

INNOVATIVE METHOD OF WATER SUPPLY BY USING EXISTING RESOURCES & CONSERVATION

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Abstract:- *24 x 7 water supply is possible by using existing resources.* The outlet supply of water from the water scare bore wells will be adjusted as per the inlet flow in the bore wells by changing the capacity of pumps as per the inlet supply, but every time it is not possible to change the capacity of pump or replacing the pumps. The existing pumps can also be used with one speed regulator to adjust the capacity of pump/speed. Thereby the continuity of flow can be maintained. Thereby the main principle of getting maximum water from the water scare bore can be achieved i. e. $Q_{outlet} \leq Q_{inlet}$. The small supply of water in the *water scare bore wells* can be used effectively. All the bore wells which are not in use because of their small supply of water will also start to function as per their inlet capacities of discharge. This concept of using speed regulators to submersible pumps is a new innovation and because of this we can make use of existing resources for effective water supply across the globe. *This innovation really serves the globe.*

The simple and effective method of ground water recharge to improve the ground water table is to take the small depth of bore wells say 50 feet in the bed of the rivers, small streams, gullies at different sections and completely filled it by filter material like pebbles and sand. Because of *this method of recharge the ground water level will come up at faster rate as it directly punctures the aquifers and ample quantity of water which is going waste in the rivers and streams will be effectively used for ground water recharge and it is cost effective.*

The effective method to convert the non irrigated land into irrigated land by using existing *water scare bore wells*/ tube wells is also possible . Also the new and innovative method to convert the non irrigated land into irrigated land by using new bore wells having *more in numbers and smaller depths* instead of deeper bore wells will be preferred.

Key words: 24 x7 water supply, bore wells, speed regulator, existing resources, irrigated land, non irrigated land



LIST OF PROCESS INNOVATION / BEST PRACTICES

All Sanitation related Water related

S. No.	Title	Short Description	Detail of Best Practice	Uploaded By
1	24 X 7 WATER SUPPLY BY USING EXISTING RESOURCES (Category : Water related)	24 X 7 WATER SUPPLY BY USING EXISTING RESOURCES IS POSSIBLE BY USING ONE SPEED REGULATOR TO THE SUBMERSIBLE PUMPS. IT WORKS FOR ALL THE SEASONS THOUGH THE INLET SUPPLY OF THE WATER IN THE BORE WELLS IS VERY SMALL DUE TO SUMMER OR ANY OTHER REASON. DUE THIS ALL BORE WELLS WILL START TO FUNCTION.	<p>Uri --</p> <p>Document Download</p> <p>Presentation --</p> <p>MP3 --</p> <p>Video --</p>	<p>Name : Sidramappa shivashankar dharane</p> <p>Mobile : 9890283390</p> <p>Email : dr.dr.sidrama ppa@gmail.com</p> <p>Designation : --</p>

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INTRODUCTION:

A] 24 X 7 WATER SUPPLY BY USING WATER SCARE BORE WELLS:

The whole world is facing the problems of effective water supply for various purposes. The reason may be summer season and drought, etc. In rural and urban area there are so many water scare tube wells (bore wells) which are not in use because of their small inlet supply of water., if we adjust the pipe diameter , capacity of pump and introduced one regulatory valve at outlet, we can adjust the outlet discharge from the bore well which is less than or equal to the inlet discharge i. e. as per supply of water in the tube wells (bore wells). It leads maintain the continuity of flow and gets 24 X 7 water supply. Even it is effective in drought. Also it is more effective for irrigation just by constructing small water tanks or by changing methods of irrigation like sprinkler or drip. By using this small principle of maintaining the continuity of flow by adjusting outlet discharge less than or equal to inlet discharge. We can make use of existing water scare bore wells (tube wells) which are not in use because of their less supply of water and saves lot of money of nation and can serve nation more effectively.

The new innovative approach to adjust the capacity of pump as per the inlet discharge to maintain the continuity of flow plays very important role for effective water supply and economy. As every time it is not possible to change the capacity

of pump as per inlet discharge. In this case the capacity of the pump should be designed for maximum discharge and *one speed regulator* can be used to adjust the capacity of the pump/speed of pump, so that one can make use of maximum as well as minimum inlet discharge as per the availability of water which depends on several factors. In this way every water scare bore well will start to function as per its inlet capacity. This approach of designing new pump along with speed regulator to adjust the capacity of pump/speed leads to effective water supply and overall economy.

