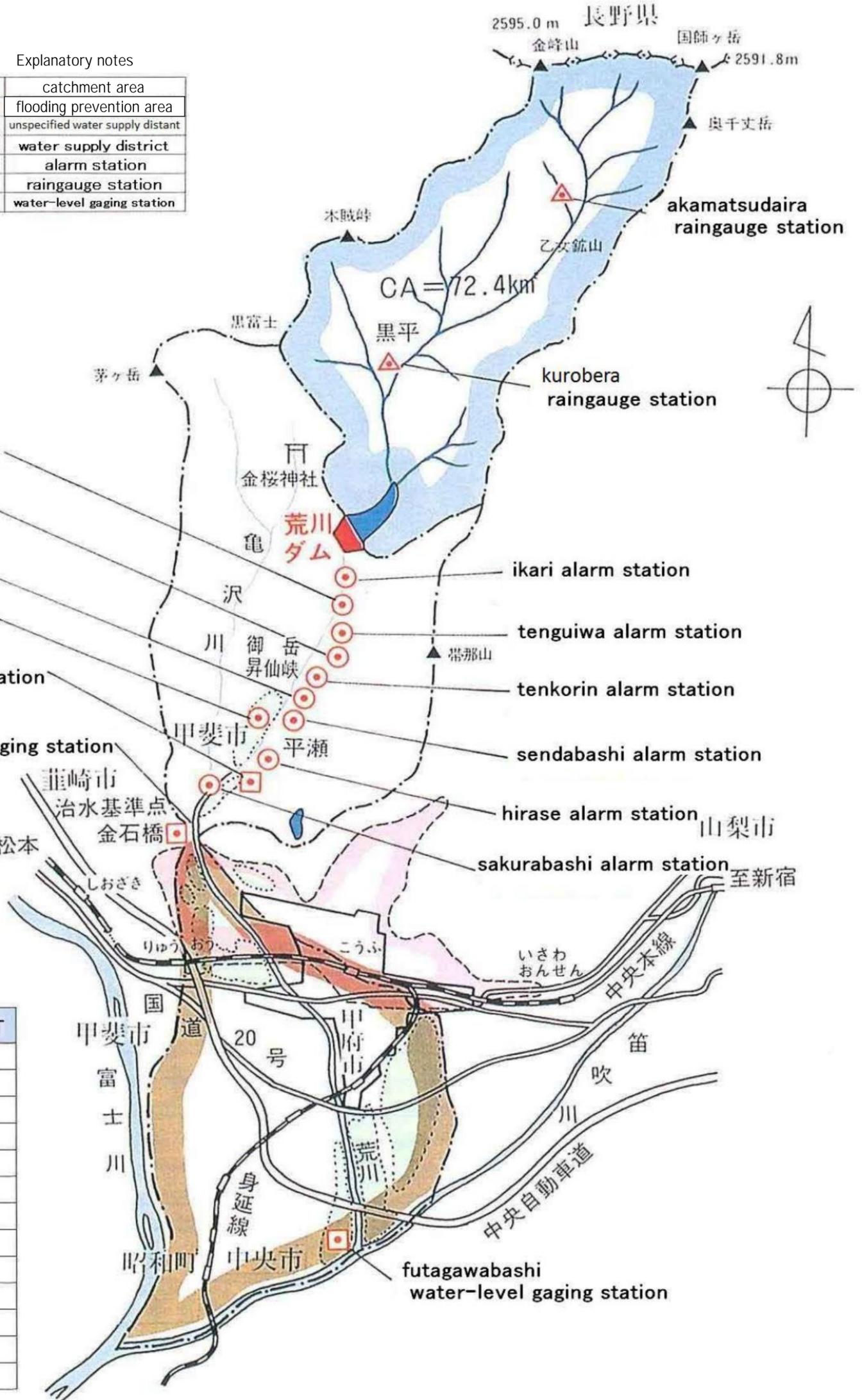


water supply districts and equipments for flood disaster mitigation



Explanatory notes

	catchment area
	flooding prevention area
	unspecified water supply distant
	water supply district
	alarm station
	raingauge station
	water-level gaging station



