



Technical Sanction Letter

Irrigation & Water Resources Department, Haryana

To

The Superintending Engineer,
JLN CIRCLE, NARNAUL

Memo No. : HEWP/FY2022-23/T-7133

Dated : 11/11/2022

Subject :- Injection wells, Estimate for Recharging ground watertable from surplus water during rainy season by installing injection wells or suitable structure at 25 different locations in Ateli Block Distt Mohindergarh (Under Atal Bhujal Yojana).

Amount : 65.98 (in Lakh)

Above cited work having an estimate amount of Rs. 65.98 Lakhs has been sanctioned technically subject to following conditions:-

Conditions :-

1. The Estimate prepared by the field officers have been technically scrutinized yet due care with application of mind be taken, while executing the work strictly as per the site conditions.
2. All drawings & design should be approved from competent authority.
3. All the material used in injection/bore well should be as per IS: 2800 Part-I

BIJENDER SINGH NARA
Chief Engineer

No. 7/90-91/2-W

Dated: 14-12/2022

Copy of above is forwarded to SDO W.S. NO. 1,>NNL & DAO of this Division for information and necessary action please.

Hiti-2
Executive Engineer
M/Garh Canal W/S Division,
Narnaul.

r - Sufficient efforts have been made to do the calculations accurately. But, calculations are required to be checked at each
ling officials will be held responsible for checking the estimates in all respect as per prevalent practice.

Detailed Estimate
Irrigation & Water Resources Department, Haryana



ame:

Division : Mahendragarh WS Divn Narnaul[M/Garh
W.S.Divn. Narnaul]

Circle :JLN W.S. Circle Narnaul[JLN CIRCLE,
NARNAUL]

Work:

Injection wells, Estimate for Recharging ground
watertable from surplus water during rainy season by
installing injection wells or suitable structure at 25
different locations in Ateli Block Distt Mohindergarh
(Under Atal Bhujal Yojana).

p. Estimate Cost:

Rs. 79.11 Lakhs

al Approval Cost:

Rs. 65.98 Lakhs

Item Type	Item Cost	Total Charges	Total Cost
HSR Items	₹38,44,946	₹38,449	₹38,83,395
NS Items	₹26,87,500	₹26,875	₹27,14,375
Total	₹65,32,446	₹65,324	₹65,97,770

e Prepared By:

Name: NITIN BHARGAVA

Designation: Executive Engineer

which work is likely
mpleted:

365 Days

1 of Estimate

Village:BIHALI,Village:KANTI,Village:KHERI,Village:NA
WEDI

oly Constituency:

ATELI

MAHENDRAGARH

ategory:

Other

Sufficient efforts have been made to make the online calculations accurately. But, calculations are required to be cross checked
t each level. Dealing officials will be responsible for checking the accuracy of all Calculation in the estimate in all respect.

ineering Works Portal(HEWP)

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Inclosure,
a. pl.
Copy of
Sanctioned
estimate

No. 321-22 14/12/22
12w sb. 27/01/2016

M/Garh Canal W/S Division Narnaul

Detailed estimate for Recharging ground water zone from surplus water during rainy season by installing injection wells or suitable structure at 25 different locations in Ateli Block Distt Mohindergarh

REPORT

This detailed estimate amounting to Rs. 6597770/- only has been framed to cover the probable cost of above said work.

