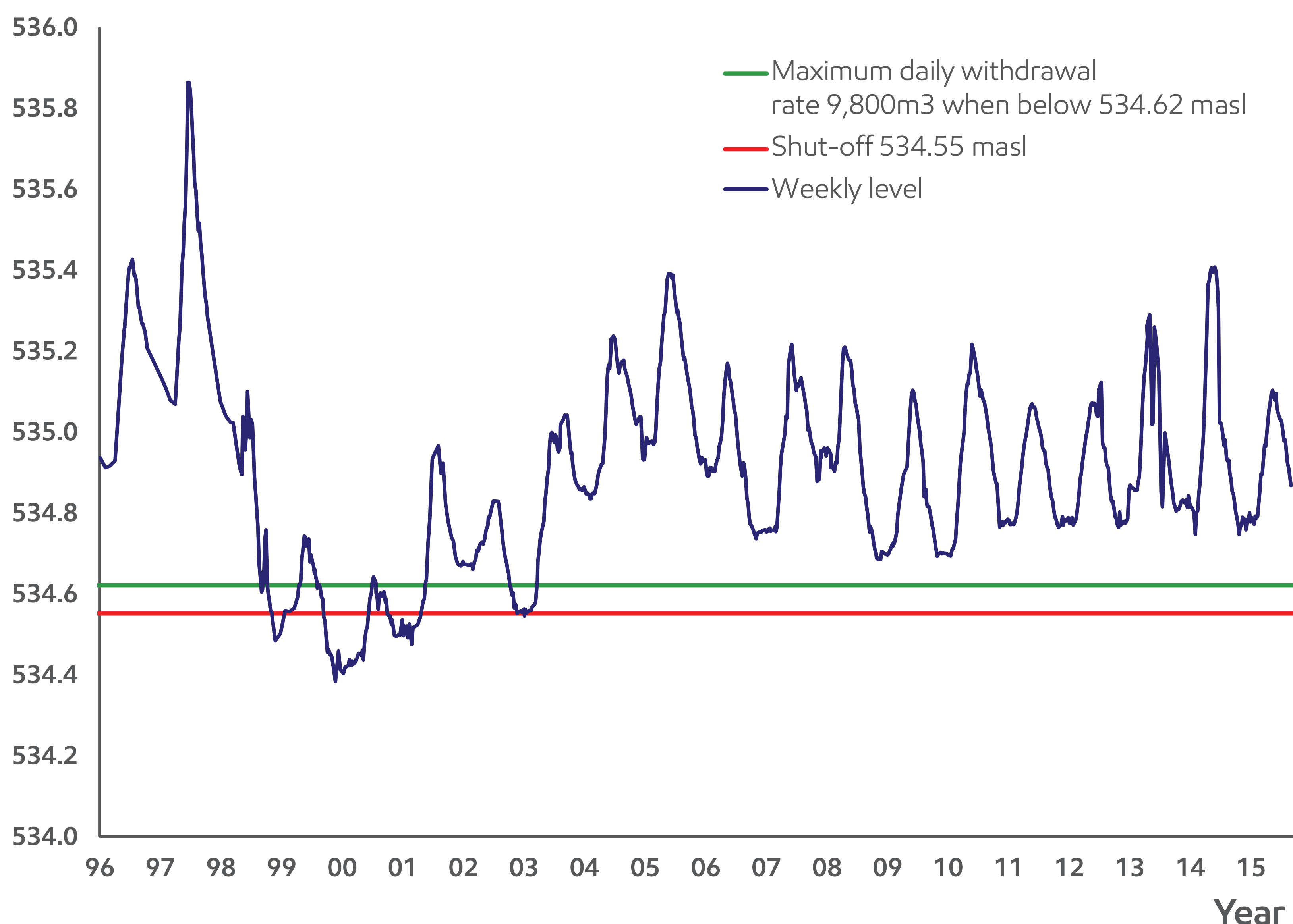
### Historical water use

Fresh water to bitumen ratio



# Cold Lake water level 1996 to 2015 YTD

Metres above sea level



Data used for chart from Environment Canada

## For the proposed Midzaghe development, Imperial plans to:

- Use SA-SAGD, which will reduce water use over the life of the project as compared to SAGD.
- Not exceed the existing Cold Lake operations water withdrawal licences.
- Continue to maintain a 300 metre setback from the high-water mark of Bourque Lake, Marie Lake, May Lake, Jackfish Creek, and Marie Creek.





- Imperial continues to investigate and expand monitoring of groundwater chemistry - as groundwater moves very slowly and requires a long time to move even short distances, the groundwater field studies will continue for many years.
- Cold Lake operations has an extensive groundwater monitoring program for both shallow and deep groundwater.

Cold Lake operations groundwater monitoring program will be expanded to incorporate the Midzaghe development

