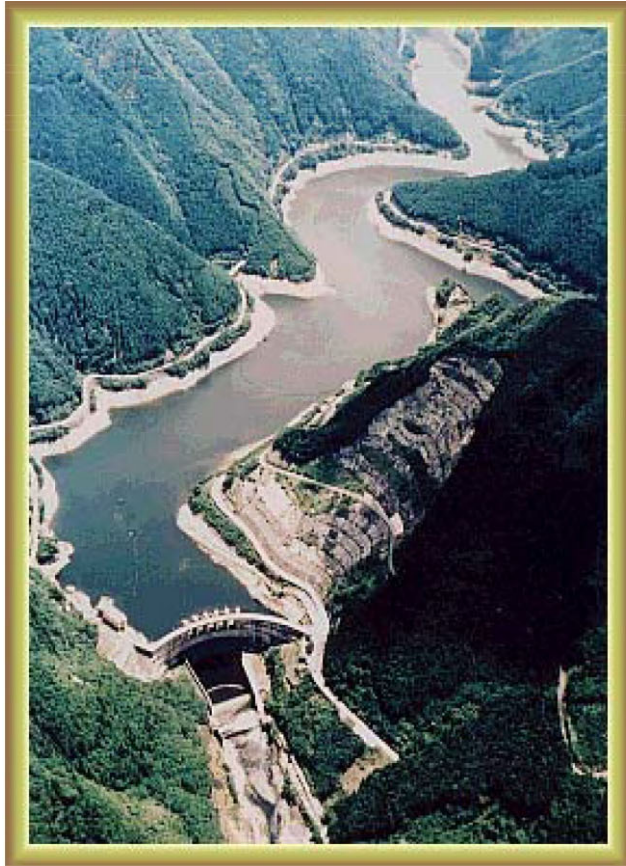
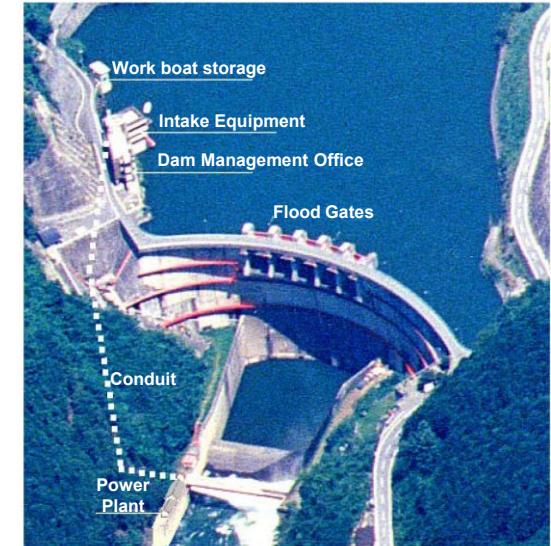
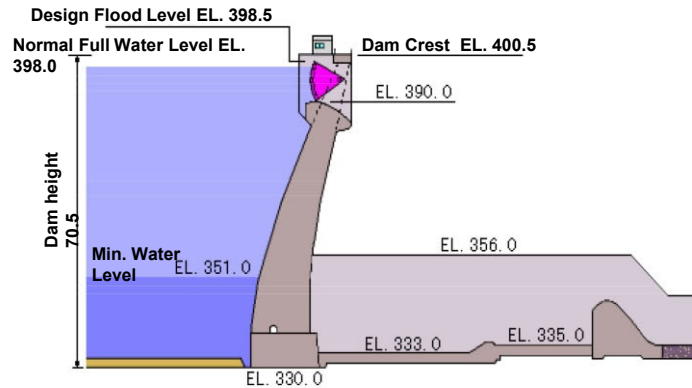


Ohsako Dam



Structure of Ohsako Dam

Ohsako Dam is an arched concrete dam, which supports the water pressure on both sides of embankment. So water pressure is supported by not weight of dam but strength of the bedrock on both sides due to the action of its arch, that its construction is not suitable where weak bedrock on both side but possible with less concrete than gravity dam.