In short there are four stages to get maximum quantity of water from any water scare bore wells are as below

1. Design the capacity of pump as per inlet discharge.
2. Design the pipe diameter.
3. Use the regulatory valve at outlet.
4. Use one *speed regulator* to adjust the outlet discharge as per inlet discharge

B] SIMPLE AND EFFECTIVE METHOD OF GROUND WATER RECHARGE:

The country & globe is facing the great problem of water supply for various purposes. Day by day because of less rainfall, summer and drought the ground water level is going at deeper level. So it is necessary to bring the water table up. There are number of methods which bring up the water table up. The most effective and innovative method is to take the small depth bore well across the rivers, small streams , etc. at different sections and completely fill it by filter material like pebbles and sand . As the ample quantity of water in the rivers and streams etc. is going to waste will be very effectively used for ground water recharge. Because of this method of recharge the ground water level will come up at faster rate as it punctures the aquifers directly and percolated water directly connects the underground streams as well as it is cost effective. Also it reduces the ricks of floods considerably.

In short there are three stages to bring up the water level up are as below

1. Take the small depth bore wells across or sides of rivers, streams, etc. of approximately 50 feet.
2. Fill the drilled bore wells completely by filter material like pebbles and sand.
3. Pebbles are filled at lower level and at top the sand will be filled.

C] EFFECTIVE METHOD TO CONVERT NON- IRRIGATED LAND INTO IRRIGATED LAND:

The first aspect to convert the non irrigated land in to irrigated land even by using existing water scare bore wells is to make use of water scare bore wells. Water scare bore wells can be more effectively used to get the maximum quantity of water just by using one speed regulator to the pumps which maintains the continuity of flow and stops the fluctuations of water flow from the water scare bore wells. The said water may further be collected in storage tanks or it can also be used for various purposes, even for irrigation by using advance methods of irrigation say sprinkler, drip, sub surface irrigation, etc.

The second aspect is that in case of new bore wells; take more number of smaller depths of bore wells instead of deeper bore well. If we compare the total quantity of water collected from the number of smaller depths bore wells with the deeper bore well and its costs, the total quantity of water collected from the number of smaller depths bore wells will be definitely more as compared to deeper depth of bore well as it covers the larger specific catchment area. Also it increases the chances of getting more water in the bore wells. Also it is cost effective. The number of smaller depths bore wells requires lesser capacity of pumps and thereby it reduces the total cost of electricity bills. As well it brings the water table up and reduces the total cost of water conservation.

The method explained as above leads to convert the non irrigated land into irrigated land effectively and saves billions of Rs of nation for major projects and also improves the livelihood of citizens.

SALIENT FEATURES AND CONCLUSIONS

A] 24 X 7 WATER SUPPLY BY USING EXISTING RESOURCES

1. Effective 24 x 7 water supply
2. Water can be made available in any corner of the country & globe with minimum investment.
3. Existing water scare bore wells which are not in use can be used effectively.
4. Deeper bore wells can be automatically avoided and thereby water table can be maintained at higher level.
5. Saves billions of Rs of the nation for major projects.
6. Overall economy and development can be achieved.

B] SIMPLE AND EFFECTIVE METHOD OF GROUND WATER RECHARGE

1. Simple and effective method of ground water recharge.
2. Cost effective.
3. Covers larger area.
4. More effective than the roof rain water harvesting as ample quantity of water which is available in rivers and streams can be more effectively used.
5. Ground water quality will improve.

6. It reduces the risks of floods considerably.
7. It works across the globe.
8. Also it reduces the risk of flood considerably.

C] EFFECTIVE METHOD TO CONVERT NON IRRIGATED LAND INTO IRRIGATED LAND

1. Simple and cost effective.
2. Even water scarce bore wells can be used more effectively by using one speed regulator to adjust the capacity of pump to maintain the continuity of flow and thereby get maximum quantity of water to convert non irrigated land in to irrigated land.
3. The new approach of going for new bore wells is to take more number of smaller depths instead of deeper bore well, which reduces the total cost of bore wells, etc.
4. In case of new bore wells, the new bore wells of smaller depths and more in number covers larger specific catchment area hence the chances of getting more water in the bore wells will also increase. In case of small supply of water use one speed regulator to the pumps to main the continuity of flow, which ultimately leads to collect maximum quantity of water.
5. The method of taking new bore wells of more in numbers of smaller depths brings the water table up.
6. In case of new bore wells, is to take more number of smaller depths bore wells instead of deeper bore well, which further reduces the total cost of water conservation.
7. The method of going for more number of smaller depth bore wells reduces the electricity bills as smaller depth bore wells works more effectively even on single phase power supply.
8. Even the barren land can also be used for plantation or cultivation.

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