





Project's Objective

The objective of the project is to provide water to the following areas with total of 8.4m3/sec at the avergage rate of 3.5 m3/sec for irrigation water and 4.9m3/sec for domestic water. Portion of water resources is taken up from dam reservoirs in the upstream of Tone River at average rate of 6.6m3/sec and two other dam reservors of Togane and Nagara dams at the average rate of 1.8m3/sec, which is managed by our offfice.

Irrigation Water

Water is discharged to Chiba Coastal Industrial Region and its neigbouring areas at the average water volume of 3.5m 3/sec.

Supplied Areas of Domestic Water

Sosa City, Yokoshibahikari Town, Togane City, Sanmushi City, Kujukuri Town, Oamishirasato Town, Mobara City, Shirako Town, Chosei Village, Ichinomiya Town, Mutsuzana Town, Chonan Town, Nagara Town, Katsuura City, Otaki Town, Isumi City, Onjuku Town, Tateyama City, Kamogawa City, Minabiboso City and Kyonan Town

To 21 cities, towns and villages: 2.64m $_{\rm 3/sec}$

To Chiba City :0.411m^{3/sec}

For Securing Stable Water Supply to Boso Peninsula

The Boso Conveyance Canal Operation and Maintenance Branch Office operates and manages water facilities of pumping stations, canals and dams to collect newly developed water at dam reservoirs in the upstream of Tone River and convey the intake water to the areas in demand of water such as Kujukuri coastal area, Nanboso area and Nanbo Coastal Industrial Region. For securing stable water supply to those areas, the office monitors intake volume of water and water storage volume of dam reservoir so that it operates each facility in the most effective way.

The active reservoir capacity of Nagara dam reservoir and Togane dam reservoir is 9.6 millionm3 and 2.3 million m3 respectively.



The type of both Nagara and Togane dam is earth fill dam. For 52m-hig Nagara Dam is one of the highest dams in Japan.

Nagara Dam

Based on the needs of each user for domestic and industiral water, its operation started in 1977 and in 1986 respectively. The former is supplied to the Water Supply Authority in Kujukuri area and the latter is to Chiba Prefectural Governnment. In 1995, domestice water started to supply water to the Water Supply Authority in Minabi Boso Area. As of March of 2005, approximately 1.68 billion tons of water had been provided.

Incorporated Administrative Agency Japan Water Agency

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This Tonegawa Ryoso Gate is a start point of Boso Conveyance Canal. Water from Tone River is taken up at this gate and conveyed the water to No.1 Ryoso Pumping Station.

Tonegawa Ryoso Gate

No.1 Ryoso Pumping Station

Northern Main Canal

Water taken up from Tone River by a pump installed at No. 1 Ryoso Pumping Station is discharged at the maximum volume of 17.47m3/sec. The model of installed pump is Double Suction Horizontal Shaft Vokute Pump. At this pumping station 5 pumps with 1 200 mm

Pumped water at No. 1 Ryoso Pumping Station is conveyed to *Kuriyama* River through the northern main canal. The northern main canal consits of a tunnel and open-canal.

Yokoshiba Pumpsing Station

Water of Kuriyama River is pumped up at Yokoshiba Pumping Station located

Yokoshiba Pumping Station

Pumped water at the Yokoshiba Pumping Station is conveyed to *Oami* Pumping Station through a tunnel of conveyance canal, or closed conduit and siphon. Again, the conveyed water is pumped up and carried to Nagara Dam.

Togane Dam

Togane Dam is an earth dam with height of 52m and the active reservoir capacity of 2.3

Naraga Dam

Water taken up from *Tone* River in *Katori* City in *Chiba* Prefecture is conveyed to *Okita* Dam, which requires 19 hours of conveying water travelling about 100 km distance through canals, pumping station, and

Photo(left) shows internal parts of a volute pump. In the volute pump, a bladed wheel is installed in a whorl-shaped case. Water moves from right to left by centrifugal force by spinning around the blades. (It is the same principle that rainwater splashes by spining an umbrella around) This pump has 1,200 mm of bore diameters and enables to carry water at averagerate of 2.894m3/sec. This alllows to fill up a 25-m long swimming pool in 90 seconds.