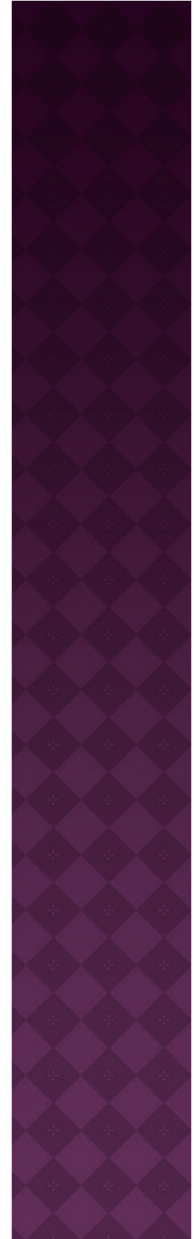


## 4. MULTAN WASA

### 4.1 CURRENT WATER SUPPLY CONDITIONS

- Multan WASA is improving water supply and sewerage system by using Provincial budget, Prime Minister's fund and ADB loan. MWASA has adequate development funds.
- Multan is located in the most rich ground water resources area. However, the billing efficiency is as low as 40%, so water supply service time is limited to 6 hours due to not being affordable to pay power supply charge.
- MWASA is required to challenge more effective billing and collection system.
- The estimated NRW rate is 40% and there is no leak detection equipment.
- Two years ago, 8,000 sets of customer meter have been purchased by ADB project and still stored in warehouse. No meter is installed at present.



## Multan WASA



Elevated Tank in the city



Stocked customer meters (digital type), 8,000 Nos supplied by ADB

Chemical Analysis Report for Drinking Water Sample

City: Multan (Muzaffargarh)

Condition: 10/10/10 Depth: 10m

Nature of Source: 10/10/10 Date of Collection: 10/10/10

Collected By: 10/10/10 Date of Analysis: 10/10/10

Sample No: 10/10/10 Others: 10/10/10

Sr.No.	Parameters	WHO Desirable	WHO Max.	Results mg/L
1	Temperature, C			22.5
2	pH	7.0 - 8.5	6.5-9.2	8.2
3	Odor	Unobjectionable	Unobjectionable	Unobjectionable
4	Color	5 Units	20 Units	Unobjectionable
5	Taste	Unobjectionable	Unobjectionable	Unobjectionable
6	Turbidity NTU	5 Units	20 Units	Unobjectionable
7	Total Dissolved Solids	500.00	1500.00	Unobjectionable
8	Calcium	75.00	200.00	11.50
9	Magnesium	50.00	150.00	2.20
10	Hardness as CaCO <sub>3</sub>	100.00	500.00	13.70
11	Alkalinity as CaCO <sub>3</sub>	NGVS		5.50
12	Chloride	200.00		7.50
13	Conductivity Us/cm	NGVS	600.00	2.50
14				2.80

Remarks: Found to be 10/10/10 for drinking purpose

Water quality test data in own laboratory



Aged billing computer system (MS Dos)

