

**From:** Phil Townsend  
**Sent:** Friday, 26 August 2016 4:38 PM  
**To:** 'Zara Lowien'; eo@namoiwater.com.au; tim.napier@brff.com.au; 'mrff@bigpond.com'  
**Cc:** 'Michael Murray'  
**Subject:** RE: social and economic modelling [SEC=UNOFFICIAL]

Hi Zara

As indicated at the public meetings, we were looking for inputs/insights on the modelling results as presented to those groups. As a consequence of the input received, we needed to update some of the modelling (eg. input from you around High Security water recovery and modelling design with respect to 2003 for the Moree community, other insights from Wee Waa on the proportion of infrastructure program water savings that were kept by the irrigators). I just checked the data presented at Moree for the effects of water recovery for the 278 and 415 GL water recovery scenarios relative to those which are in the models provided today. There is little change in the results (eg. effect of water recovery on maximum area of production) between the two. Virtually the same for the Wee Waa landuse modelling (as another example).

KPMG will receive the revised hydrology-landuse modelling outputs and re-run those through their community model. People at the University of New England have the role of peer-reviewing all of the social and economic modelling. Part of the independent reviewer's role is to understand the matters people raised with us during the consultations and to consider how we have addressed those matters in the economic modelling. Does that answer your questions?

Regards

Phil

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**From:** Zara Lowien [mailto:zara.lowien@gvia.org.au]  
**Sent:** Friday, 26 August 2016 4:15 PM  
**To:** Phil Townsend ; eo@namoiwater.com.au; tim.napier@brff.com.au; 'mrff@bigpond.com'  
**Cc:** 'Michael Murray'  
**Subject:** RE: social and economic modelling [SEC=UNOFFICIAL]

Hi Phil

Are KPMG re-working or peer reviewing the job analysis as linked to the scenarios?

The previous information as presented at the public sessions has changed?

*Zara Lowien*

Executive Officer

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**From:** Phil Townsend [<mailto:Phil.Townsend@mdba.gov.au>]

**Sent:** Friday, 26 August 2016 3:34 PM

**To:** [eo@namoiwater.com.au](mailto:eo@namoiwater.com.au); Zara Lowien <[zara.lowien@gvia.org.au](mailto:zara.lowien@gvia.org.au)>; [tim.napier@brff.com.au](mailto:tim.napier@brff.com.au); 'mrff@bigpond.com' <[mrff@bigpond.com](mailto:mrff@bigpond.com)>

**Cc:** 'Michael Murray' <[michaelm@cotton.org.au](mailto:michaelm@cotton.org.au)>

**Subject:** social and economic modelling [SEC=UNOFFICIAL]

Hi all

Please find attached 3 documents for your consideration and examination, which are an update of the files you have received previously.

- NthBasin rain allocn ag spreadsheet contains information on the models developed for each community, including statistical analysis (t-test on coefficients, F-test on models, adjusted R2 estimates);
- hydrology landuse documentation is a Word document describing the content and development of each of the models, including the variables and sources of data used to construct the models in the NthBasin rain allocn ag spreadsheet;
- NBR hydro-landuse model is a spreadsheet containing all the individual community models - essentially the scenarios of water recovery are provided at cells L12 to Q18. Copying one set of water recovery such as L12 to L18 across to cells F12 to F18 makes it possible to calculate through the effects of the water recovery scenarios with the results presented for each community at the specified tabs. This will update the information for all of the communities except Dirranbandi and St George. For those two communities, a couple of extra steps are required – on the StGDirran page, go to cell S1. That is where the scenario data should be entered. To get the scenario data, go across to cell AN1. From there, the hydrology data for the individual scenarios is provided. To select the data for Scenario A, highlight cells AO1 to AS206, copy and then past to cell S1. That will update the hydrology data for that scenario. Two further steps are required before going to the results. For St George, go to cell AC268. In the formula, you need to revise the second last value. For example, if considering Scenario A, leave the 42 unchanged. If considering Scenario C, replace 42 with 15 (as indicated in cell AF270. For Dirranbandi, you need to alter cell T377. In that function, if considering Scenario A, leave the second last value unchanged as 98; if considering Scenario C, for example, replace the 98 with 76 from cell T381. I can explain this one to you over the phone (and will write the documentation for it next). Results for Dirranbandi are at cell Z361 and at cell Z286 for St George. The outputs from this spreadsheet provides the inputs to the KPMG modelling.

With regards to the next level of information (effects on employment in the ag and non-ag private sector for each of the communities) I will provide the hydrology-landuse scenarios to KPMG this afternoon and expect to receive the results of that analysis next week then look to share those results with you early the following week. They will contain additional information, such as the flow-on effect between Collarenebri water recovery and Moree, flow-on effects of Dirran water recovery on St George, consideration of groundwater and surface water reductions for Wee Waa and a couple of other scenarios.

regards

Phil

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