NWR-03

13 June 2017.

National Water Reform inquiry team,
Productivity Commission.
<water.reform@pc.gov.au>

Hello NWR inquiry team,

Further submission by Jim Galletly.

Attached, please find two short papers relating to replenishing alluvial groundwater and the effects of fluctuating groundwater levels.

The paper on replenishing alluvial groundwater was developed because of inequitable water allocation in the Lockyer Valley where water use is measured and paid for in the Central Lockyer (where supplies are limited) but not in the Upper Lockyer (close to the source of the water supply). A similar account has been published in the local newspaper, The Gatton Star, but has drawn no comment, favourable or unfavourable. Springflow can currently be seen in (upstream) Tenthill Creek (in the Upper Lockyer), but not in the Central Lockyer (downstream where aquifer depletion continues).

This account is not accepted by the Queensland Department of Natural Resources and Mines which is responsible for managing the water supply. The Department is unable to explain how the alluvial groundwater is replenished and this may be because it does not recognise the existence of basalt lava aquifers on the Main Range in the south and west of the valley, or the springflow which they discharge.

Is it possible that a similar situation occurs in parts of the Murray-Darling Basin which have areas of basalt on some Ranges ?

Also attached is a paper about fluctuating groundwater levels which have become pronounced in the Valley since about 1970 when the then Commissioner for Irrigation and Water Supply (Mr Fred Haigh) announced that 'With the large volume of underground storage available, water levels must be drawn down during periods of low replenishment to make use of this available storage'. But by drawing down water levels, farmers close to alluvial margins are deprived of their water supplies while others continue to irrigate as usual. Many consider this to be inequitable and unethical management.

I notice that, in several catchments in NSW, (e.g. Lower Namoi), groundwater levels remained high and stable until the 1990s, after which they began to fluctuate wildly. It is

explained that, at the current level of water use, sufficient water remains to allow irrigation to continue for 200 years.

Does the Reform Team agree with this explanation, or should water use be regulated to ensure that groundwater levels remain high and stable?

With kind regards,

Yours faithfully,

Jim Galletly.

Attached:

LVH-37n, Replenishing alluvial groundwater in the Lockyer Valley.

JCG17(3)-03. Causes and effects of fluctuating groundwater levels.