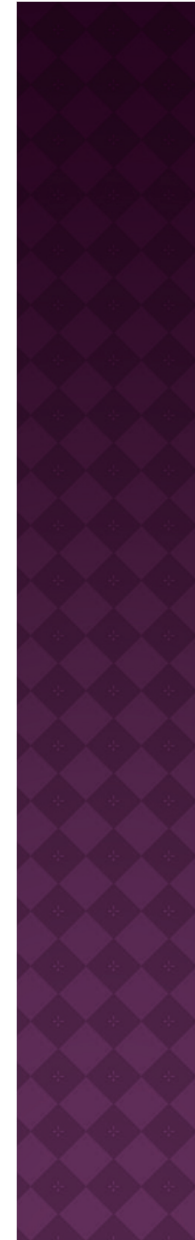
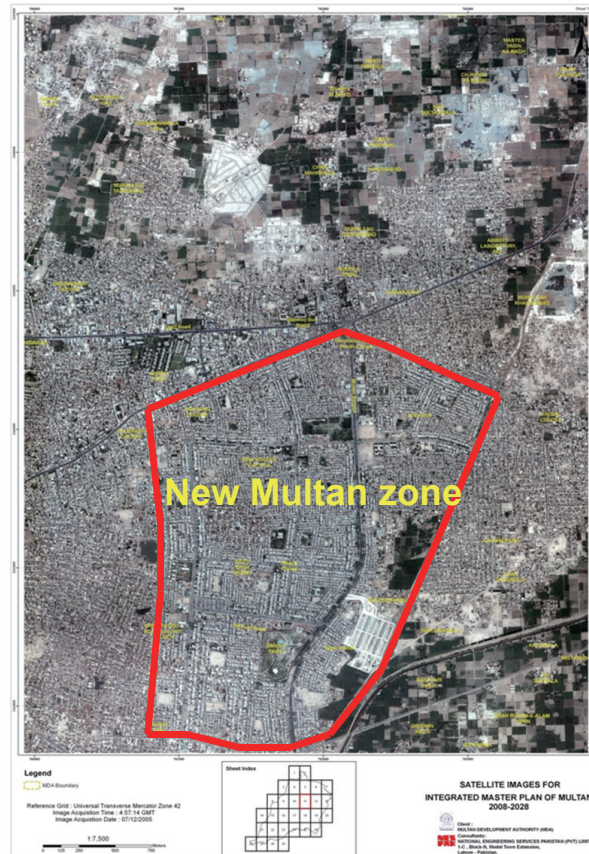
## 4.2. PROPOSED PROJECTS FROM MWASA

Sr. No	Name / Description of Projects	Estimated Cost (Rs. In Millions)	Current Approval Status	Estimated Implementation Period (months)	Estimated Population to be Served (Millions)	Brief scope of work
1	Water supply Scheme for Northern Zone	890	Revised approval awaited	24 months	0.20	Tube wells= 20 Nos Distribution lines = 325 Km
2	Water Supply Scheme for Southern zone Multan	710	-do-	24 months	0.17	Tube wells= 10 Nos Distribution lines = 309 Km
3	Improvement of water supply system for new Multan zone	190	In planning phase	24 months	0.07	i) Bulk meters = 12 Nos ii) Generator sets of 250 KVA = 5 Nos iii) Customer metes = 10,000 Nos iv) Service connection pipes=10,000 places v) Upgrading of billing computer system = 1 No
4	Improvement of water supply system for Sameej Abad zone	140	In planning phase	24 months	0.06	i) New tube wells = 2 Nos ii) Bulk meters = 3 Nos iii) Generator sets of 250 KVA = 2 Nos iv) OH reservoir with 0.15 MG = 1 No v) Customer metes installation = 8,000 Nos (In storage supplied by ADB) vi) Service connection pipes= 8,000 places vii) Upgrading of billing computer system = 1 No

**Note:**

Technology transfer of the above No. 3 and No.4 for establishing District Metering Area (DMA) will be covered by Punjab WASA Academy in collaboration with JICA.

