Response to Anonymous Referee #2's comment on "A decision tree model to estimate the value of information provided by a groundwater quality monitoring network" by A. Khader et al.

The reviewer generally approves the methodology presented in the paper. He also acknowledges the originality of the proposed utilization of the value of information concept. We thank the reviewer for providing helpful suggestions to improve the manuscript. These suggestions include recommended recent literature and improvements in two locations in the text. We make these changes.

Below we provide our response to each comment and point out manuscript revisions that address each comment. Numbered **red text** quotes original reviewer comments. Our responses are in black. *Italic smaller black text* indicates quotation from the revised manuscript.

1. The estimation of the probabilities presented in Section 3.2 is based on the relative frequency of a number of scenarios coming from prior Monte Carlo simulations and RVM model results. How many MC and RVM runs were actually made in order to estimate these probabilities? This is important since the use of frequency approaches to estimate probabilities require a large sample size, ideally approaching infinity. Unfortunately, these details are not available because the cited paper containing such information is currently under review. I would recommend to enrich the section with a brief description of the MC and RVM results.

   There were 10,000 Monte Carlo runs and 100 RVM runs. We have added the following sentences to section 2: *"The Monte Carlo simulations yield 10,000 nitrate concentration values for each aquifer water model cell. However, available RVM modeling tools cannot handle a problem of this size, so Khader and McKee (2012) performed 100 RVM model runs where in each run, 100 nitrate concentration target for each cell were randomly but conditionally sampled from the total Monte Carlo population to preserve the spatial correlation of concentrations between cells."*

2. There are two recent and relevant papers that could complement the literature review. First, in the discussion in page 13809, paragraph 15, the work by Bouma et al. (2009), with respect to interviewing decision makers to get their "willingness to pay" for water quality monitoring using remote sensing. Second, in page 13808, paragraph 10, the work by Alfonso and Price (2012), with respect to the use of models to estimate the probabilities required the VOI estimation to design monitoring networks.

   Great, thanks for the suggestions. We have added the two papers to the literature review.

3. The novelty of the paper, the use of the VOI in a decision-tree approach, should be explicitly stated. A sentence in the introduction will suffice.

   Yes, thank you. We have modified several sentences in the introduction: *"Here, our main contribution is to use the decision tree framework to estimate the value of implementing a groundwater quality monitoring network. Other contributions include applying the approach to help inform aquifer monitoring and management decisions, and showing how the VOI is influenced by a multitude of design, public awareness, financial, demographic, and demographic-hydrogeological factors such as the monitoring system design and accuracy, public abidance with manager recommendations, costs of alternatives, size of the population, and location of the population in relation to areas that pose a health risk."*