DISCHARGE WARNING EQUIPMENT	
dam	W/C, loudspeaker
ikari	R/C, loudspeaker
sengataki	R/C, loudspeaker
tenguiwa	R/C, loudspeaker
rakanji	R/C, loudspeaker
tenkorin	R/C, loudspeaker
sendabashi	R/C, loudspeaker
hirase	R/C, loudspeaker
sakurabashi	R/C, siren, loudspeaker
iwamatsu	R/C, loudspeaker
nagatorobashi	R/C, loudspeaker
mannenbashi	R/C, loudspeaker
kanaishibashi	R/C, loudspeaker

OUTLETS	
spillway (orifice)	flood season radial gate 4.40m × 4.00m × 1
	non-flood season slide gate 3.60m × 3.60m × 2
emergency spillway	overflow spillway side-overflow type crest length 85.0m
	crest elevation 800.900m
jet flow gate	φ 350 × 1
	φ 1200 × 1

RAINGAUGE STATION
akamatsudaira, kurobera, damu

WATER-LEVEL GAGING ST.
mannenbashi, kanaishibashi
futagawabashi

Prefectural Land Development Department
River Improvement and Management Division
〒400-8501 1-6-1 Marunouchi, Kofu city, Yamanashi
TEL 055-237-1111 (代)
FAX 055-233-1704

Arakawa Dam Management Office
〒400-1213 972 Uranoyama, Kawakubo,
Kofu city, Yamanashi
TEL 055-287-2006 (代)
FAX 055-287-2015

ARAKAWA DAM

(NOSEN LAKE)

left bank kawakubo-machi kofu city

right bank taka-machi kofu city

river

arakawa (fujikawa river system)
catchment area 72.4 km²

reservoir

water surface area	0.41 km ²
D W L	805.00m
S W L	800.90m
N W L	793.60m
N W L in flood season	783.70m
L W L	767.00m

dam

type	rock fill dam (center impervious wall)
crest EL	808.00m
bedrock EL	720.00m
height	88.00m
crest length	320.00m
crest width	10.00m
bottom width	340.00m
dam vol.	3,010,000m ³
geology	tuff breccia, andesite agglomerate

reservoir capacity

gross storage	10,800,000 m ³
effective storage	8,600,000 m ³
sediment storage	2,200,000 m ³
flood control storage	
flood season	5,300,000 m ³
non-flood season	2,500,000 m ³
water utilization	
flood season	3,300,000 m ³
non-flood season	6,100,000 m ³

yamanashi pref.

Overview of the Arakawa Dam

The Arakawa River, that runs from headwater “Kokushigatake”, flows southward and confluences to the Fuefuki River as a tributary. Serious flood disasters occurred in 1910 and in 1959 (Ise-Bay typhoon) etc. due to heavy rain in this river basin where riverbed gradient is very steep.

As the first step for the flood disaster mitigation, the local government of Yamanashi Prefecture carried out the river improvement. Besides that, flood control by dam was planned because it was very difficult to secure the land space to widen the river and much project budget was needed where river flows in urban area.

In addition, much municipal water was newly required at cities including Kofu City since the economy rapidly develops and the living standard is improving at this area.

Yamanashi Prefectural Government constructed Arakawa Dam as a multi-purpose dam and supplies municipal water to this area as well as flood control by dam.

Role of Arakawa Dam

① Flood control

The Arakawa Dam can store 490m³/s of design discharge 670m³/s in reservoir, and outlets 180m³/s to downstream. This flood control by dam decreases the flood disaster at lower reaches such as Kofu, Kai, Showa and Chuo area.

② Discharge for maintenance stream flow

The Arakawa Dam supplies 0.5m³/s of water (Futagawabasi site) to the downstream for the irrigation (the irrigation area :766.0ha) and preservation of the river environment.

③ Water supply

The Arakawa Dam supplies maximum 100,000m³/day of municipal water (Hirase site) to the Kofu City.

④ Power Generation

To save the cost for maintenance and operation of the dam, electric power is generated by using surplus water for the irrigation (maximum output 490kW).

