

# Study on Artificial Ground Water Recharge Improvement Technique

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**Abstract:** Measuring the transformation of groundwater charging from the introduced renewable energy program is important to assess future water availability. Water scarcity is one of the major problems that still needs to be addressed and water scarcity is becoming a global problem. Water demand is growing as the population grows. Although 75% of the earth's surface is covered with water, only a small percentage of it is suitable for human consumption. Over-demand has put a strain on our water resources. In many areas groundwater, which makes up about 20 percent of our fresh water, is widely used for human, agricultural and industrial uses. In India, the problem of groundwater is most prevalent in areas with high agricultural economies, although it is higher in urban areas. Underground recycling methods can be used to supplement our water resources. Different methods, depending on the weather and location, can be used. In arid areas, for example, wetlands can also be used to manage water resources. In this paper, we have reviewed and summarized various studies to suggest various ways to recycle groundwater. There is a need for groundwater replenishment through methods such as water distribution, refilling wells, boreholes, wells and much more. The choice of a particular method is determined by geographical, geological and soil conditions; Non-renewable recharge as a means of strengthening the natural groundwater supply turns out to be much needed for groundwater management. The main purpose of this study was to identify and design residential accommodation facilities. Based on our study, it suggests that this method of disposing of wastewater in rural areas is effective and provides a high effect of re-charging the groundwater table. By using this method, the problem of unsanitary conditions near houses is prevented and mosquito production is avoided. Therefore, this type of disease arose because of poor hygiene and mosquitoes are avoided. This approach provides a healthy lifestyle for living people.

**Keywords:** Groundwater recharge, artificial recharge system, Recharge Pit

## REFERENCES

- [1] M.Sai Sudheer Reddy, N.Sandeep Kumar, K.Venkatesh "A Study on Ground Water Problems, Artificial Recharge Techniques in Musunuru" ICFMR 2020 DOI: 10.1016/j.matpr.2020.04.136
- [2] Miss. Arpita A. Nandanwar, Mr. Akash Y. Raut, Mr. Avej S. Qureshi, Mr. Chhatradip M. Bande, Mr. Jeevan M. Dhawase, Mr. Maitray M. Khobragade "A Review Paper on Groundwater Recharge by Utilizing Waste Water from Residential Area" olume: 07 Issue: 02 | Feb 2020 www.irjet.net
- [3] Sumedh R Kashiwar , Usha R Dongarwar , Bijoya Mondal and Manik Chandra "An Overview on the Ground Water Recharge by Rain Water Harvesting" Journal of Energy Research and Environmental Technology (JERET) p-ISSN: 2394-1561; e-ISSN: 2394-157X; Volume 3, Issue 2; April-June, 2016; pp. 146-148
- [4] Debu Mukherjee "A Review on Artificial Groundwater Recharge in India" SSRG International Journal of Civil Engineering ( SSRG – IJCE ) – Volume 3 Issue 1 January 2016
- [5] Prasenjit Mondal, Abhishek Nandan, Prasenjit Mondal, Abhishek Nandan, Dr. N. A. Siddiqui and B. Siddiqui and B. P. Yadav "Impact of Soak Pit on Groundwater Table" [https://www.researchgate.net/publication/319979073\\_Impact\\_of\\_Soak\\_Pit\\_on\\_Groundwater\\_Table](https://www.researchgate.net/publication/319979073_Impact_of_Soak_Pit_on_Groundwater_Table)
- [6] H. Hashemi, R. Berndtsson, M. Kompani-Zare, and M. Persson "Natural vs. artificial groundwater recharge,

quantification through inverse modelling” [www.hydrol-earth-syst-sci.net/17/637/2013/](http://www.hydrol-earth-syst-sci.net/17/637/2013/) doi:10.5194/hess-17-637-2013

[7] Vedavati R Pujari. and V. V. Diwan “Artificial Groundwater Recharging In India” (PDF) Artificial ground water recharge with a special referen [https://www.researchgate.net/publication/319979073\\_Impact\\_of\\_Soak\\_Pit\\_on\\_Groundwater\\_Table](https://www.researchgate.net/publication/319979073_Impact_of_Soak_Pit_on_Groundwater_Table) ce to India (researchgate.net)

[8] Pallavi Saxena, Abhishek Chandra , Abhinav Garg , Gaurav Sharma and Prateek Varma “Conservation Of Groundwater By Artificial Recharge In Delhi And Haryana State Of India – A Review” ISSN 0976-4550 Volume: I: Issue-3: Nov-Dec - 2010

[9] Amartya Kumar Bhattacharya “Artificial ground water recharge with a special reference to India” Proceeding of International Conference SWRDM-2012

[10] For fig 2 <https://www.thehitavada.com/Encyc/2021/9/29/City-witnesses-trend-of-increasing-annual-rainfall-in-last-one-decade.html>