

QUALITY OF SOURCE WATER IN HALI-ELA AREA FOR DRINKING PURPOSES

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Physiochemical and bacteriological analyses were carried out on water supply scheme of National Water Supply & Drainage Board (NWS&DB), water used for drinking purposes in Hali-Ela, Sri Lanka. The results obtained were compared with WHO and SLS, Sri Lanka standards for drinking water. With the exception of stream water that did not comply with colour and Turbidity standards respectively, all others were within the standards set for pH, conductivity, alkalinity, hardness, Biological Oxygen Demand (BOD), nitrate and phosphates. None of the samples complied with bacteriological standards as number of total coliform bacteria present in the samples was high. Also there were largenumbers of E-coli bacteria present in all the samples. The presence of potential pathogens in water for drinking purposes is of public health significance considering the possibility of the presence of other bacteria, protozoa and enteric viruses that are implicated in gastro-intestinal water borne diseases and the low infectious dose for these water borne pathogens. Finally investigated locations categorized as low risk areas and high risk areas. This investigation provides a preliminary assessment of the pollution of water supply scheme and will act as a data base for future investigations and monitoring of the high physical, chemical and bacteriological quality of surface raw waters.