

# NC-10/A Bhachau Booster

A 282 MLD Raw Water Pumping Station, GWIL, Kutch, Gujarat.

## The Geographic Definition & Situation :

Kutch, a semi-arid region located in the western part of Gujarat. The people of Dist. Bhuj have been able to survive in this drought prone area only thanks to a very elaborate system of water management engineered 450 years ago. This ancient system has been functioning till 1968. After this date, the development of bore wells and the growing urbanization of the city, totally disintegrated it.

Bhuj is located on a "porous" sandstone which acts like a "sponge". The annual average rainfall in Bhuj is around 330 mm per year with a variance of 65% which is a big variation. It means that there is a lot of rain some years and no or little rain other years. Storing the water is then essential!

## Bhachau, kutch :

Keeping in view the summer season, proactive and time bound steps have been taken by Gujarat Water Supply & Sewerage Board & Gujarat Water Infrastructure Limited. Proven technology ensured that Aqua was once again chosen to supply not only large-scale raw water pump sets, but to build the whole Pumping Station.

*"Supply, Installation, testing and commissioning of submerged centrifugal pump and allied equipments and construction of sump and panel room with 10 years of comprehensive O&M at Bhachau, Dist. Bhuj, with the total time of performance of the contract shall be 3 months from the date of acceptance i.e. 30-12-2014"*

Under the Rural Water Supply Programme, the Government of Gujarat has taken up the implementation of Sardar Sarovar Canal based drinking water supply project with **Gujarat Water Supply & Sewerage Board & Gujarat Water Infrastructure Limited** as the implementing agencies. Gujarat water infrastructure limited lays bulk water pipe lines to provide bulk quantity of water from Narmada Canal off-take points to pre determined water scarce areas. Water is fed up to village level by transmitting water from bulk water transmission lines by the GWSSB & GWIL.



• SubCF pump sets installed in Suction Trench even as the Civil works are ongoing.



• Pumping Machineries



• Panel Room



## Pump sets Data

- 170 MLD : 8+4 Nos, Horizontal SubCF pump sets of 300kW each having 924m<sup>3</sup>/hr and 80m Head.
- 85 MLD : 4+2 Nos, Horizontal SubCF pump sets of 300kW each having 924m<sup>3</sup>/hr and 80m Head.
- 27MLD : 2+1 Nos, Horizontal SubCF pump sets of 82kW each having 587m<sup>3</sup>/hr and 37m Head.

## Project Data

- Customer : GWIL  
(Gujarat Water Infrastructure Ltd.)
- End Customer : GWIL  
(Gujarat Water Infrastructure Ltd.)

## Watch more on

<https://youtu.be/lhy6UgOTewE>

## The Situation

- The lifeline of kutch is totally dependent on Khirai pumping station which was 15 years old & failure of which could lead to devastating results. Thus quick and appropriate decision was taken to replace the old pumping machinery with new one. Installation and commissioning of the new pumping machinery has not only improved the reliability of the system but has also enhanced the water pumping capacity from 220MLD to 260MLD.

## The Outcome



[Inauguration of this project by Hounourable Chief Minister Smt. Anandiben Patel.]

A very first in the history of Gujarat, supply of drinking water to 5589 villages and 116 cities under the Swarnim Grid Water Supply Project, Govt of Gujarat.

With increasing the Pumping machineries by 7% at Khirai Pumping Station resulting rise of 18% of flow at Bhachau. By Established a new Booster Pumping station at comparable lower height then existing PS, it is possible to starved extra 40MLD water to varshamedi laying 900mm parallel pipeline to existing pipeline up to 35km.

## Aqua's Solution

The NC-10 A Bhachau booster PS is to starved water from Bhachau (Samkhiyali to Bhachau) to Varshamedi & gurukrupa head works. Within the record brake time frame of just **90 days**, **Aqua bangs again with the 12ML RWR, 282 MLD Pumping station** with pumping machineries and **66kW 6MVA Substation** - Can Proudly say "**The Landmark Project by Aqua.**"

The proud moment and a valuable feather adds to the cap of Aqua when -The Chief Guest, Chief Minister of Gujarat, honourable Anandiben Patel comes to open this project on 18th April 2015.

