Sewage treatment and septic tanks essay

ASSIGN BUSTER

Drainage and Sewerage System for the Municipality of Kabuki You are part of the team planning for the drainage and sanitation/sewerage system of the Municipality of Kabuki. The present number of inhabitants of Kabuki is about 320, 000. An increase is expected at a rate of 2. 5% annually at least for a period of 10 years to come. After that a certain leveling off must be realized. A map of the municipality is presented in Annex 1. The map indicates the presently skewered zones of the municipality A and Band the laces where they discharge into the sea and the harbor.

The neighborhoods have been named A, B, C, etc. These sewer discharge the wastewater of about 45, 000 inhabitants plus sewage from public and commercial sector. Most of these inhabitants live in publication in the center of the municipality. In this center also hotels, government buildings, workshops, banks, hospitals, schools are found. A serious problem is the pollution of the seashore and especially the nice beaches. High E. Coli counts indicate severe fecal pollution. This is the first problem you have o solve.

Heavy rainfalls occur in the municipality of Kabuki especially in the months of May until August. It is generally dry the rest of the year. The rainfall may lead to flooding of the lower parts of the city. After flooding there is a marked increase in the incidence of dengue at the publication and malaria at the outskirts of the municipality. Flooding also causes damage to public and private properties. During the dry periods, there is a severe lack of irrigation water in the market gardens that surround the Municipality of Kabuki.

The market-gardens are especially found on both sides of the small river T. Dogma. This river has a very low flow-rate in the dry seasons. At that the

water is polluted. Water supply to Municipality of Kabuki is from Teaspoon River. Water from a reservoir is taken for treatment and pumped to the municipality over a distance of 25 Km. Water for irrigation is scarce especially in the months March until May. More International auto ten analogousness AT ten multiparty: A Padlock center with hotels, government buildings, public buildings, sewers and septic tanks B

Central business district, workshops, banks, middle income apartments, market place, harbor activities, sewers and septic tanks C Center: residential areas, septic tanks D Low income housing, no sewers, some septic tanks, and pit latrines, others have no latrines E Industrial areas salt production s AY = small airport Present population of the municipality of Kabuki. I Neighborhood 145, 000 I nil Questions: I Inhabitants | 30, 000 130, 000 I ID | 20, 000 I Connected to sewers 115, 000 1190, oho BIB 135, 000 1 . How would you deal with the problem of pollution of the beaches of municipality of

Kabuki? What effects do you expect from indiscriminate discharge of raw sewage? 2. Indicate the locations of future sewage treatment stations. Give your arguments justifying the location or locations. 3. Given the chance and resources, which type of sewer system is most appropriate for the municipality: combined or separate sewer system? Explain or Justify your answers. A. How would you layout the storm water drainage system in section A, B, C, D of the town? B. What type of sewerage system would you select: conventional, settled, or simplified sewerage?

Your choice may upend on the part of the city under consideration. C. How would you handle the sanitation/sewerage situation of the people residing in section E? D. Indicate the tracks of the main sanitary sewer lines. Justify your choice. If necessary indicate the location of pumping stations for sewage. 4. What type of wastewater treatment system would you choose? Explain, why. 5. What do you propose to do with the treated sewage effluent: discharge to bodies of water or reuse? If you consider reuse, indicate what purpose or type of reuse you find preferable and why? ANNEX 1 Teaspoon River