

Authors' response to Referee #1**RC1: 'Comment on egusphere-2025-3841', Anonymous Referee #1, 29 Sep 2025****General comment**

It was a pleasure to read and review this well-prepared manuscript by Janik et al.. The objectives, methods, presentation and clarity of writing are first class. The manuscript is well focussed, direct and purposeful and will be a significant contribution to RBF/MAR. It makes a valuable contribution that will be well recieved by water resources managers, especially as it gives a great deal of design and monitoring information that can be readily adapted to proposed RBF/MAR systems. I recommend that the manuscript be accepted more or less as is, subject to a few minor editorial suggestions in the attached annotated pdf file. Congratulations on an excellent paper.

REPLY: We sincerely thank you for carefully reading our manuscript and for the very positive and encouraging words. We greatly appreciate your recognition of the clarity, focus, and potential contribution of our work to the field of RBF/MAR. We are particularly grateful for your note on the practical value of the design and monitoring information, as our intention was precisely to provide material that water resources managers and practitioners can directly adapt. We also acknowledge your editorial suggestions provided in the annotated PDF. We will implement these minor revisions to improve the quality of the manuscript. Please find below our answers to some of the specific comments.

Specific comments

General remark: Considering that most of the comments attached by Referee #1 in the PDF file were of an editorial/stylistic nature, with which we agree and for which we are grateful, we are not listing every line (comment) here to save time for the Editor and Referee reading the response. Therefore, if a line with a Referee's suggestion is not mentioned below, it means that we agree with the comment and will implement it in the revised version of the manuscript. Below, we only provide responses to those suggestions that, in our opinion, require clarification.

L. 77: wellfield

REPLY: We think that in British English, which we use across the manuscript, "well field" is more proper and commonly used. Thus, we suggest leaving it as is.

L. 90: Perhaps swap the order of figures 1 & 2, i.e put regional figure first ...then local

REPLY: We agree. That is a very good idea and will be implemented.

L. 415: untreated effluent?

REPLY: We think that "untreated groundwater" fits better here.



L. 415: This comment is hanging,,needs a context

REPLY: If we got it right, the Referee referred to the part “...(regarding raw water in the production wells)...”. We agree that we have used a thought shortcut here, which may not be evident to everyone. Our point was that (at least in the case of the Kępa Bogumiłowicka RBF site) at groundwater abstraction sites using a siphon system, groundwater from individual wells is rarely tested, e.g. twice a year, because from the perspective of waterworks, the key issue is the quality of water from the collector well, particularly after the treatment process. Therefore, we wanted to specifically mention in brackets that we are referring to water from individual wells, as water from the collector well is tested much more frequently, which would contradict the point of this paragraph. Nevertheless, after rereading it, we think the sentence from the bracket can be merged with the previous sentence. Hence, we suggest:

“...Therefore, knowledge of these seasonal isotopic dynamics enables targeted, event-driven monitoring rather than merely routine observations of untreated groundwater in the individual production wells several times a year...”

