矢木沢ダム
Yagisawa dam

●Outline of Yagisawa dam

Yagisawa dam is a multi-purpose, arch type concrete dam, 131m high, built on the upper region of the Tone River.
In 1959, Ministry of Construction started its construction, and it passed the control to the Water Resources Development Public Corporation, when it was establishment in 1962.
The construction work was completed in 1967, conquering severe geographic and weather conditions.

●Purpose of the dam

●Flood control

By controlling the flow at about 600m³/s, out of the estimated high water discharge of 900m³/s during floods, the dam diminish the high water discharge at the lower course, at the dam site, in coordination with the other dams at the upper course of the Tone River.

●Maintenance of normal functions of the river water

Yagisawa dam supplies water for irrigation to accomplished farmland around the Tone River, in coordination with the dams at the upper course of the Tone River.

●Water supply

Water for Irrigation

The amount of water for irrigation that the Yagisawa dam supplies is 8.66m³/s in average (15.89m³/s maximum) through the Gunnma irrigation channel, for a farming area of 10,000 ha, which is expanding at the Akagi Haruna foothills.

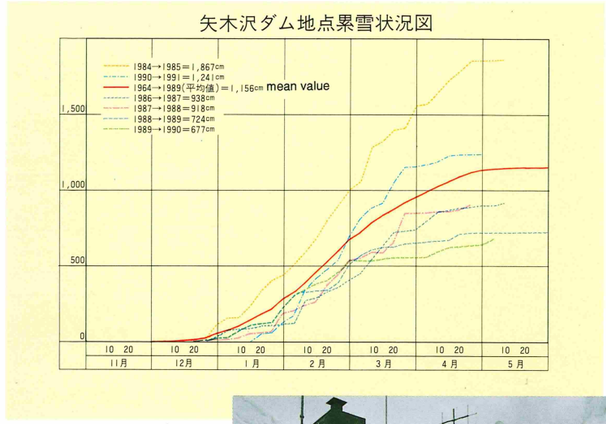
Domestic water

For the Gunnma Prefecture the dam provides ,for domestic water, 3.20m³/s (maximum), and for the Tokyo Metropolitan area, 4m³/s in the irrigation period, through the Gyouda point.

●Power generation

Localized in the lower side of the dam, the Yagisawa power station, operated by Tokyo Electric Power Corporation, generates 240,000kw of electricity on full pumping-up.
Moreover the dam increases the generative output of the others power stations in the lower course.

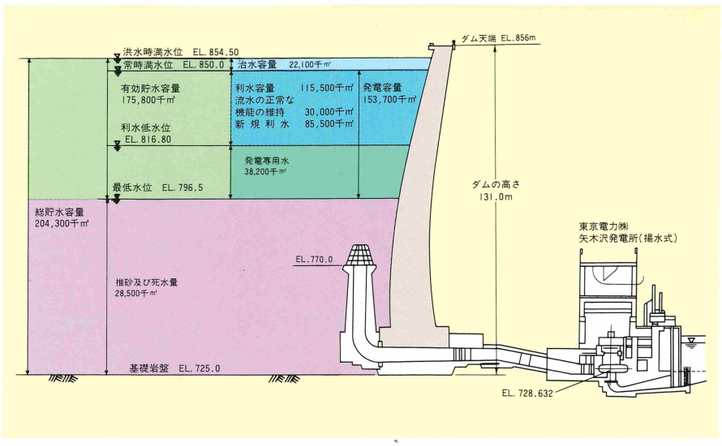
Total snowfall diagram in Yagisawa dam



Environs of Yagisawa dam near the mountain range of the Joueatsu border, is a prominent heavy snawfall region in Japan. The total snowfall of about12m in average (about 18km in maximum), the maximum snowfall in one day of 1.0m, and the accumulated snow of about 2.0m in average (maximum 3.65m)are reached, respectively.

The entirely lie of the land travelling special vehicle 'Shirogane-gou' which plays an active part in the winter dam management.
HÄGGLUNDS BV206D

Storage capacity distribution of reservoir



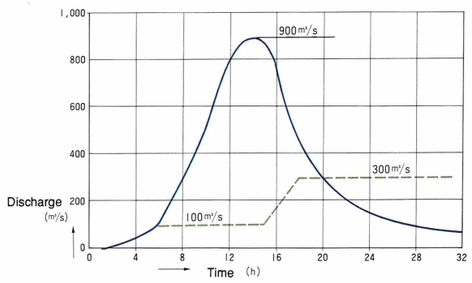
●Specifications of the dam

河川名	River's name	: Tone River system Tone River
位置	Location	: Yagisawa, Fujiwara, Minakami-machi, Tone-gunn,Gunnma prefecture
形式	Type	:
堤高	Height	: 131.00 m
堤頂標高	Crest elevation	: 856.00 m
堤頂長	Crest length	: 352.00 m
堤頂幅	Top width	: 7.90 m
堤体積	Volume of dam	: 570,000 m³

●Specifications of the reservoir

名称	Name	: Okutone lake
集水面積	Drainage area	: 167.4km²
湛水面積	Reservoir area	: 5.67km²
常時満水位	Normal water level	: EL. 850.00m
満水期制限水位	Flood control water level in flood season	: EL. 854.50m
最低水位	Lowest water level	: EL. 796.50m
総貯水容量	Gross storage	: 204,300,000m³
有効貯水容量	Active storage	: 175,800,000m³
堆砂容量	Storage capacity filled with sediment	: 28,500,000m³

