

**SUBJECT : ADMINISTRATIVE APPROVAL TO THE PROPOSAL FOR AUGMENTATION OF PRODUCTION FROM JAISAMAND LAKE, FOR UWSS UDAIPUR, ESTT COST - RS 215 CR. (HON'BLE CHIEF MINISTER BUDGET ANNOUNCEMENT 2020-21).**

## **OFFICE NOTE**

### **BUDGET ANNOUNCEMENT 2020-21 :**

In the budget speech of Hon'ble Chief Minister in Assembly for year 2020-21, the proposals for augmentation of production from Jaisamand lake has been announced. The excerpts of speech are as under:

जयसमंद झील से उदयपुर शहर हेतु पानी की वर्तमान उपलब्धता को बढ़ाने के लिए पेयजल योजना पर 2.5 करोड़ रुपये का व्यय किया जायेगा। वर्ष 2020-21 में इस हेतु 30 करोड़ रुपये का प्रावधान किया जा रहा है। "

### **INTRODUCTION:**

The population of Udaipur town as per 2011 census- (including five peripheral villages) is 4.93 lacs. The present population of the town is estimated to be 5.89 lacs.

Total demand of the town (including domestic + bulk consumers viz. Railways. MES, Hindustan Zinc, RIICO, outer areas etc.) is 137 MLD. The alternate day water supply is being maintained in the town since 1998.

The present average water production from all the surface & ground water sources to the town is 99.3 MLD. The per capita supply is 109 LPCD (after considering; distribution losses-15%, institutional demand-10%, filtration losses-3% and bulk supply as 5.5 MLD).

### **PRESENT JAISAMAND – UDAIPUR PROJECT STATUS:**

Proposal to supply 22 MLD of water to Udaipur town from lake Jaisamand was sanctioned in year 1988. The work included providing laying and jointing of 600 mm dia, 6.0 mm thick and 55 km long MS pipe line from lake Jaisamand to Doodh Talai headworks (Udaipur) including construction of three nos. Pumping Stations including all MEI works, construction of intermediate RWRs of 2.5 ML capacity each. The scheme was commissioned in year 1995 on 15th August.

Presently raw water production is being done from Jaisamand water supply scheme to the tune of 21.5-22 MLD at Pumping Station No. 1 at Jaisamand lake.

## NECESSITY:

The present demand of the town is 137 MLD against which, total availability of water from all the sources is mere 114.5 MLD, Hence there is a shortfall of 22.5 MLD, say 23 MLD. A reservation of 525 mcf raw water in lake Jaisamand is available for PHED, for which annual payment is being made to WRD. After utilizing the full reservation, maximum 41 MLD of water can be lifted from the lake. Presently 21.5 to 22 MLD of raw water production is being done from Jaisamand water supply scheme, out of which 1.5 MLD of water is provided to en-route 10 nos. villages and about 20.5 to 21 MLD of water is being provided to UWSS Udaipur. The present production can be increased to 41 MLD as per available water reservation. Hence, it is proposed to augment the production from present 22 MLD to 41 MLD.

Presently two nos. submersible pump sets have been installed near the bank of lake inside lake Jaisamand without any intake structure, which causes difficulty in approach for maintenance. Hence it is necessary to construct an intake well at a deepest portion inside lake Jaisamand.

Similarly, existing 55 Km MS Pipe lines of 600 mm dia is in continuous use since commissioning for around 25 years and is corroded resulting in to maintenance burdens due to frequent leakages requiring shut downs of system. It has practically completed its useful life and needs replacement at the earliest. Looking to the present shortfall of demand and availability of reservation, it is proposed to replace existing 600 mm dia pipe by laying 900 mm dia pipe line along the existing route.

Installed Pumping Sets are also in continuous use and are proposed to be replaced by high capacity pumps as per the increased flow. All the MEI works will be accordingly done including up-gradation of Transformer capacities.

Existing Pump House buildings and RCC RWR structures are proposed to be repaired and renovated.