# LOCATION MAP OF PLANNED DISTRICT METERING AREA



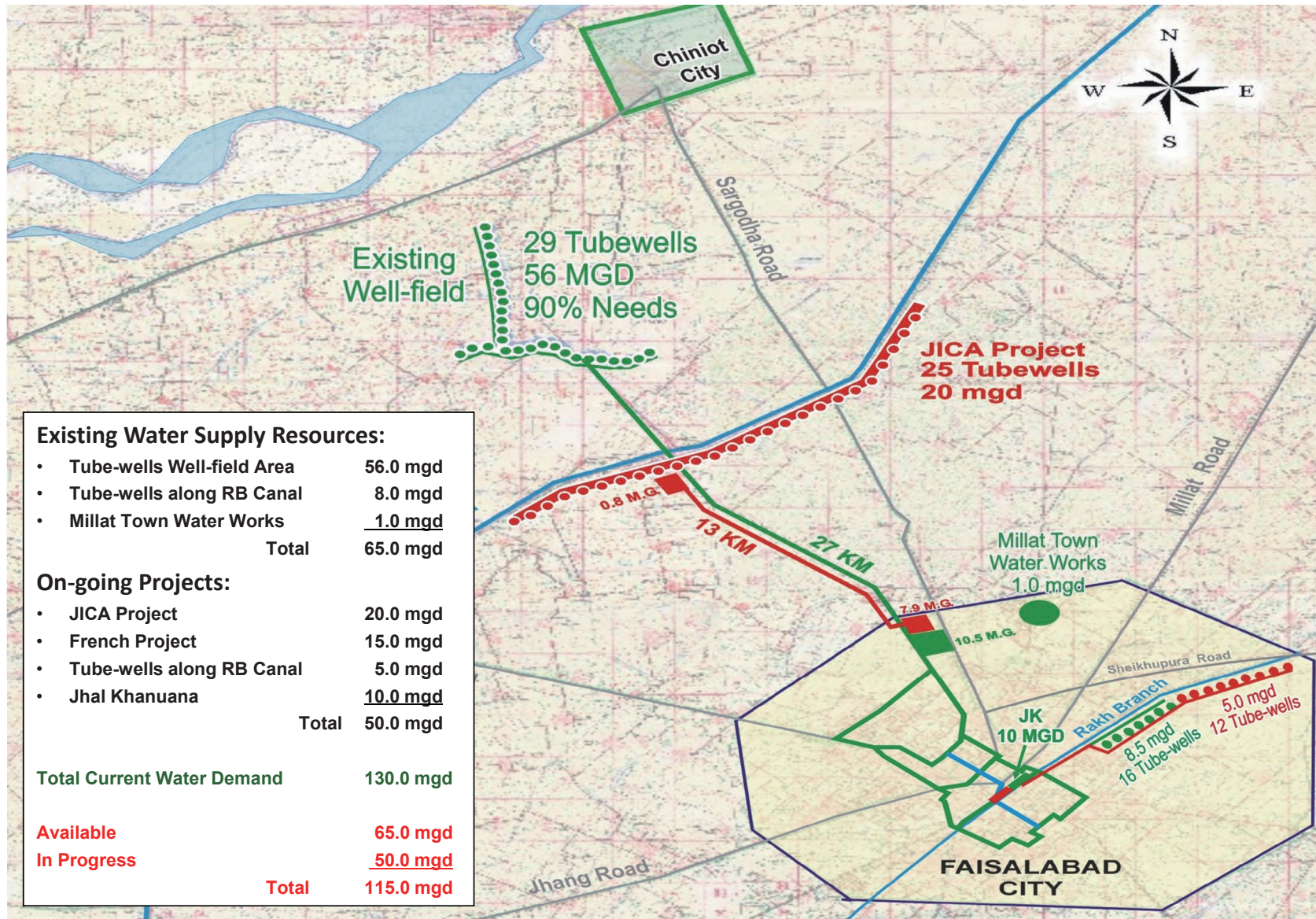
## 5. FAISALABAD WASA

### 5.1 CURRENT WATER SUPPLY CONDITIONS

- French soft-loan project (Rs. 5.3 billion) for extension of water resources of Faisalabad City is on-going and it will be completed in 2015. Outline of the project is as follows:
  - 1) New 10 MGD Jhal Khanuana water treatment plant
  - 2) New Arterial main (dia. 1200mm), L=6.5km
  - 3) 10 Nos of Tube well (5 MGD)
  - 4) 51 Nos of bulk flow meters and 20,000 Nos of customer meters
  - 5) Design of network zoning and GIS system
- JICA grant aid project for increasing water supply capacity by construction of 25 Nos tube wells (20 MGD), 13km transmission pipeline and reservoir with distribution pumps are newly completed.
- In Faisalabad, future water demand is very high, 170 MGD in 2017. The existing water supply capacity is 115 MGD in 2012, so development of new water source is urgently needed. While, replacement of aged pumping machinery in the existing water source installed in 1991-1992 is also urgently needed.