Necessity:-

It is submitted that the water crises increasing day by day in this drought prone area of District Mohindergarh and declared as dark zone. Due to heavy withdrawal of ground water for irrigation as well as domestic purposes, the ground water table declined at an decreasing rate of 0.49 mtr/year to 1.41mtr/year. To arrest the declining water level and to give sustainability to groundwater table construction of recharging wells have to be proposed at various sites. To ensure recharging of ground water table as well as to save the rainy water, recharging wells have to be constructed. Hence, the above subject cited estimate for constructing recharge wells in the location of Behali Sub Minor Tail, Behali village pond, Kanti village pond, Kheri village pond, Nawadi village ponds i.e. 25 No's various locations for collecting rainy water has been framed. in compliance of Administrative Approval which was accorded by Worthy Engineer-in-Chief-cum-Project Director, Atal Bhujal Yojana, I&WRD, Haryana Panchkula vide letter No. ABY/2122/37W/2617-21 dated 25.01.2022 amounting to Rs. 630.00 Lacs. for 12 No. works including this work (copy enclosed) for improving ground water position for implementing the Atal Bhujal Yojana Launched by Govt. of India. Accordingly, the estimate for this work was got sanctioned by Worthy CE/LCU, I&WRD Haryana, Panchkula vide his office letter 681/SLCU/2022 dated 10.02.2022 amounting to Rs. 7233904/- only which is also submitted vide E-Office No. 909362 for cancellation the same.

Provision:-

The design for constructing injection well has been received from the consultant and total depth has been proposed in 100 mtrs depth as per water table is 90m in this area. The quantities have been worked out as per design provided by the consultant. The average size of cement concrete pit has been taken 3.20 mtr. x 3.20 mtr. having depth 1.20 Mtr. and distance between two wells has been taken more than 300m. A filter pit has been proposed as per design provided by the consultant for filter media i.e. gravel, boulder & sand in the center of pit and drilling of bore well of size 450 mm dia having depth 100mtr. BGL. The depth of recharging well has been proposed the same as already approved and installed recharging well in bed of experimental channel/Hamidpur bund. Well casing of 200mm dia PVC pipe & screen pipe in center of bore well having length 88 mtr. and 12 mtr. respectively and gravel packing around the pipe in 450mm dia has been proposed in proposed 25 Nos. bore wells.

Aims & objectives:-

The main objectives of the scheme are as under:-

1. The replenish the de-saturated aquifer from the surplus canal water /rainy water which is available in the month from July to September.
2. To construct suitable recharge structure in low lying area for augmentory the ground water using surplus canal water/rainy water in the area.
3. The monitor the impact and rate of additional ground water and to evaluate the cost benefit of artificial recharge techniques.
4. The create awareness in public about importance artificial recharge to ground water resources particularly in drought prone areas where every drop of water is precious.

The rates provided in the estimate are as per HSR-2021. The contingency charges @1% have been provided for unseen expenses as usual & in practice.

An early sanction of the detailed estimate is requested please.

Handwritten signature
Executive Engineer,
M/Garh Canal W/S Division,
Narnaul. *(R)*

Detailed Estimate

Irrigation & Water Resources Department, Haryana



Name: Injection wells, Estimate for Recharging ground watertable from surplus water during rainy season by digging injection wells or suitable structure at 25 different locations in Ateli Block Distt Mohindergarh (Under Atal Biju Vojana).

