

ISBN	978-93-88122-14-6
Website	www.veltech.edu.in
Received	01-May-2020
Article ID	NISDCE107

VOL	01
eMail	nisdce@veltech.edu.in
Accepted	16-May-2020
eAID	2020.nisdce.107

ASSESSMENT OF GROUND WATER QUALITY BY USING WATER QUALITY INDEX AROUND AJITHSINGH NAGAR DUMP YARD IN VIJAYAWADA, ANDHRA PRADESH, INDIA.

**Bharthavarapu srikanth¹ geetha selvarani a²
Bibhutibhusan saho³**

¹ Research Scholar, Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology, Tamil Nadu.

² Professor, Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology, Tamil Nadu.

³ Associate Professor, MVR college of Engineering & Technology, Andhra Pradesh.

ABSTRACT: Water is an essential natural resource for sustaining life and environment but over the last few decades the water quality is deteriorating due to its over exploitation. Water quality is essential parameter to be studied when the overall focus is sustainable development keeping mankind at focal point. Groundwater is the major source of drinking water in rural as well as in urban areas and over 94% of the drinking water demand is met by groundwater. The study was carried out to assess the ground water quality and its suitability for drinking purpose around the ajith singh nagar dump yard of Vijayawada, Andhra Pradesh. For this purpose, water samples were collected in ajith singh nagar, nunna, payakapuram, kandrika, rajiv nagar areas around dump yard and analyzed for different physio-chemical parameters such as pH, turbidity, total hardness, chloride, total dissolved solids, total alkalinity, fluoride, sulphates, nitrate, and iron. We assessed ground water quality in terms of WQI of those areas by using weighted arithmetic water quality index formula. It shows that WQI of ajith singh nagar, nunna, payakapuram, kandrika, rajiv nagar areas have poor ground water quality and undesirable for drinking purpose.

Keywords: Groundwater Quality, Physio-Chemical parameters, Statistical Parameters, WQI

This paper is prepared exclusively for International E-Conference on Novel Innovations and Sustainable Development in Civil Engineering 2020 which is published by ASDF International, registered in London, United Kingdom under the directions of the Editor-in-Chief Dr E B Perumal Pillai and Editors Dr. M Vinod Kumar and Mr. R. Saravana Kumar. Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage, and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s). Copyright Holder can be reached at copy@asdf.international for distribution.

2020 © Reserved by Association of Scientists, Developers and Faculties [www.ASDF.international]