Example of path of water in kansas city research paper

Business, Management

Kansas sources its water from several river basins which feed a number of reservoirs. This includes thirteen federal reservoirs that are operated by the U. S army Corporation of Engineers. The reservoirs have reduced in capacity over the recent years due to effects of siltation and sedimentation. These federal reservoirs are the providers or supplies of untreated water to industries and communities around Kansas (Drought Update, 1).

The water services department, Kansas City treats the city's water so that it is safe for human consumption. Storm water systems and levees are also managed by this department. Over and above provision of clean water, the department also manages and cleans the city's wastewater. The process of water treatment involves several stages. The water is first collected in a central point usually several reservoirs. The water is then subjected to filtration where large water particles, aquatic animals and other debris are separated from the water. The water is then pumped to another tank where is subjected to filtration using fine stone granules and sand as part of the filter. This removes even the finest of particles from the water.

However, the water is still unsafe for human consumption at this stage. It has to be subjected to chemical treatment so as remove dangerous chemical substances from the water. Alum is used to coagulate with the chemicals in water so that the precipitate of this reaction can be allowed to sediment at the bottom of the tank. The water is then decanted and transferred to another tank where it is subjected to chlorination. Chlorine has antibacterial properties and kills most of the harmful germs and disease causing organisms in the water. There are ratios for mixing the water and chlorine, depending on the level of impurities in water.

Excess amounts of chlorine may result in harmful effects on the final user of such water. Under-chlorination may lead to unsafe properties being sustained in the water. The treated water is then exposed to direct sunlight. This helps to remove the bad smells from the water while allowing for aeration of the water. After this stage, the water is ready for distribution. Usually there are several tanks that contain the water that is ready for distribution. However, before any distribution is done, the water is inspected for its level of safety. This involves taking laboratory samples and doing tests to determine the level of safety (Pizzi and Nicholas, 245).

The department also manages wastewater. It is quite obvious that any domestic or industrial user of water has some waste water. Industries use water for cooling of machines, cleaning of equipment and even in processing. Such industries are required, by law, to have control measures in place to treat such water before discharging it as effluence in the city's rivers. Domestic users have septic tanks for storage of waste water. The department ensures that industries follow the mandatory procedures before discharge of waste water. It also carries out sewer rehabilitation, disinfection and treatment for both domestic and industrial users.

The individual users of the city's water have tanks for storage purposes. Users can increase storage if they feel the need to do so. Incidents of water shortages are rare but may happen once in a while due to breakage of distribution piping systems. Such repairs are carried out by the department. It is quite obvious that users must pay for these services, and a fee is levied on all users depending on the monthly usage which includes a standing charge.

Works Cited

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