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Review -Need of Sewage Treatment and Different Processes Used in Sewage Treatment

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Abstract:

This paper reviewed the need and different processes of sewage treatment. The methods employed in these researches are mainly Physical, Chemical approaches. Wastewater has a lot of impact on the environment and therefore it is important to treat it effectively. By treating wastewater you don't just save the creatures thriving on it, but also protect the environment.

Keywords: *Chemical, Physical, wastewater, protect, environment.*

Introduction:

Rainwater is available to us for two and a half months of the year. It will be available for the rest of the day and this is not possible in every place and therefore where the population is concentrated and there is not enough water storage or other facilities for proper planning. Water scarcity is a common experience. Therefore in urban or suburban residential areas, water management, along with water conservation, is a very useful and effective step in wastewater treatment and recycling for secondary works.

It is time for everyone to decide whether to spend all their time and money on storing these two and a half months of water or to spend a small portion of it on year-round wastewater treatment and to get the water we need for secondary use. About 70% of the water we use in residential areas is used for secondary use. That is, we spend about 70% of our demand for good quality water for secondary use. In doing so, we are increasing our daily demand for water. Therefore, the people, the administration and the government have found themselves in a quandary with the problem of limited availability of water on the one hand and non-disposal of wastewater on the other. If people in residential areas decide to process their daily wastewater and bring it to fruition, it can definitely help reduce the water scarcity we have to endure, perhaps shutting it down completely.

DIFFERENT METHODS FOR THE PURIFICATION OF THE WASTEWATER:

1. Domestic methods of water purification:

Water from bore wells, rivers, streams, springs, lakes is often bad. The following are the remedies for purifying water.

i. Storage and disposal:

After filtering the water in the pot, storing it and letting it go for some time, the mud settles down. If water is used for 24 hours 95% of the germs are killed. This action is quicker by turning the alum. This is the cheapest and easiest method.

ii. To boil:

Once it has boiled keep it boiling for at least five minutes. But if you want to do it on a large scale, this is a little bit costly solution.

2. Chemical purification:

Water can be disinfected using bleaching powder. If there is a system to replenish the water of rivers and lakes, then this measure has to be taken from house to house. For this, you get chlorine tablets or dilute the medicine. The amount of chemicals to be mixed in the water is given on the pill pack or in the medicine bottle. After taking the medicine or pill, use it in water for about half an hour. Chlorine solution can be prepared without medicine or pill.

Alkali Filter:

Water in borewells and wells is heavier due to salts. In fact, many salts are harmful to the body. It also makes cooking difficult and changes the taste. Therefore, water salinity should be checked. If there are salts beyond certain limits, measures should be taken. Nowadays saline filters are available.

SUJAL WATER FILTER:

Grain bran, sand, stone and binder (cement) are used to make this water filter. The process of creating this filter is very simple.

Features:

1. 8 to 10 litres of water at a time is filtered in 4 hours.
2. Water turbidity is reduced by 12 to 18 percent.
3. The number of germs is reduced by 13 to 11 percent.
4. Fluoride and arsenic levels in water are reduced.
5. The filter bed remains operational for 6 to 8 months.
6. Filters are available at very reasonable prices and can be easily made and replaced.
7. The filter is made from grain ash, sand, stone and cement.

Instructions for using the filter:

Always keep the filter at a height above the ground. Keep the filtered area and surroundings clean. Always keep the filter cartridge (stick) and upper utensils on a clean plate while cleaning. Do not place on the ground. Clean the bottom pot and plate daily. To clean the filter at least once a week, pour 7 liters of boiling water into it and pour it into the lower pot. Always take water from the lower (tap) container. Do not dip the glass in the upper pot. The water in the lower pot is clean and drinkable. Fill the filter gently with water. Doing so does not damage the filter.

Mass water purification:

It is better to keep the collective water supply clean than to purify water from the house to house. But if this water is used for other purposes besides cooking then the cost of purification is wasted. Even before the collective water supply cure supplied by purification.

Water Purification Centers:

Water is purified in three stages at well-equipped water treatment plants in the city.

a) Allowing sludge to settle with alum
b) Filtering water through the sand layer
c) Sterilizing water with chlorine gas.

The cost of construction, machinery etc. is huge. But for small villages other cheap and equally effective plans can be made. If there is a deep well with a lot of water, it can be kept clean by covering it from inside to outside, covering it, and installing a suction system.

Ideal well:

If the spring water from the well is flowing under the rock, then this water is usually pure. The purity of drinking water can be guaranteed if germs are not allowed to mix in such water wells from outside. Such facilities have been provided in the Jalaswarajya project.

a) Wells need to be repaired to prevent contamination from outside. First of all, the well should be constructed from inside so that surface water does not seep into it. Make a three-four foot wall on the ground to prevent dirt and water from entering and cover it from above.
b) Arrangement has to be made to draw water (e.g. pump, Rahat etc.) without getting into the water.
c) In order to prevent spilled water from seeping in.
d) There should be no contaminated water in the vicinity of the well up to about one hundred and fifty feet. With such care, drinking water will remain safe and pure. If possible, this water can be pumped to and from the village by installing a pump.

Plant Sand Filter:

Nowadays water supply centres have also been set up in some small villages. However, due to the high cost of a water purification system, the purification at many small centres is very poor and unsatisfactory. Simple and inexpensive technology is available for water purification for the village. One example is the use of aquatic plants instead of mechanical filtration. These aquatic plants grow spontaneously when water accumulates on the sand layers and the filtered water is purified. The work of these filters was slower than that of mechanical filters, but purification is much better than that. It kills 99 percent of the germs. For a small village, it is best to use a vegetative sieve. Its maintenance cost is very low and very pure water is available.

Conclusion:

This type of method should apply on a large scale so they will help people in improving health and sanitation with sustainable development.

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