

JUSTIFICATION FOR TLAWNGHNAR RECHARGING DAM FOR AUGMENTATION & IMPROVEMENT OF ZOBAWK WATER SUPPLY SCHEME

Problem & Necessity:

Lunglei Township is consisting of 24 village council areas from Pukpui in the north to Zobawk 'S' in the south, Hauruang in the west to the Zohnuai in the east. Recent development has upgraded the township to the Municipality comprising 11 municipal wards.

The existing drinking water supply to Lunglei town was commissioned in the year 1995 by pumping treated water from the tri-junction pumping station of Tlawng and Pialtheng river sources with 9 MLD water treatment plant. This project has covered about 90% of the township areas leaving behind higher elevated localities in the south namely- Upper Theiriat, Mizoram Polytechnic complex, Hrangchalkawn, Lungpuizawl and Zobawk 'N & S' as uncovered. In these areas, each locality is served with separate water supply schemes by gravitation or small pumping scheme, including Zobawk 'N & S'.

Managing the water supply in the whole area of Zobawk 'N & S' has been done by improvement of traditional water sources (Tuikhurs), installation of deep hand pump tube wells / submersible pumps, the lone gravity feed piped water supply from upstream of Tlawnghnar (2005) and private water carriers through those past many years. Drinking water supply crisis in Zobawk village became problematic in recent years due to under mentioned two main reasons:

- ✓ Damage and dislocation of Tuikhurs, HPTWs or Submersible pumps and existing water storage tanks within Zobawk as the road construction of NH-54 by NHIDCL work is in progress.
- ✓ Reduction of source yield of existing gravity feed PWS scheme from Tlawnghnar executed in 2005 especially during dry season (from Feb-April).

Project Objective:

To overcome the present water crises or scarcity, the best feasible solution considered would be Harvesting of the monsoon surplus discharge by Augmenting the storage capacity at source by new construction of impounding dam at below the existing one which will enhance storage of large volume of water for driest periods of February-April. The total storage capacity of impounding Dams in the existing and new ones will be approximately 35 million litres and total storage capacity of Service Reservoirs in the existing and new ones will become 0.90 million litres. All these total raw water storages at source, and RCC storage tanks at the village together with Rooftop rainwater harvesting system executed from HPC Lunglei (40,000 lits) will cater village population of 3585 souls for 5 (five) months of dry periods from December to April without acute crisis. There is no other alternative water source for Zobawk village.

To prevent siltation of the impounding dams, check dams / silt barriers (Gabion structures) were constructed across the surface flow at multiple places in the up-stream sides which will enhance longevity of dam capacity as well as groundwater recharging capacity and enduring recharging process. Awareness dissipation to public has been effectively carried out

in the village community on conservation of water bodies and catchment development activities.

Benefit to Accrue:

After fully implementation of present project, following outcomes are expected to achieve in Zobawk 'N & S' village-

- ✓ All the 700 household families will tend to have their own House Water Connection and thereby elevating their standard of living.
- ✓ Increase in water revenue. It is expected annually ₹ 16.80 Lac or more during project life.
- ✓ The recharging Dam and the Gabion structures will enhance groundwater recharging both in quantity and elongating duration of recharging process. Improve in sub-surface flow of river downstream.
- ✓ The VWSC-village WATSAN Committee will take-up catchment protection and recharging work activities through MNREGA components.
- ✓ Development in ecosystem, flora and fauna at the source and catchment environment.

Environmental Impact:

Truly speaking, this project seems having no ill effect to the forest and the environment since the project is purely water source development and catchment protection / development. The construction of recharging dam and the submerging areas will not kill any trees or harm to the green cover of the catchment areas. The water submerged area will only be a fraction of hectare on the very V-shaped riverbed only. The water body impounded

during dry season will rather promote the ecosystem, apart from serving drinking water purposes.

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