ITEMS

Type	Category/Description / Item Size	Unit	Quantity	Unit Rate (Rs.)	Total Amount (Rs.)	
Sub-Component : Installation of 25 Nos. injection wells for recharging ground watertable including construction of C.C pit at 25 different locations in Ateli Block Distt Mohindergarh						
Sub-Component :- Installation of 25 Nos. injection wells for recharging ground watertable including construction of C.C pit at 25 different locations in Ateli Block Distt Mohindergarh						
	NS Item -Boring/drilling bore well of 450 mm i/d for casing/strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire and running charges of all equipment's, tools, plants and machineries required for the job	Per Metre	2500.000	1075.00	2687500	
	Description	No./Qty	Length	Breadth	Depth	Total Qty
	Drilling of 450mm i/d injection bore well = 25 No.	25.00	100.000	0.000	0.000	2500.000
						2500.000
	HSR Item 4.12.1 -Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead up to 50 m and lift up to 1.5 m, as directed by Engineer-in-charge. 1. All kinds of soil HSR Rate(Rs.) 87.00 Through Rate	cum	384.000	87.00	33408	
	Description	No./Qty	Length	Breadth	Depth	Total Qty
	Cement concrete Pit for recharging injection well	25.00	3.200	3.200	1.500	384.000
						384.000
	HSR Item 33.8.3 -Supplying, assembling, lowering and fixing in vertical position in bore well Unplasticised PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings and accessories etc. all complete, for all depths, as per direction of Engineer -in-charge. 3. 200 mm nominal size dia HSR Rate(Rs.) 1030.00 Through Rate	Metre	2200.000	1030.00	2266000	
	Description	No./Qty	Length	Breadth	Depth	Total Qty
	Lowering of 200mm i/d UPVC casing pipe in injection well (100 mtr.- 12 mtr.= 88 mtr each)	25.00	88.000	0.000	0.000	2200.000
						2200.000
	HSR Item 33.9.3 -Supplying, assembling, lowering and fixing in vertical position in bore well Unplasticised PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire and labour charges, fittings and accessories etc. all complete, for all depths, as per direction of Engineer-in-charge. 3. 200 mm nominal size dia HSR Rate(Rs.) 1097.00 Through Rate	Metre	300.000	1097.00	329100	
	Description	No./Qty	Length	Breadth	Depth	Total Qty
	Lowering 200mm i/d UPVC screen pipe in injection well = 12 Mtr. each.	25.00	12.000	0.000	0.000	300.000
						300.000

Sufficient efforts have been made to make the online calculations accurately. But, calculations are required to be cross checked at each level. Dealing officials will be responsible for checking the accuracy of all Calculation in the estimate in all respect.

Encl. 1a. pl.

Copy of
Submitted
Estimate

12/12/22
20/12/22

321-22

27/12/22

Detailed Estimate
Irrigation & Water Resources Department, Haryana



ITEMS						
Category/Description / Item Size	Unit	Quantity	Unit Rate (Rs.)	Total Amount (Rs.)		
HSR Item 33.12-Supplying, filling, spreading and levelling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads and lifts, all complete as per direction of Engineer-in-charge. HSR Rate(Rs.) 1164.00 Through Rate	cum	57.600	1164.00	67046		
Description	No./Qty	Length	Breadth	Depth	Total Qty	
Bottom layer of stone bolder in recharge pit	25.00	2.400	2.400	0.400	57.600	
					57.600	
HSR Item 33.13-Supplying, filling, spreading and levelling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads and lifts, all complete as per direction of Engineer-in-charge. HSR Rate(Rs.) 1164.00 Through Rate	cum	102.400	1164.00	119194		
Description	No./Qty	Length	Breadth	Depth	Total Qty	
Mid layer of Gravel in recharge pit	25.00	3.200	3.200	0.400	102.400	
					102.400	
HSR Item 33.14-Supplying, filling, spreading and levelling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads and lifts, all complete as per direction of Engineer-in-charge. HSR Rate(Rs.) 1164.00 Through Rate	cum	160.000	1164.00	186240		
Description	No./Qty	Length	Breadth	Depth	Total Qty	
Top layer of coarse sand in recharge pit	25.00	4.000	4.000	0.400	160.000	
					160.000	
HSR Item 33.15-Gravel packing in tube well construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading and sizes as per actual requirement, all complete as per direction of Engineer-in-charge. HSR Rate(Rs.) 1306.00 Through Rate	cum	295.000	1306.00	385270		
Description	No./Qty	Length	Breadth	Depth	Total Qty	
Volume of gravel packing in 450mm i/d injection well (area 0.159 Sqm)	25.00	1.000	0.159	100.000	397.500	
D/d Volume of gravel packing for 200mm i/d or 229mm outer dia in injection well (area 0.041 Sqm.)	25.00	1.000	0.041	100.000	-102.500	
					295.000	
HSR Item 33.16.3-Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for bore well of: 3. 200 mm dia HSR Rate(Rs.) 273.00 Through Rate	Each	25.000	273.00	6825		
Description	No./Qty	Length	Breadth	Depth	Total Qty	
For 25 Nos. injection well	25.00/1.000	0.000	0.000	0.000	25.000	
					25.000	

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Copy of
Submitted
Estimate.