# Water Supply Sources: Current and Proposed



## Faisalabad WASA



**Aged distribution pump installed in 1991 in Terminal Reservoir**



**Newly completed distribution pumps in Terminal Reservoir by JICA grant aid**



**Existing slow sand filtration at Jhal Khanuana WTP**

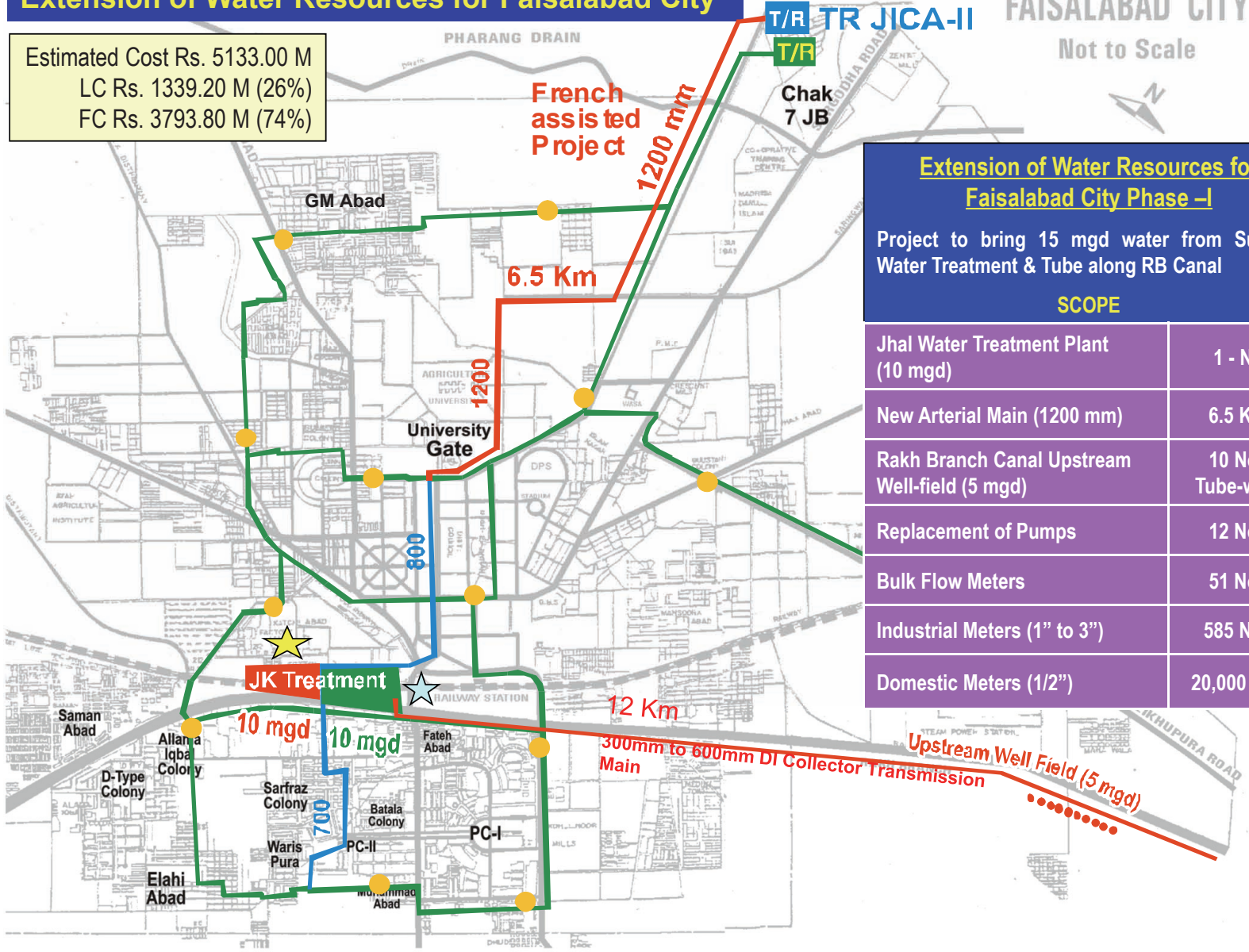


**Malfunctioning elevated tank in the city**



## Extension of Water Resources for Faisalabad City

Estimated Cost Rs. 5133.00 M  
 LC Rs. 1339.20 M (26%)  
 FC Rs. 3793.80 M (74%)



