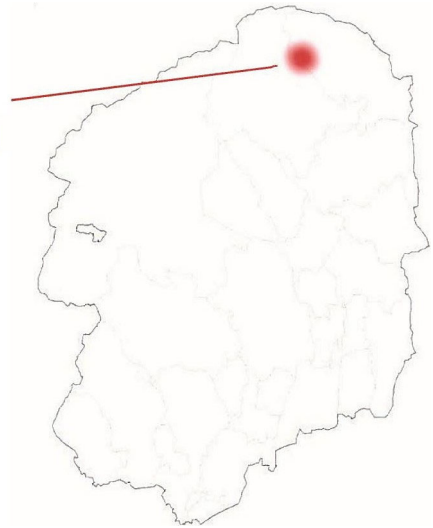


Nasu Irrigation Canal

[Tochigi Prefecture /
Nasushiobara City, etc.]

Nasu Irrigation Canal

One of the Three Large Sosuis in
Japan that brought the water of
life to the barren land of
Nasunogahara



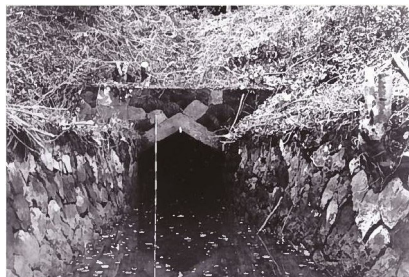
- Although Nasunogahara in Tochigi Prefecture is a vast alluvial fan, it was one of the most prominent areas of wasteland nationwide, said to have "no water to scoop up by hand" due to the unique phenomenon of water running underground.
- In the Meiji era, the momentum to develop wilderness increased. The first Tochigi Prefectural Ordinance by Miki Nabeshima and others established the "Grand Canal Concept" that connects Nasu and Tokyo. This idea resonated strongly with two influential villagers, Josaku Innami and Takeshi Yaita, who devoted themselves to actively bringing the project to fruition. Despite twists and turns, in 1885, "Nasu-sosui", said to be one of the Three Large Sosui in Japan, was completed. To complete the trunk canal of about 16km drawn from the Nakagawa within about 5 months marked an incredible feat.
- Subsequently, in the Showa era, the state-owned Nasunogahara reclamation construction project was carried out by the Ministry of Agriculture, Forestry and Fisheries from 1967. Today, Nasunogahara has become a large-scale rice cultivation area.



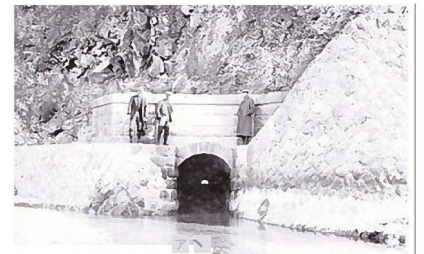
The Sabi River having dried up



A farmer drawing water



The former Sabi River Siphon



Former intake



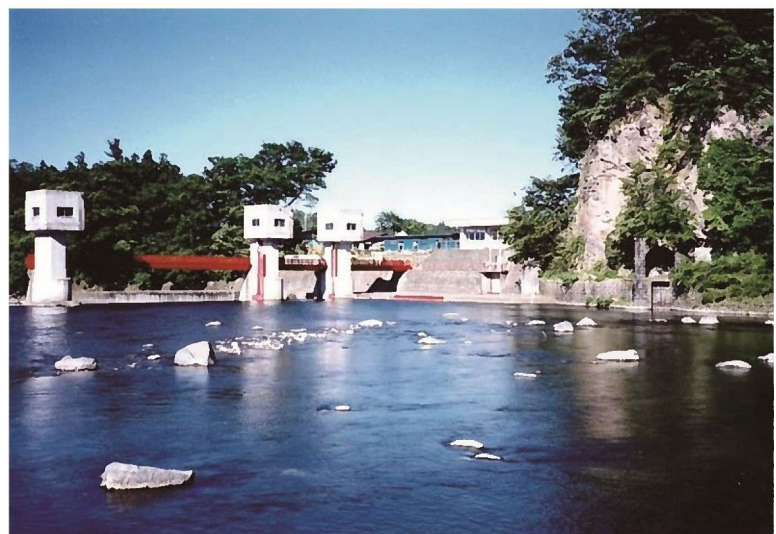
Takeshi Yaita
(1849~1922)



Josaku Innami
(1831~1888)



