A

Brief presentation on Scaling up sustainable SSHE, TSC & fluoride mitigation (Water Safety Approach) in Ujjain & Jhabua Districts of M.P.



Sponsored by: UNICEF, Bhopal





Presented By: H.B.Dwivedi (Addl.Director)

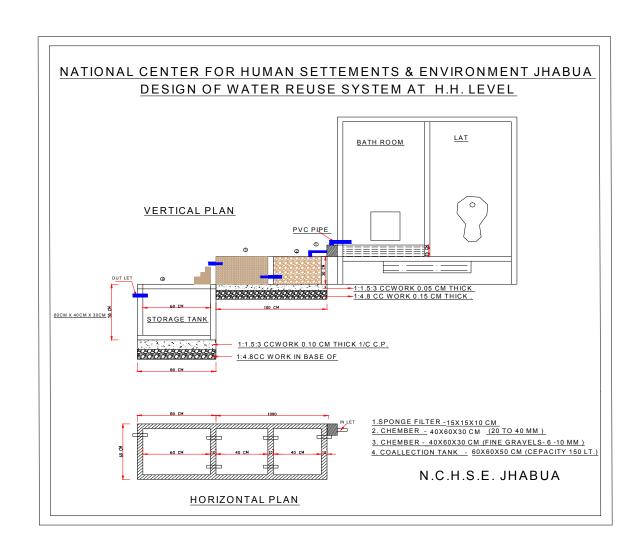
National Center for Human Settlements & Environment, Ujjain

Reuse of grey water at house hold level.

Water Scarcity is the biggest problem at village level for different uses. Average 20 liter water is used for bathing by each & every person. This water is wastages by drain. Most of the time grey water is stored in deepen places & a lot of diseases generated due to stagnant waste water.Now grey water is used for toilet flushing & gardening.



Reuse of grey water at H.H. level



Water Reuse System at House Hold Level Specification of filter:

S.NO.	ITEM	DIMENSIONS	FILTER MATERIAL	ROLE
1.	Sponge filter	15cmx15cmx1 0cm	sponge	To check solids, hairs & other particles
2.	Filter I	40x 60 x 30 cm.	Gravels 10to 20 mm.	Purification of gray water
3.	Filter III	40x 60 x 30 cm	Fine gravels – 6- 10mm	Purification of gray water
4.	Step Aereation	20x 60 x 20 cm.		Aeration, Odor removal, etc.
5.	Grey water storage tank	60x 60 x 50 cm		Storage of gray water
6.	PVE pipe and Steel sewage	50mm and jali 2mm porse		Flow of gray water from chamber to chamber

Check List for W.R.S.

- ➤ 20cm.thick base concrete of 40mm metal in 1:3:6 ratio only in collection tank.
- > 10C.M.thick base concrete of 12-20mm metal in 1:2:4 ratio
- Brick masonry work in 1:4 cement mortar
- Cement plaster in 1:4 cement mortar in all side
- Thickness of wall will be of 10cm.
- Flow of grey water from one chamber to another chamber should be one down & one down
- Outlet should be at the base of each chamber for the cleaning of filter media.
- > Separate water supply should be for anal cleaning
- Chamber should be covered by bamboo net or other low cost cover can be used.
- > Steel sieves must be in outlet of bathroom.
- Construction time required for WRS system only one day.

Operation & maintenance at H. H. level systems

- Sponge filter should be clean in alternate day.
- Filter chamber should be flush weekly with the support of provided out let in each chamber.
- The whole filter material should be clean and replace once in a month. Cleaning work should be only by wearing hand gloves.
- Gray water collection tank should be clean weekly.
- Pathroom should not be use for urinal, cleaning wounds, vomiting & menses period and also avoid to clean bathroom with phenyl.

Benefits

- Available of Grey water for flushing of toilet is making sustainability for sanitation.
- Villagers are saving 100 to 150 liter water per day by each beneficiaries.
- Saving of drinking water by reuse of grey water.
- Grey water is using for irrigation of horticulture & other plants.
- Wastage water is not stagnant near by houses. So, system is helping to reducing diseases like Dengue, Chicken guniya, viral fever, etc.