**FAISALABAD CITY**  
 Not to Scale

### Extension of Water Resources for Faisalabad City Phase -I

Project to bring 15 mgd water from Surface Water Treatment & Tube along RB Canal

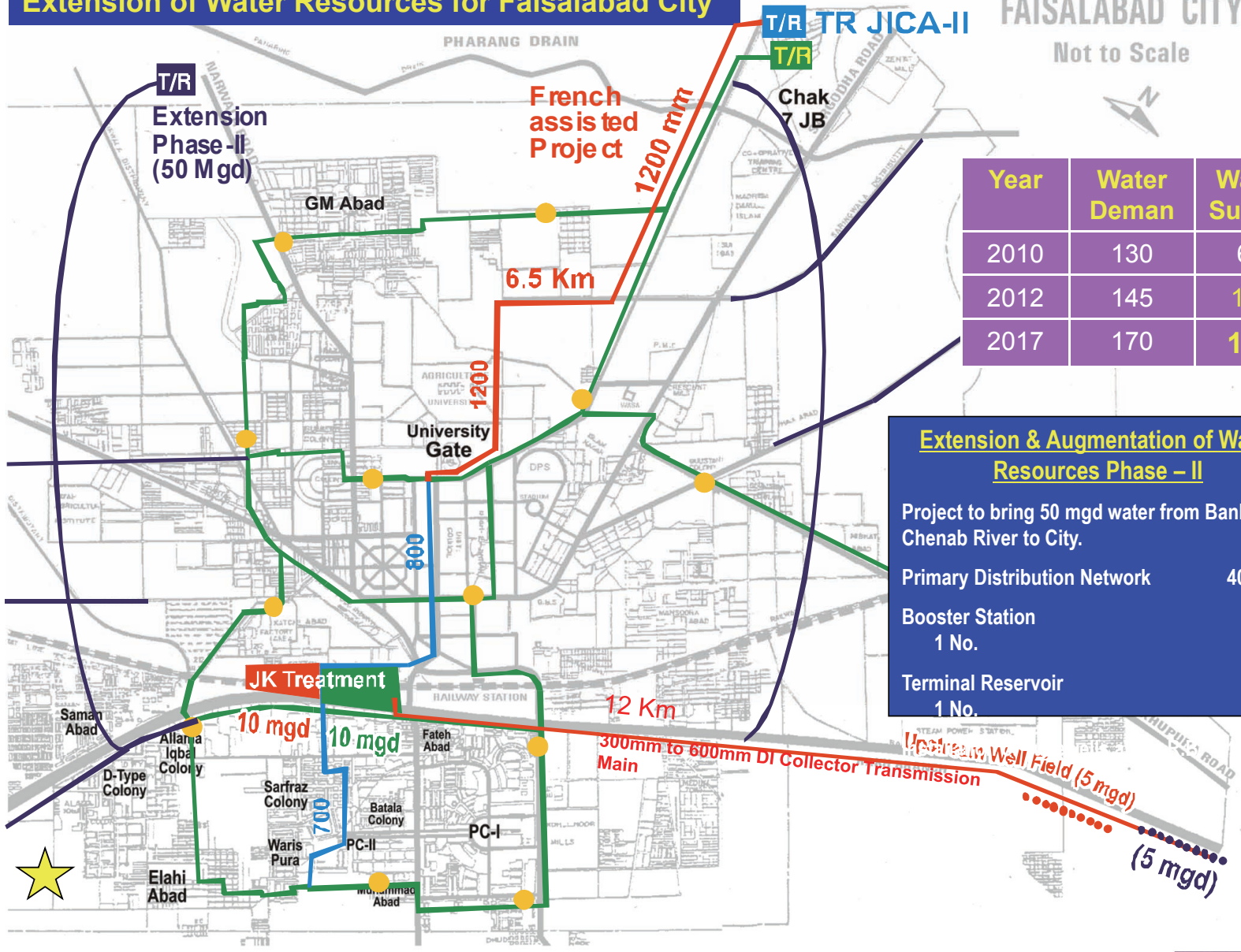
#### SCOPE

Jhal Water Treatment Plant (10 mgd)	1 - No.
New Arterial Main (1200 mm)	6.5 Km.
Rakh Branch Canal Upstream Well-field (5 mgd)	10 Nos. Tube-wells
Replacement of Pumps	12 Nos.
Bulk Flow Meters	51 Nos.
Industrial Meters (1" to 3")	585 Nos.
Domestic Meters (1/2")	20,000 Nos.



# Extension of Water Resources for Faisalabad City

**FAISALABAD CITY**  
Not to Scale



Year	Water Demand	Water Supply
2010	130	65
2012	145	115
2017	170	<b>170</b>

**Extension & Augmentation of Water Resources Phase – II**

Project to bring 50 mgd water from Banks of Chenab River to City.

Primary Distribution Network 40 km

Booster Station 1 No.

Terminal Reservoir 1 No.