To the editor,

Thank you for the prompt comments on the revised paper, and please accept my apologies for the time it took to get the updated manuscript ready. Below I have addressed the points raised in the editor comments (in red), and the changes are highlighted in the updated manuscript uploaded with this response.

Best regards,
Joshua Dean
(On behalf of all co-authors)

Comments to the Author:
The revised version of the manuscript (submitted on January 20, 2015) responds to most questions raised by the reviewers. Especially the discussion of results is better structured and more clear and the conclusions are better justified than in the first version of the manuscript. There remain, however, several points requiring more elaboration.

1. The positive correlation between the barometric pressure and groundwater heads is very surprising. More information on the measuring protocols and quality control might convince readers that this effect was not an artefact.
More information as requested is inserted into the text – see highlighted text from lines 288-299.

2. I agree with the reviewers that the isotopic data are underutilized. There are also some dubious points in their interpretation.
There is not really enough room in this manuscript to add in more complex isotopic analysis; the focus of the paper is instead on the recharge estimates, using the isotopic results to help constrain the groundwater conceptual models.

- What criteria were used to identify bores containing a component of younger water? Only four are mentioned as such (line 420) while in Table 1 one can find four more bores with measurable tritium and not modern radiocarbon levels. In fact, all of these bores contain mixtures of „older" and „younger" groundwaters.
Thank you for pointing this out, there is no special criteria for identifying younger water in the groundwater other than the presence of tritium, and the four extra bores mentioned are now added to the text on lines 432-3.

- Groundwater in this study is not „dated" with tritium as no groundwater ages were evaluated. Consider also expressing the tritium results in Tritium Units – this would be more comprehensible for the readers accustomed with the tritium method.
"Dated" in reference to tritium has been removed from line 226. Table 1 has been updated with TU instead of Bq/kg, as has the relevant part of the methods section (line 226-7).

Fig. 8 shows that the bores can have very different radon levels. According to Fig. 9 bore Euc92 reaches into the granite bedrock which explains high radon content. Does the same apply to Pas95 where radon concentration is even higher? On the contrary, are radon concentrations in Euc90 and Pas96 lower because they are screened in saprolite or alluvium?

Finally, higher radon level at the outlet of the eucalypt catchment can be interpreted not as the evidence for groundwater discharge but as a result of radon exhalation from shallow granite bedrock.

I agree with your interpretations here: Pas95 is in granite bedrock causing high ^{222}Rn values; Euc90 and Pas96 are screened in more weathered material causing lower observed ^{222}Rn; shallow granite bedrock rather than groundwater discharge could be causing the higher ^{222}Rn values in surface water in Eucalypt catchment. The text has been updated on lines 459-465 to reflect this and add more interpretation of Fig. 8.