



Abstract

Nikaweratiya is a divisional secretariat in the north western province in Sri Lanka with an approximate population of 40,450 and an area of 146km². As Nikaweratiya is an area with less rainfall and dry climatic conditions, there are around 800 low income families and agricultural lands of around 1000 acres with scarcity of water.

Even though a huge water supply project, “The Daduru oya water supply project” runs through the Nikaweratiya area, there were no measures taken to implement a project for the benefit of the people in the area. The villagers have requested the irrigation department many times regarding this matter, but a favorable reply has not been received. The irrigation department has stated that it is merely impossible to direct water in the project to the above mentioned area. But in a discussion with those families it was evident that they were in desperate need of a solution to meet their urgent need.

The aim of the research was to find out a suitable solution to this issue by proposing a method of directing a portion of water in the Daduru oya project to the Nikaweratiya area by using a canal called “southern canal water supply project” and to provide the above mentioned low income families with land and water for their agricultural purpose.

Initially, a 1:100000 contour map of the area was used and it was clear that there was a possibility to direct water to the area. For the first stage a level line was taken and a cross sectional drawing was done. Then the extent of excavation needed was calculated and it showed a very low extent of excavation and filling were needed for the project. This showed the viability of the project for the possibility of constructing the proposed canal, the surveying data taken from the site was then produced by the irrigation department and after several discussions the project was approved by the department as a suitable solution for the problem.

In the designing phase, as there were 8 tanks to be fed by the proposed canal, the design was at turnouts for each tank carried out. After the designing phase was completed it was again produced to the irrigation department and got approved.

With the approval of irrigation department, the proposals and the designs provided proved a success to the solution for the issue of “scarcity of water for 800 low income families and 1000 agricultural lands”