

## ***Interactive comment on “Hydrological dynamics of water sources in a Mediterranean lagoon” by C. Stumpp et al.***

### **Anonymous Referee #1**

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In general it is an interesting work, showing how environmental tracers can be used for quantifying complex interactions among various water bodies in a coastal Mediterranean area.

General comments In order to conduct a spatial analysis of the isotopic data, authors should unavoidably present their data on a map through the use of a GIS program. The geological setting (i.e. geological map of the area) as well as the hydrogeological setting (piezometric map) and the conceptual model constitute essential information for the reader to understand the complex interactions taking place in the study area. For example what is the origin of thermal waters? I believe that authors should have based their conclusions on such figures.

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In the introduction section authors state much information that is already known (e.g. lines 27–32 of page 2). However, they should present the novelties of their work and their contribution to the state of the art regarding their methodology. Environmental tracers are applied in numerous applications. What are the original points of the present application?

#### Specific comments

Page 4, line 24: A mean annual precipitation of 1083mm for the specified area seems too high. What data and what was the time period used for extracting this mean value?

Page 5, line 5: Are there thermal waters present in the system? If this is so a fourth end member, i.e., thermal water should have been also examined. Please explain.

Page 5, line 29: Where has the LMWL been estimated from? Was it a previous work?

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