



SDI Review Form 1.6

Journal Name:	<a href="#">Journal of Engineering Research and Reports</a>
Manuscript Number:	Ms_JERR_48519
Title of the Manuscript:	Validating Visual Modflow Numerical Model To Predict Future Impact Of Brine Disposal On Groundwater
Type of the Article	Original Research Article

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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**PART 1: Review Comments**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Compulsory</b> REVISION comments	<p>1. The overall procedure of this study is wrong. You have to respect the following steps:</p> <ul style="list-style-type: none"> <li>× Build the conceptual model,</li> <li>× Calibrate the model,</li> <li>× Validate the model</li> <li>× Use the model for prediction</li> </ul> <p>Step 1 is missing.</p> <p>2. The abstract is too short. you should briefly talk about the method used and the silent results.</p> <p>3. This objective is not clear. You cannot calibrate a model that is not build! First, you have to build a model that predict the fate of brine water disposal into an aquifer, secondly, you would have to calibrate and validate that model.</p> <p>4. Where is the model you are talking about? It would be difficult to follow you calibrating a model that does not exist. You should know that Visual modflow is a software and not a model. So; present your conceptual model.</p> <p>5. What is the type of soil used? How many layers have you used and why? The soils was it disturbed or undisturbed? You previously talk of layer one, this mean that you have at least two layers. Here you give the properties of only one layer, what about the others layers?</p> <p>6. More description are required for the observation points. How are they monitored? How do you evaluate the water concentration in salt?</p> <p>7. The main problem in the result section is that you did not show how you got the set of data used to build the model. Data for calibration are from the lab experiment, what about the model data? This lead to a doubtful result. The figures 1 and 2 have no meaning for my point.</p> <p>8. You cannot delineate the flow direction with only two observation points.</p> <p>9. For an original research, the scope of virtual aquifer is out of date. You should identify a real portion of a coastal aquifer and experiment your research there.</p>	<p>1-This point is done, we have built the conceptual model ( line 61 and from line 71 to 91).</p> <p>2- the abstract was lengthened, we have talked about the methodology and the results (line 9 to line 13)</p> <p>3- we adjusted and modified the objective of the research (line 8 and line 9). we have built the conceptual model ( line 61 and from line 71 to 91).</p> <p>4- the conceptual model is presented,we have built the conceptual model ( line 61 and from line 71 to 91).</p> <p>5- the type of soil is coarse sand soil and was mentioned in the paper ( line 62). Number of layers are five layers (line 74 , as described in the laboratory experiment of [8].The soil is generally uniform and isotropic (line 85). All the layers have the same properties</p> <p>6- More description for the observation points was mentioned in lines (68 -71) (recorded by a sounder and a digital conductivity meter respectively.)</p> <p>7- the model data was mentioned in the research from line 71 to line 91.</p>



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	10. I doubt that this can be helpful to the scientific community.	<p>8- figure 3 shows a comparison between results of visual modflow and laboratory experiment of [4] for HOB1 and HOB2</p> <p>9- We didn't represent a real portion of a coastal aquifer due to the lack of data and fund and we agree with your point of view so we removed this part from the research.</p> <p>10- the result of this research after modification (considering your comments) are: a)we calibarated/validated a numerical model, b)Visual MODFLOW can assist engineers and researchers in simulating and predicting the future impact of brine disposal on the groundwater salinity.</p>
<b>Minor</b> REVISION comments	Language and manuscript structure	done
<b>Optional/General</b> comments	You will see more comments on the manuscript.	We took them into consideration during the modifying of the research.

**PART 2:**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	No