◆ Dam Specifications

Name of River	Kino River (Yoshino River)
Location	Kita-Wada, Kawakami, Yoshino-gun, Nara
Type	Unequal-thickness Domed Arch Dam
Crest Elevation	400.50m
Foundation Elevation	330.00m
Foundation Geology	Slate and hard sandstone
Dam Height	70.50m
Crest Length	222.30m
Dam Volume	158,000m ³
Catchment Area	114.8km ²
Capacity Area	107ha
Total Storage Volume	27,750,000m ³
Normal Full Water Level	398.00m
Effective Storage Volume	26,700,000m ³
Design Flood Discharge	2,300m ³ /s
Flood Gates	Radial Gate (9.00m × 8.65m)
Max. Intake Discharge	20.0m ³ /s
Discharge available for Power Generation	Max. 15.0m ³ /s
Output	Max. 7,400kW
Annual Generated Electricity	19,870,000kWh

Roles of Ohsako Dam

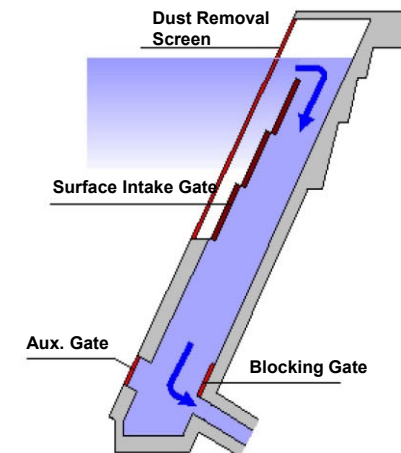
Ohsako Dam, which was constructed under the State Managed Totsu/Kino Rivers Land Improvement project, is a dam intended for the supply of agricultural irrigation water to the Yamato and Kii Plains and tap water for Nara prefecture.

Also, water discharged from the dam is used to generate up to 7,400kW of electricity.