Current Nasu-sosui trunk canal



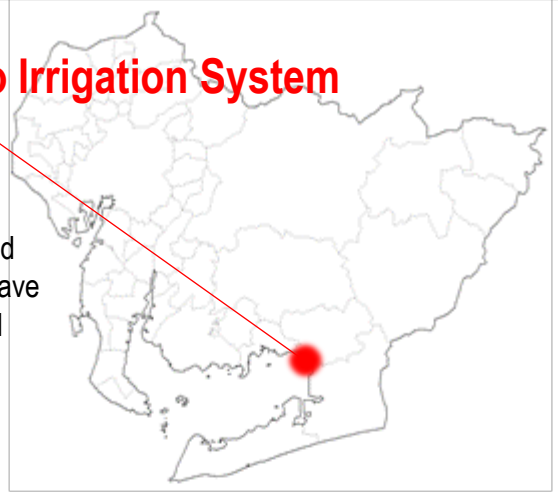
Current Nishiiwazaki head work (left) and former intake (right)

Matsubara-Muro Irrigation System

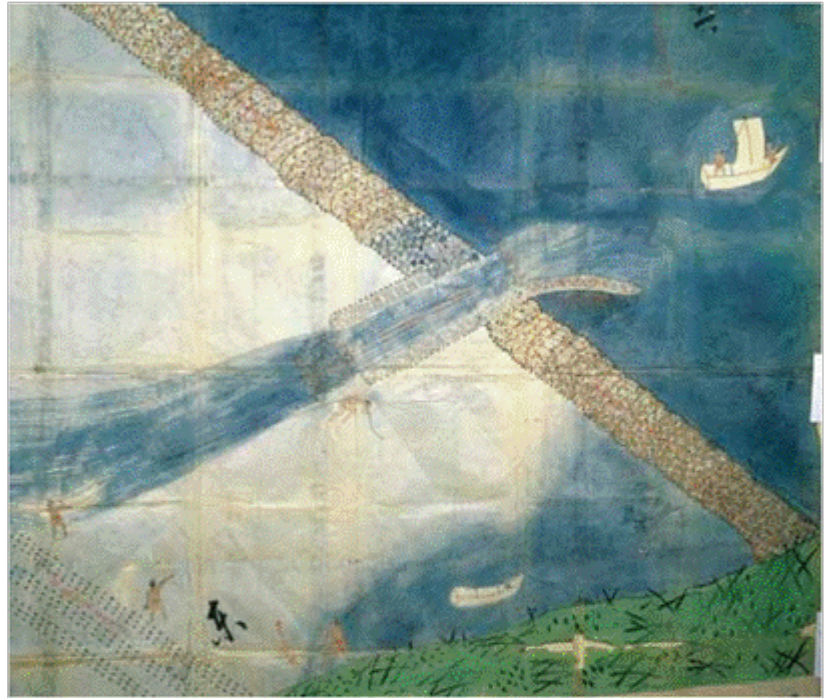
[Aichi Prefecture /
Toyohashi City, etc.]

Matsubara-Muro Irrigation System

Advanced ideas and
technologies that have
overcome repeated
disasters



- It started in 1567 when the Hashioi weir was built. Due to water flow, the East Mikawa area, which lacked any reliable water source, developed into a major agricultural area.
- Toyokawa, the source of water intake, was a fast-flowing river that caused repeated flooding.
- Repeated flood disasters were overcome by introducing advanced ideas and technologies such as "weir in a straight line", "free operational gutter", and the "artificial stone construction method".
- Archaeological excavation was undertaken in December 2018 in the current Toyokawa area, where the former Matsubara irrigation intake was located, from 1869 to 1967 and the former intake gutter was excavated. At the time, the use of artificial stones and construction specifications were also confirmed.



Picture of "Kusakabei Weir" which was a weir in a straight line (Matsubara irrigation)



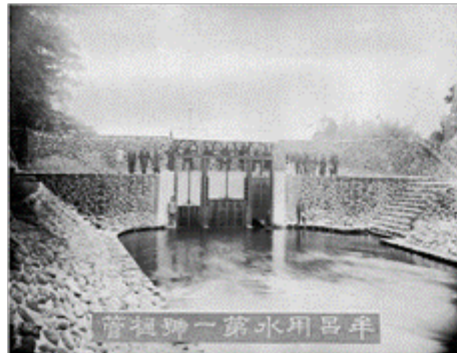
Excavation of the former intake gutter gate



Former intake gutter gate and its wheel



Free-operational gutter (Muro irrigation)



Artificial stone construction method partially remains on the Muro-Matsubara trunk line.



Odai Irrigation Canal

[Hashimoto, Wakayama Prefecture, etc.]

Odai Irrigation Canal

Transforming river terraces into rich paddy fields

A canal that underpinned the development of new paddy fields in Japan



- Constructed in 1710 on the river terrace of the right bank of Kinokawa River, it transformed what was a vast and arid river terrace into abundant paddy fields.
- Crossings over several rivers were made possible with grade separations by Toi (aqueduct) and Fusekoshi (siphon).
- Accurate leveling and advanced technology introduced by Saizo Ohata consolidated the "Kishu style" that was key to the subsequent development of new paddy fields in Japan.



Picture of Tatsuno Toi in around 1850



Existing Tatsuno Toi renovated in 1919 (above) and before renovation (below)



Odai Land Improvement District