

**WATER SAFETY PLAN FOR
DEHIGOLLA WATER SUPPLY SYSTEM**

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ABSTRACT

Public Supply Systems can be defined as a system that provides water via piping or other constructed conveyances to the public for human consumption and also it refers to water withdrawn by public & private water suppliers and delivered to users. Public water suppliers provide water to domestic and commercial uses of public. The research focus is on a rural public supply called Dehigolla Water supply system in Badulla, Sri Lanka. This supply scheme serves an estimated 60% of families in Dehigolla. Public Supply System can be gradually upgraded to improve water quality, but water quality can also be improved through effective risk management. The World Health Organization (WHO) has developed a risk management tool known as Water Safety Plan (WSP), but until recently tool has not been tried at developing countries such as Sri Lanka. This research focuses on the relevance of the generic WHO water safety plans tool to Dehigolla Supply System, with the aim to develop an appropriate water safety framework for certain supply system to ensure the acceptable quality of provided water. Water from this supply is used for both ingestion and non – ingestion household activities. The water quality of supply is deteriorated and various causes are responsible for hazardous events which are identified. As a result of water quality analysis problems are encountered with higher turbidity, coliform content and iron content.

According to the results, major outcomes of the survey demonstrates that existing scheme was providing unsafe water because of poor construction of intake and distribution network, absence of protection for supply system and unawareness on the water quality. Therefore, this research suggests the developing spring box with refixing pipelines may be the good implementation for this supply system. Assembling the water safety plan team may be maintain the supply scheme with proper documentation and arrange awareness programs of water safety among people.

Key words: Public Water Supply System, Water Safety Plan, Dehigolla, water quality, sampling points.