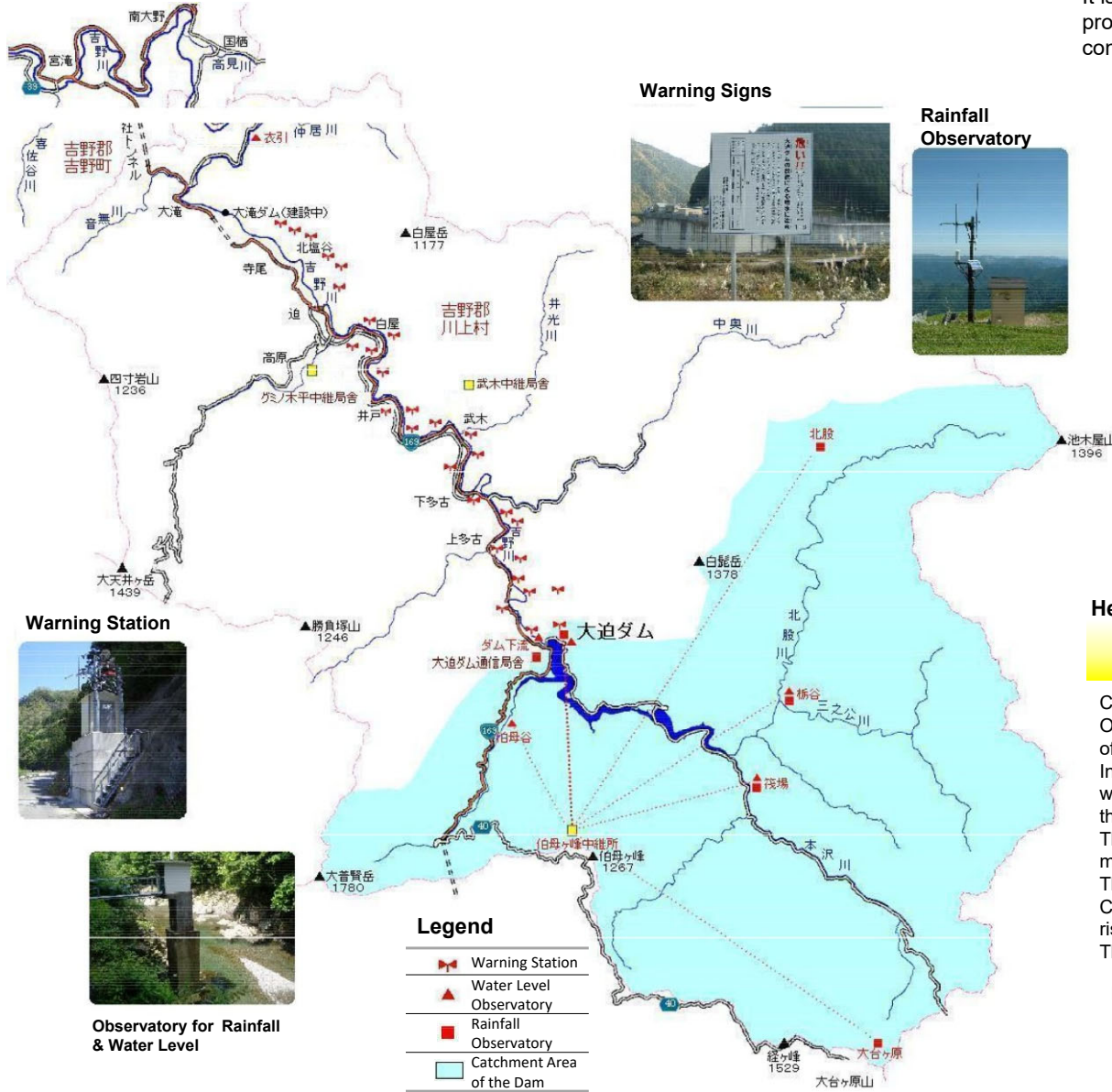


◆ Intake Facility

The surface layer of the reservoir is warm water, and the bottom layer is cold water. The intake structure intakes warm water from the surface layer to be discharged downstream.

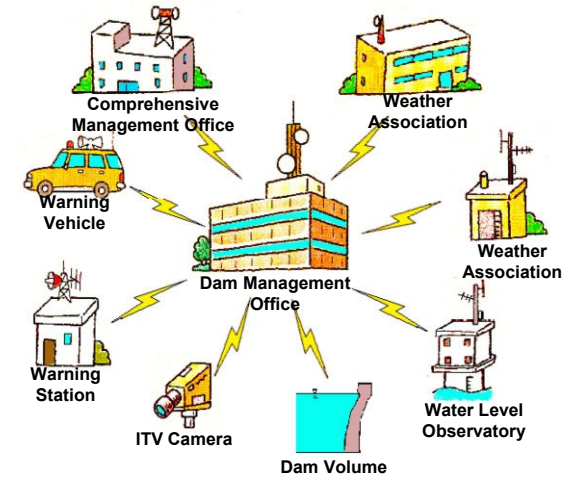


Warning Equipment/Hydrological Observation Facilities



Information Network

It is necessary to collect various kind of information to operate dams properly. So that, information network is prepared to collect data of conditions of dam, meteorological values and so on.



Heaviest Rainfall Area in Japan

Ohdaigahara

Catchment area of Ohsako Dam includes Japan's heaviest rainfall area, Ohdaigahara, with an annual rainfall of 4,800 mm, which is about 2.7 times of the national average 1,800 mm.

In comparison, the annual rainfall in the Yamato Plain is low, at 1,500 mm, which shows that the rainfall at Ohdaigahara is significantly different from the surrounding area.

The main cause of the heavy rain in the summer at Ohdaigahara is the moist southeastern air current.

The southeast air current, which is full of moisture from the Kuroshio Current, flowing from Owase, collides with the Ohdaigahara mountains and rises, which cools suddenly to form localized heavy rain.

This phenomenon is called "Seburi".

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