## ACTION PROPOSED:

Water supply from the Jaisamand scheme is average 21.5 to 22 MLD. To meet out the water shortfall of the town, production from Jaisamand is proposed to be augmented to 41 MLD as per water reservation available. The proposed distribution of water after commissioning of the scheme is as under:



SOURCE WISE SUPPLY EXISTING AND PROPOSED					
SN	Name of Source	Availability y 2021	Availability 2026	Present	Year 2026
1	Lake Pichola	41.90 MLD	41.90 MLD	26.80 MLD	41.10 MLD
2	Lake Fateh Sagar	16.40 MLD	16.40 MLD	15.00 MLD	16.50 MLD
3	Lake Mansiwakal	25.80 MLD	25.80 MLD	27.00 MLD	26.00 MLD
4	Lake Jaisamand	24.40 MLD	41.00 MLD	20.50 MLD	41.00 MLD
5	U/G Sources	6.00 MLD	10.00 MLD	10.00 MLD	9.80 MLD
	<b>Total</b>	<b>114.50 MLD</b>	<b>135.10 MLD</b>	<b>99.30 MLD</b>	<b>134.40 MLD</b>
	<b>Service Level</b>			<b>109 MLD</b>	<b>117 MLD</b>

## PROVISIONS TAKEN:

Following provisions have been taken in the proposal:

- Provision for construction of intake Well with pumping machinery, panels at Jaisamand Lake along with EMI works under UWSS Udaipur.
- Providing, laying and jointing 900 mm dia 19000 m long DI K-7 rising mains from Jaisamand PS1 to Daya PS2.
- Providing and installation of pump sets, panels and allied electrical works at Pumping Station 2 headworks.
- Providing, laying and jointing 900 mm dia 12000 m long MS rising mains from Daya PS2 to Jaisamand PS3, Kewda.
- Providing and installation of pump sets, panels and allied electrical works at Pumping Station 3 headworks.
- Providing, laying and jointing 900 mm dia 5000 m long MS rising mains from Jaisamand PS3, Kewda to Jaisamand PS4, Kewda Ki Naal.
- Providing and installation of pump sets, panels and allied electrical works at Pumping Station 4 headworks.
- Providing, laying and jointing 400 mm to 900 mm dia 18150 m long DI K-7/ MS rising mains from Jaisamand PS4, Kewda Ki Naal to Teetardi WTP and Doodh Talai WTP
- Design, construction, execution, testing and commissioning of Rapid Gravity filter Treatment Plant of 13 MLD capacity at Ambaghati.
- Providing, laying and jointing 350 to 450 mm dia 12300 m long DI K-7 gravity feeder mains from proposed WTP at Ambaghati to existing headworks at Pratap Nagar
- Provision for civil & electrical works at PS-1 2 3 and 4.
- Provision for up-gradation of GSS at PS-1, S-2, PS-3 and PS-4 at Jaisamand scheme.

UWSS Udaipur.

- Provision for land acquisition for Treatment Plant at Ambghati
- Provision for forest clearance.
- Provision for direct 33 kv HT feeders between Jaisamand PS1 to PS2.
- Provision for SCADA.
- Provision for Survey, vehicle and other related works
- Provision for Railway crossing near Odn.
- Provision for operation and maintenance of the system for 3 years after defect liability period of one year Project with water treatment plant.

#### ESTIMATED COST:

The proposals have been framed on the basis of PWD BSR Circle Udaipur- 2019, BSR for pipe line works, RWSSMB, PHED Jaipur 2019, RUIDP Jaipur SOR 2017, PHED BSR 2012 amended up to date, AVVNL SOR 2019, CE Special Projects BSR 2013.

Rates for other material are based on present market rates.


The estimated cost of the proposal works out to Rs. 215.00 Crores.

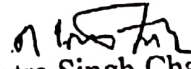
#### IMPLEMENTATION SCHEDULE:


The total cost of the scheme is proposed to be posed to 4215 State Plan Urban fund. The scheme shall be executed and maintained by PHED.

FY	2020-21	2021-22	2022-23	2023-24	O&M for 3 years	Total (Rs. Crores)
Flow of Fund (Cr)	30.00	50.00	92.73	35.00	7.27	215.00

It is requested to accord Administrative approval to the Proposal for augmentation of existing Jaisamand Udaipur pipe line project of Rs. 215.00 Crores as announced in the budget speech of Hon'ble Chief Minister in Assembly for year 2020-21.

  
(Sanjay Kumar Srivastava)  
EE, PHED, City Dn.I, Udaipur

  
(Nakshatra Singh Charan)  
SE PHED Circle Udaipur,

  
(Sanjay Lal Salvi) 17/03/2020  
ACE PHED Region Udaipur

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(सलिल जोशी)  
सहायक अभियन्ता  
जन स्वास्थ्य अभियांत्रिक विभाग  
नविमोजना सचयण्ड, उदयपुर