

## ***Interactive comment on “Managed aquifer recharge with reverse-osmosis desalinated seawater: modeling the spreading in groundwater using stable water isotopes” by Yonatan Ganot et al.***

**Anonymous Referee #2**

Received and published: 11 October 2018

As an increased using of new water resources, understanding its effect is necessary. The desalinated seawater is a potential water resource with the increasing demands of fresh water all around the world in the modern days. This manuscript introduces a new insight of stable isotope application in water research. An isotopic solute transport model was built to estimate the spread of the desalinated seawater in the coastal aquifer. It is not common to see applying the stable isotope method by a numerical model, considering the wide range of isotopes of the water bodies. Authors take the advantage of the conservation isotope concentration of the DSW, so that they can sim-

C1

plify the local water sources to groundwater into a binary system in the sight of isotopic concentration. To be honest, this manuscript is very interesting but it is really hard for me to make a comment on it. Generally, it is a useful and convincing study, but it lacks novelty on method. So my suggestion is accepted after revision.

The number and type of water samples are not clear in this manuscript. Since the rainwater and the runoff water in the setting pond are regarded as water sources to the groundwater, it should be more specific of the isotope data, especially, the runoff water.

Q1: How many isotopic water samples do you have? Q2: Is there any water samples of rain or runoff water in the ponds? Line 124 Q3: How did you deal with these values? The lowest and highest? For example, the lowest CGW  $\delta^{18}\text{O} = -5.43\%$ ,  $\delta^2\text{H} = -22.68\%$  is this the result of one sample or the lowest values of all groundwater samples? Why? Line 121. Q4: Is there any soluble salt in the study area? Line 150 Q5: Do you have any data from modern rainwater? Is that too old for your study? 1972? Line 153. All the advantages listed in the manuscript of using the method show that it is specific lucky for this area. Can you give some descriptions to show the universal applicability?

---

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2018-341>, 2018.

C2