Comments	**General Response** While we appreciate the critical review comments, one of the key aspects highlighted by both reviewers was about the novelty of this work. We would like to take this opportunity to restate that the study was not intended to develop a new method /process /tool or model to predict the chlorine decay. The aim of this study was to primarily: a) Estimate and compare the chlorine decay parameters for surface water and ground water (specifically from deep hard rock aquifer). This would help predict & manage water quality aspects in water distribution networks b) Validate the results with those from the existing studies
P199: what do the authors mean by "secondary treatment of water"? Normally, secondary treatment refers to a level of wastewater treatment.	We agree with the Referee that use of phrase 'secondary treatment' is not appropriate in the context of drinking water. Thereby we are rephrasing it in the revised manuscript.
The authors have defined the fast and slow reacting components present in different types of water in Table 1. However, their concentrations were not measured.	The definitions of the slow and fast reacting components are taken from the literature and we have not measured their levels in the test water.
Later on, in P204 L15, the authors state that "we observed that in groundwater the ratio of slow to fast reacting component is thirty times greater than that for the surface water." How the authors observed that ratio for the groundwater did was 30-times greater than that for the surface water?	The 2R model assumes chlorine decay as a function of the fast and slow reacting components present in water. Using the data from bench scale chlorine decay tests, we calibrated the 2R model for different initial chlorine levels. The model estimated four parameters for each type of water i.e. the two reaction rate constants (fast and slow) and the respective fast and slow reacting components present in water. The ratio presented in Table 5 is derived from the parameters estimated by the 2R model.
Could the authors kindly provide the source of the information in Table 1?	The references are provided in the text. As per referees suggestion we will also provide reference at the bottom of Table 1
The 2R model has been studied by several authors,	We agree that 2R model has been extensively

including Fisher et al., 2011; Mutoti et al., 2007; Rossman, 2006. Could the authors explicit the novelty of this manuscript compared with the previous studies?	studied by the authors citied, but in this study we estimated parameters which are useful in the context of study area (Deccan plateau region –south India) as, a) This study intends to provide, parameter estimates which in conjugation with pipe flow models could be used for predicting chlorine accurately in water distribution networks. b) Through this study we have also inferred that a) Only first order decay models could not accurately predict decay b) The 2R model and its estimated parameters when used with the EPANET model will accurately predict chlorine decay in water distribution networks
Does the Figure 2 (Y-axis in concentration) display the same measured data as Figure 1(Y-axis in fraction)? If they are the same, I suggest to delete the Figure 1.	Though Figure 1 and Figure 2 display the same data set, the dotted line in Figure 2 represents the 2R fitted model. In Figure 1, we demonstrate that in addition to chlorine levels, chlorine decay rate is also dependent on the type of organic matter (not a first order reaction). We would like to retain both the figures as this would help the reader understand the drawbacks of the first order process and the applicability of 2R model (second order process).
Figure 2: which figure shows the data for groundwater and which shows the data for surface water?	We have added the reference to both the Figures. Figure 2a presents surface water and Figure 2b presents groundwater.
Other comments "chlorine kinetics" -> " chlorine decay kinetics" P198 L7 (as well as multiple locations in the manuscript): "organic and inorganic matter" -> "organic and inorganic matters" P198 L10: "test" -> "tests" P198 L14: "dataset" -> "datasets" P201 L18: "whole dataset" -> "the whole datasets" P201 L21 (as well as multiple locations in the manuscript): "data set" -> "datasets" Figure 1: "IC" -> "ICC"	In addition to the grammatical errors, we will address these comments in the updated manuscript.