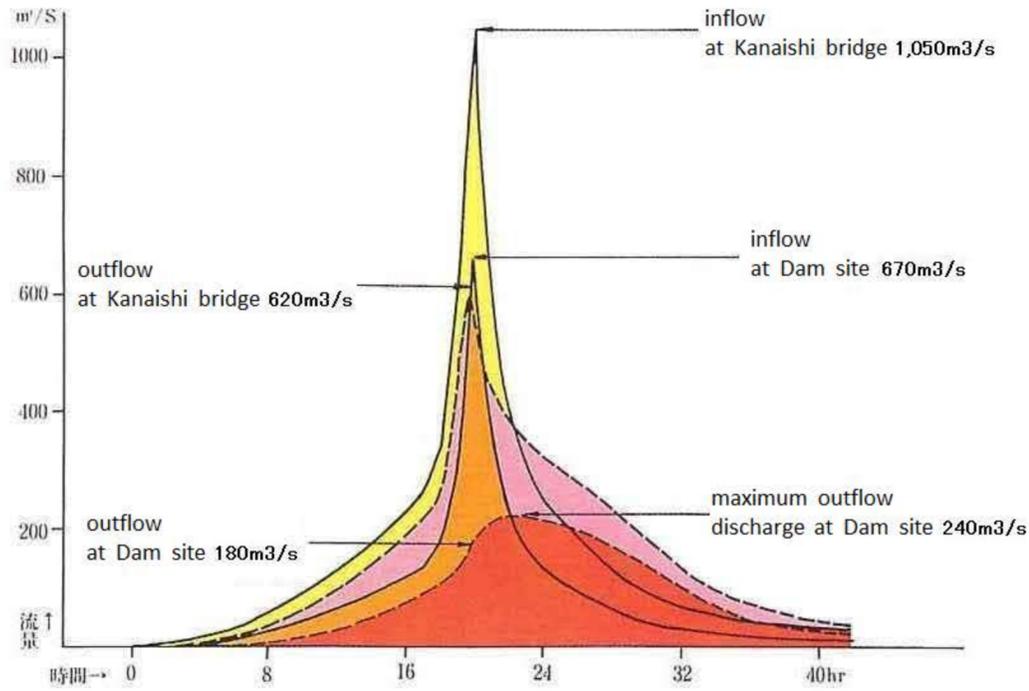
About the geology dam site

Geology of the dam site, “Quaternary Pleistocene andesite, agglomerate” and “tuff breccia of Miocene Neogene”, and expect for the weathering, cracks less stable solidified well in the rock was, is very good as a basis for Embankment Dams.

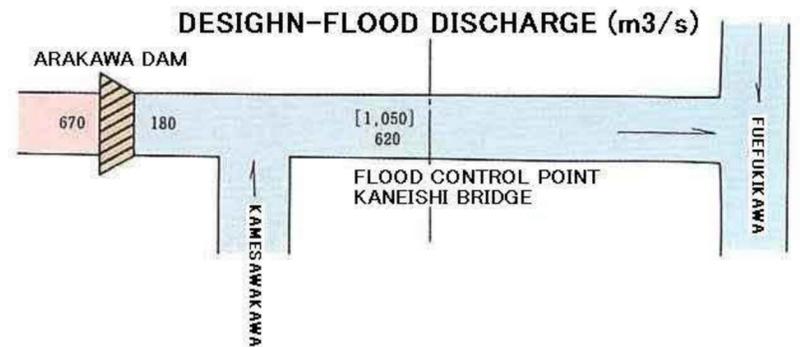
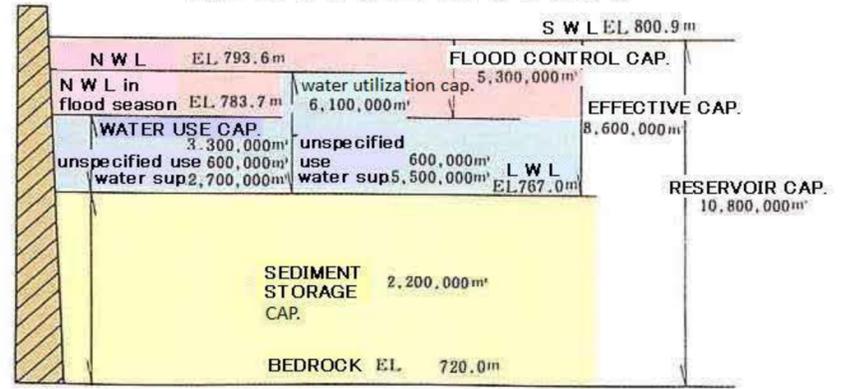
The course of dam projects

