

## CHICK LIST 11

## ALTERNATIVE FOR PROJECT COMPONENT

This is to certify that the forest area involved in the proposal is unavoidable and barest minimum forest area i.e. 0.58.48 hectare is proposed for diversion for the construction of Duhangan-III 1 MW HEP at Village & Post Office Jagat Sukh Tehsil Manali District Kullu. Three alternative have been considered for this project and adopted alternative uses minimum forest land details are under; Various Alternatives for the project.

Alternative 1- Proposed

This is left bank and right bank alternative in Duhangan Nala. The alternative involves construction of diversion structure at EL 2032 m of Duhangan Nala. The water conductor shall consist of conveyance channel, surface desilting tank, Still power pipe channel, 143 m long and surface penstock and a surface power house, located at an EL 1967m on the left side of the Duhangan Nala. The gross head available for power generation shall be around + 65m. In this alternative net head is slightly more than other alternative due to lesser length of water conductor system leading to higher leading to higher annual generation of energy. This alternative was proposed earlier and Techno economic clearance for it was accorded. In this alternative water conductor passes through cultivable land in many reaches and the local people in this alternative has been minimized. Environmentally and financially this scheme is better than other alternative. The details of trees etc. as per our proposed site: - proposed 1<sup>st</sup> Alignment for project.

No of trees	Sapling	Total	Volume in cube meter	land
15	3	18	17.188	0.58 48 hec

Alternative II: Not proposed:

This alternative is on the right & left bank of the Duhangan Nala. In this alternative all the land required is 0.9552 hectare which is extra than the 1<sup>st</sup> alternative. Moreover the land near proposed fore way and power house is sided portion where the construction of these components would be very difficult. In this alternative more forest area and larger number of trees are coming. So this alternative is not better than the 1<sup>st</sup> alternative all.

No of trees	Sapling	Total	Volume in cube meter	land
25	17	42	19.75	0.95 52 hec.



### Alternative III: Not Proposed

In this alternative the Duhangan Nala has to be joined with Duhangan intake and length of power Channel to for way also increasing near about 350 m and total land required for this alternate 1.201 hectare which is more than the 1<sup>st</sup> alternative.

No of Trees	Sapling	Total	Volume in cube meter	Land
26	23	49	21.89	1.201 hac

Therefore, alternative I which involves less forest area and lesser number of trees has been chosen for the layout of the project. This alternative is environmentally better than other two alternatives.

M/s. Jamdagani Hydro Power

Signature User  
Authorised Signatory

Forest Range Officer  
Forest Range Naggar



Divisional Forest Officer  
Kullu Forest Division  
Kullu Forest Division