## **JUSTIFICATION**

Name of Work:- Providing/ Augmentation of WSS to PC Habitation of census village Footakhal, Hiun, Pundal etc. in GP Jilhan, Gwali & Siun etc in Tehsil Padhar Distt. Mandi (HP)

This Scheme has been designed to cover 102 No partially Covered (PC) Habitation of 69 No Census Villages under 14 No Gram Panchayat for the ultimate population of 16622 persons. The design water requirement worked out to be 1163450 litre per day. The proposed source of scheme is Panjondi Nallah which falls in Chuhar valley. The source is snow fed and having lean period discharge of 198.90 LPS, thus source is very reliable and dependable. The scheme is proposed to augment 27 No existing schemes which experiences spell of drought during summer and discharge available reduces to less than 0.5 LPS in these schemes, therefore during drought season, the crises worsens as deployment of tankers are restricted by non-availability of roads.

The following alternatives were explored during finalising the alignment of MSERW pipe.

The 1st alignment for laying of Gravity main was explored from Source at Panjond the along the forest to vill Dharyan then above village Bajgan, Bajot chelling to Tikken bridge. In this alignment forest land as well as private land shall be involved. The alignment is technically unsuitable due to surface undulations, lenghty route means high hydraulic losses and huge symphon, which will be very critical to maintain, being gravity portion of the scheme.

The alternate 2<sup>nd</sup> alignment was explored from source to Village Graman, Bari Bajgan then above village Dhamchian to Tikken Bridge. In this alignment maximum private land is being involved and local habitants have strong protest against acquiring their land. The route will be lengthy means large hydraulic losses.

The alternate 3<sup>rd</sup> alignment has been explored from source to Dhamchian along the Nallah and then below the road to Tikken bridge. The proposal involves minimum length along the forest land, along natural slope of nallah. The gradient of proposed alignment is technically suitable for sustaining gravity water supply scheme. The alignment being along the Nallah, therefore it involves no felling of trees and this seems to be best option for the water Supply Scheme.

Keeping in view the above facts the 3<sup>rd</sup> alignment along the nallah is the only technical viable alignment with minimum use of forest land and has been therefore proposed in the project.

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