April 1972	Start of preliminary investigation (with the budget of Yamanashi Pref.)
April 1976	Implementation plan state aid investigation
April 1978	Adoption of construction projects
March 1981	Signing compensation criteria
December 1981	Dam body construction contracts
May 1984	Start of heap up rock
July 1984	Start of heap up core
October 1981	Cornerstone ceremony
June 1984	Complete of heap up dam body
October 1984	Flooded start
March 1986	completion
Total project cost 35.6 billion yen	

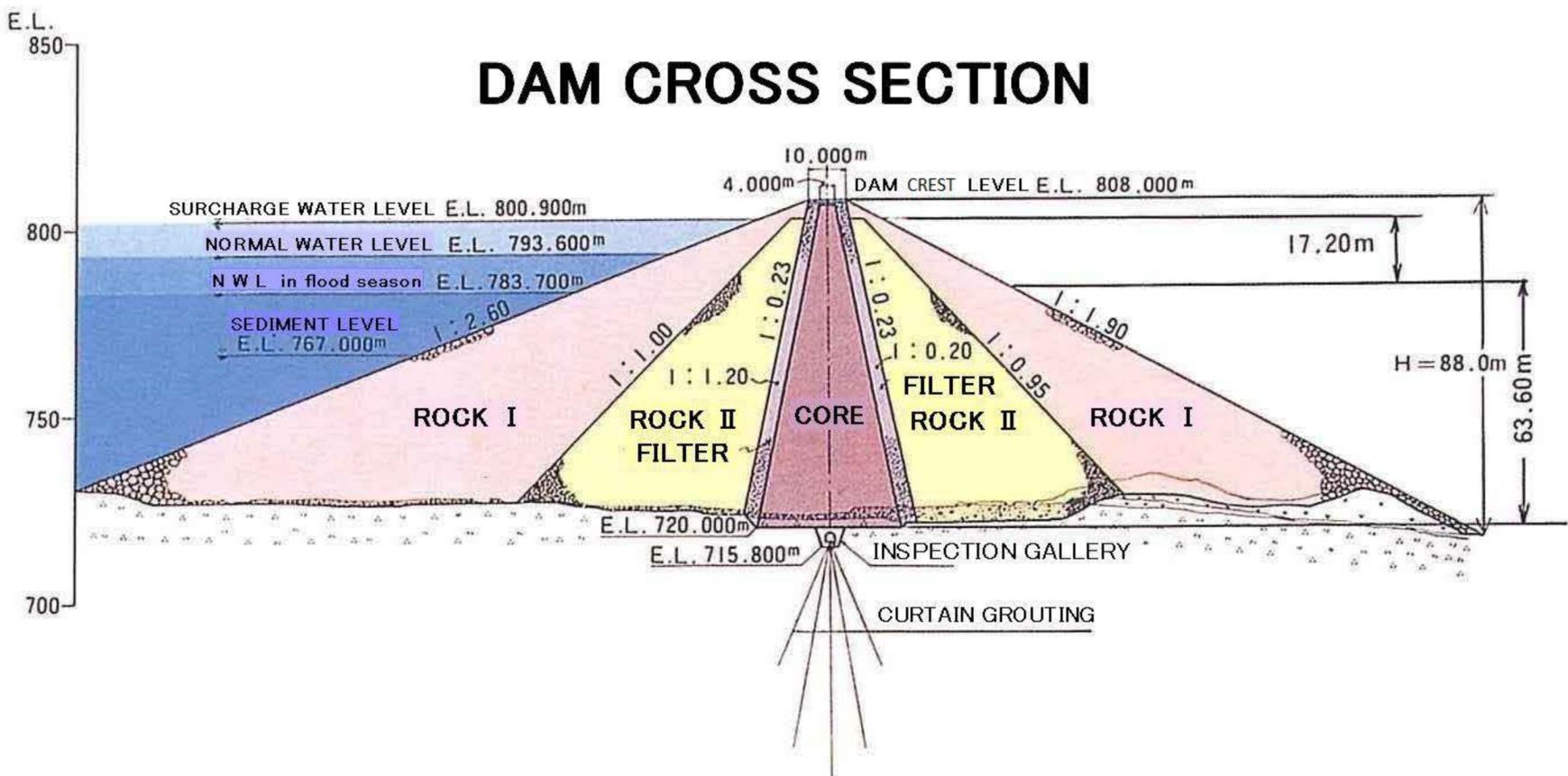
FLOOD CONTROL



RESERVOIR CAPACITY DISTRIBUTION



DAM CROSS SECTION



DAM UPSTREAM FACE