Flood control hydrograph



Water supply for metropolis and prefectures

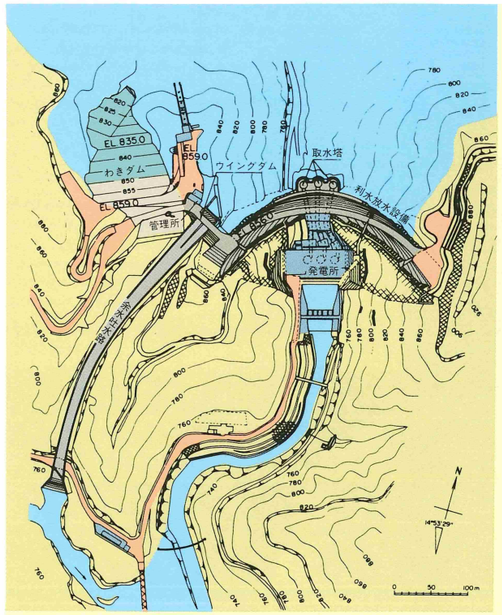
unit

Prefectures \ Water supply	Domestic water	Irrigational water	Total
Tokyo	4.00		4.00
Gunnma	3.20	Gunnma canal 8.66	11.86
Total	7.20	8.66	15.86

矢本沢ダム

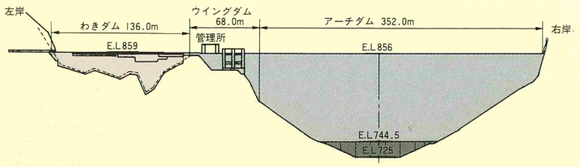
Yagisawa dam

Dam structure

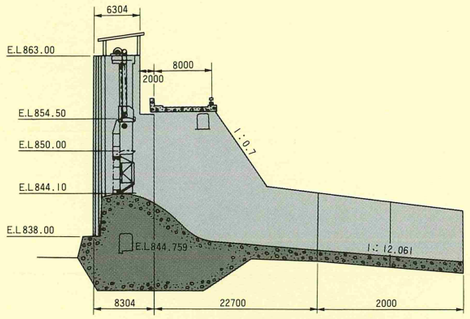


Typical cross section of water supply facility

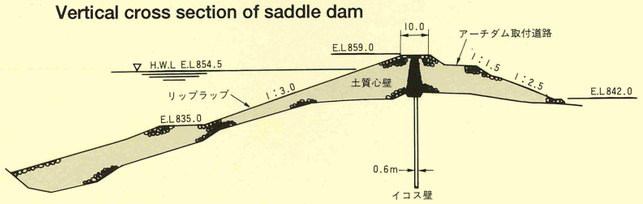
Longitudinal section of dam



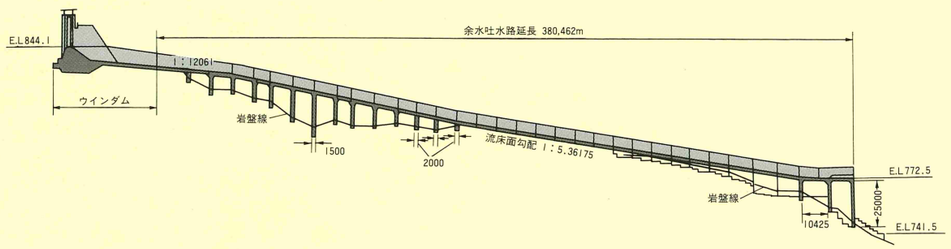
Vertical cross section of Wing dam



Vertical cross section of saddle dam



Vertical cross section of spillway



奈良俣ダム

Naramata dam

●Outline of Naramata dam

Built on the Naramata River - one tributary of the Tone River - the Naramata dam is a multi-purpose dam, 158m high, and besides the water from the Naramata River, the dam reservoir receives water from the Yunokoyasawa River through a "intake weir" and "diversion tunnel". The initial initial studies started in April 1974, and in January 1981 the dam was ordered. The Naramata dam was completed in 1991, conquering severe weather conditions.

●Specifications of the dam

河川名 River's name	: Naramata River in Tone River system
位置 Location	: Naramata, Fujiwara, Minakami-machi, Tone-gunn,Gunnma prefecture
形式 Type	: Rockfill with central impervious core
堤高 Height	: 158.00 m
堤頂標高 Crest elevation	: 896.00 m
堤頂長 Crest length	: 520.00 m
堤頂幅 Top width	: 14.00 m
堤体積 Volume of dam	: 13,100,000 m³
導水路延長	: 3,100m (horseshoe-shaped, inside dia meter ;2.65m)

●Specifications of the reservoir

名称 Name	: Naramata lake
集水面積 Drainage area	: 95.4km²
直接流域(楢俣川) Main basin (Naramata River)	: 60.1km²
間接流域(湯ノ小屋沢川) Sub basin (Yunokoyasawa River)	: 35.3km²
湛水面積 Reservoir area	: 2.0km²
常時満水位 Normal water level	: EL. 888.00m
満水期制限水位 Flood control water level in flood season	: EL. 881.00m
最低水位 Lowest water level	: EL. 800.00m
総貯水容量 Gross storage	: 90,000,000m³
有効貯水容量 Active storage	: 85,000,000m³
堆砂容量 Storage capacity filled with sediment	: 5,000,000m³