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WATER QUALITY OF MULTAN AND FAISALABAD

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Abstract:

Pakistan is recognized for its excellent surface and groundwater resources; this research study based on water quality of Multan and Faisalabad research conducted in Pakistan and data collected from Google. The rapid population growth, urbanization, and unsustainable water consumption practices have had a negative effect on the overall and quantity of water resources in Pakistan. Research target proposing potential methodologies for satisfying such solicitation under various ecological limitations. Chenab River is the space's standard and the principle wellspring of surface water and groundwater re-energize. Overall results founded that the water quality of Faisalabad is better than the water quality of Multan.

Keywords: Water Quality (WQ), Multan (M), Faisalabad (F), Groundwater (GW).

Introduction:

Water is the fundamental requirement for the life of all living things. Water quality and water resources are decreasing due to numerous global impacts caused by rapidly growing urbanization, population, industrialization, and environmental pollution. Water quality points out the physical, chemical, radiological and biological quality and properties of water; the main aim is to enhance the quality parameters of the water to make it useful for drinking, personal use, and household usage.(Yamin et al., 2015). Bad quality of water and groundwater, infection of lakes and rivers aquifers have prompt improved waterborne illnesses and different fitness impacts.

Chenab River is the primary move of the location and nicely the primary supply of groundwater recharge and floor water. The abomination of water delivery has grown to be essential trouble in Multan, considering most families use their very own wells. Only one remedy plant is present to be had within side the north of the metropolis. Sewers are presently overuse, with continual overpopulated, bobbing up from the mixed results of low volume, silting, and insufficient manipulate of commercial wastewater.(Dawood et al., 2020)

Multan metropolis is amongst the maximum afflicted by water pollution (Soncini et al. (2014). About 94% of drinking water samples of Multan were highly contaminated with arsenic. (Somoro et. al., 2011)

While the turbidity, hardness, pH, and TDS of drinking water of Faisalabad were found within safe limits of WHO guidelines. The microbial analysis showed that all samples were contaminated with total coliforms and *E. coli* (Zulfiqar et.al., 2016). Overall the ground water

used for drinking purpose in urban areas of Faisalabad was intensively polluted with sewerage water (Farid et.al., 2012).

The bacterial examination of drinking water samples from Gangapur (village), Faisalabad, show a significant picture of cow dung and municipal waste water pollution causing Diarrhea particularly in newborns (Yasar et. al., 2011)

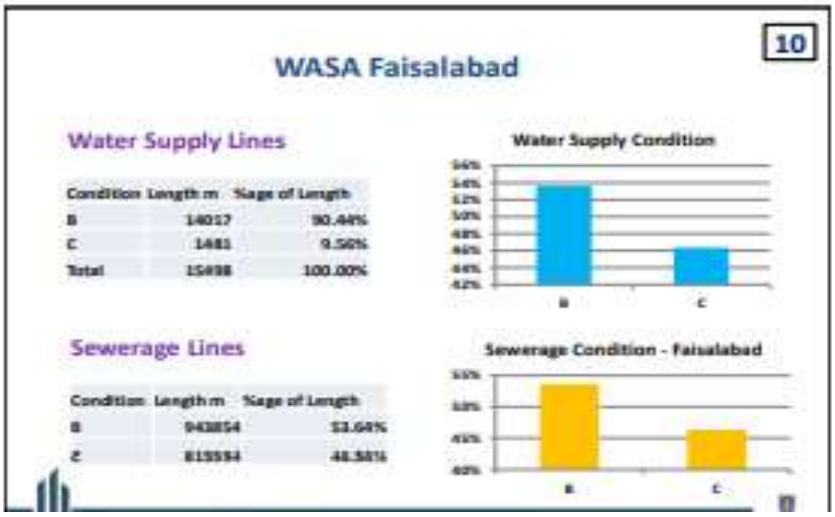
An experiment that was carried out to evaluate the drinking water quality in different ways. Water filtration systems in the city of Faisalabad, Water samples were collected from 4 colonies from 17 different commercial filtration facilities in the city of Faisalabad. The result showed that all samples correspond to the limit values of chemical parameters specified World Health Organization (WHO).Positive Coli tests were found in 14 samples, while E. Coli was absent in 3 samples. It was found that the pile-up water samples were acceptable for drinking due to physical and chemical parameters. It was noted that 70% of the samples were not suitable for drinking from a biological analysis perspective (Mahfooz et al. (2019)

Methodology:

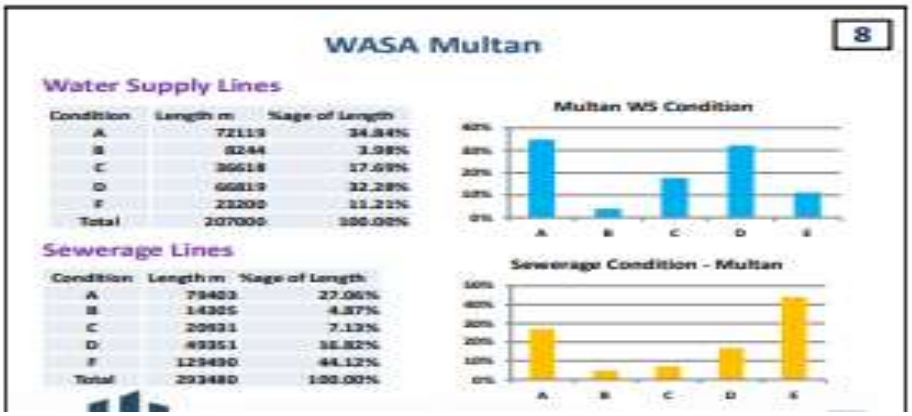
This research paper is based on secondary data for measuring the water quality of Multan and Faisalabad. In this research paper, data collected from different research papers. Research measure the quality of water of Faisalabad and Multan.

Results and discussions:

WASA



Faisalabad and Multan:



The above tables and graphs represent the WASA supply lines and sewerage condition of Faisalabad and Multan. The length of WASA Faisalabad is 90.44% in the form of B condition, and in C condition, the length of Faisalabad is 9.56%, so, similarly, the total length shows 100%. In other words, the results measure the quality of water the supply line of WASA Multan is 34.84%, 3.93%, 17.69%, 12%, and 11%, respectively. Similarly, its sewerage lines are 27%, 4.87%, 7.13%, 16%, and 44%, respectively, shows the quality of the supply line in Multan.

Name	Water consumption	Water production (M UM)	% New	Water Loss (M CUM)
Faisalabad	1.04M	1178	35	423
Multan	631000	680	40	272

The results indicate that water consumption, water production, % of New, and water loss (M CUM) of Faisalabad and Multan. The water consumption values are 1.04 million of Faisalabad which consume water in a year, and the 631000 consumption rate of Multan. The total water production rate of Faisalabad is 1178 million and 680 million of Multan so, results describe that Faisalabad's water quality is better than Multan's water quality.

Conclusion:

Results concluded that the quality of Faisalabad related to water is better than Multan's water quality. We accumulated geology, demography, and environment data, i.e., precipitation inside the space, as fundamental for a plan of water supply and sewer networks. The plan of the water supply network inside the walled city was transmitted by research on city included Faisalabad and Multan, the light of the projection of things to come near 20 years long. We, at that point given proposed all-inclusive strategies to supply and sewer networks for the whole stronghold. Results concluded that the water quality of Faisalabad is better than the water quality of Multan.

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