No. 321-22

8/2/2023

14/12/22

12-w dt. 27/01/2023

Detailed Estimate

Irrigation & Water Resources Department, Haryana



सिंचित एवं जल संवर्धन विभाग
हरियाणा

ITEMS

Type	Category/Description / Item Size	Unit	Quantity	Unit Rate (Rs.)	Total Amount (Rs.)	
R	HSR Item 33.17.3 -Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tube well as per IS: 2800 (part I), including necessary bolts and nuts of required size complete. 3. 200 mm clamp HSR Rate(Rs.) 1521.00 Through Rate	Each	25.000	1521.00	38025	
	Description	No./Qty	Length	Breadth	Depth	Total Qty
	For 25 Nos. injection wells	25.00/1.000	0.000	0.000	0.000	25.000
						25.000
R	HSR Item 33.18.3 -Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tube well as per IS:2800 (part I). 3. 200 mm dia HSR Rate(Rs.) 290.00 Through Rate	Each	25.000	290.00	7250	
	Description	No./Qty	Length	Breadth	Depth	Total Qty
	For 25 Nos. injection wells	25.00/1.000	0.000	0.000	0.000	25.000
						25.000
	HSR Item 33.19 -Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by 'V' notch method or any other approved method, measuring static level and draw down etc. by step draw down method, collecting water samples and getting tested in approved laboratory, i/c disinfection of tube well, all complete, including hire and labour charges of air compressor, tools and accessories etc., all as per requirement and direction of Engineer-in-charge. HSR Rate(Rs.) 1153.00 Through Rate	Hours	250.000	1153.00	288250	
	Description	No./Qty	Length	Breadth	Depth	Total Qty
	Development of 25 Nos. injection well	25.00/10.000	0.000	0.000	0.000	250.000
						250.000
	HSR Item 6.1.4 -Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work below plinth level and up to Floor IV level: 4. 1:3:6 (1 Cement : 3 coarse sand (zone-III) : 6 graded stone aggregate 20 mm nominal size) HSR Rate(Rs.) 3260.00 Through Rate	cum	36.300	3260.00	118338	
	Description	No./Qty	Length	Breadth	Depth	Total Qty
	In bed of recharge Pit	25.00	2.000	2.000	0.075	7.500
	In side of recharge Pit (4 Side of 25 Nos. pit = 100 Nos.)	100.00	3.200	1.200	0.075	28.800
						36.300
	Sub-Component Total Amount				6532446	
	Component Total Amount				6532446	
	Grand Total				6532446	

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Income

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NAME: Injection wells, Estimate for Recharging ground watertable from surplus water during rainy season by installing injection wells or suitable structure at 25 different locations in Ateli Block Distt Mohindergarh (Under Atal Bhujal Yojana).

Final Work Cost Abstract			
Description	Items Amount (Rs)	Total Charges (Rs.)	Total Amount (Rs.)
Main-Component : Installation of 25 Nos. injection wells for recharging ground watertable including construction of C.C pit at 25 different locations in Ateli Block Distt Mohindergarh			
Sub-Component: Installation of 25 Nos. injection wells for recharging ground watertable including construction of C.C pit at 25 different locations in Ateli Block Distt Mohindergarh	65,32,446	65,324	65,97,770
Main Component Total	₹65,32,446	₹65,324	₹65,97,770
Grand Total	₹65,32,446	₹65,324	₹65,97,770

Executive Engineer
IRRIGATION Division
Mahendragarh WS Divn Narnaul[M/Garh
W.S.Divn. Narnaul]

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