

Uchikawa Irrigation System

[Miyagi Prefecture / Osaki City]

- Iwadeyama in Osaki City, located in northwestern Miyagi Prefecture, is a historical area where Date Masamune set up his castle.
- Uchikawa irrigates 3,300 ha of agricultural land via an agricultural canal that was excavated by Date Masamune about 400 years ago as the outer moat of Iwadeyama Castle.
- Uchikawa came into being when water was taken there from a large weir in the Eai River and a river surrounded the castle.
- This facility has long been popular and has been renovated from the state-owned irrigation drainage project and the prefectural regional water environment improvement project to the current state.
- Preservation of trees along the river, revetment and surrounding landscapes have been improved, and the community still integrally protect it.



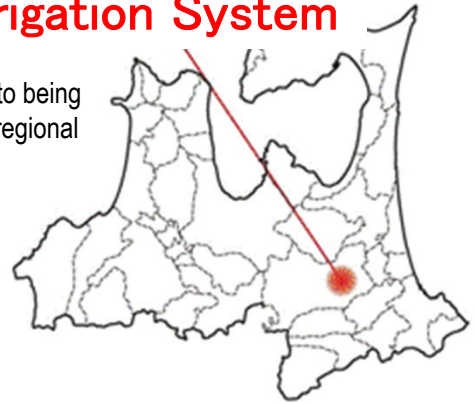
Cleaning activities by
the Uchikawa Furusato Conservation Team



Local elementary school students investigating
creatures in Uchikawa

Uchikawa Irrigation System

A trunk canal that came into being
amidst war and still helps regional
agriculture develop



Current Uchikawa



Large weir
(in 1909)



Water playground
(Around in 1955)

Murayama Rokkamura-segi Irrigation Canal

[Yamanashi Prefecture / Hokuto City]

Murayama Rokkamura-segi irrigation canal

Overcome harsh agricultural conditions with excellent canal systems and management



■ A canal was constructed 1,000 years ago on a steep slope at an altitude of 600 to 1,000 m and with few rivers and severe agricultural conditions. To suppress the flow velocity due to steep slopes, technical considerations such as canal arrangement and waterway bridges along the contour lines are seen, helping streamline the use of water in modern times.

■ In the 1700s, arrangements for 30 villages, which remain in use today, were recorded, covering maintenance and repair, water usage costs and managers. In addition, farming plans and yields for rice, wheat and soybeans, etc. are also listed, and the amount of water and water usage costs are set out in detail accordingly.



Nature-friendly canal near the Kawakoishi diversion



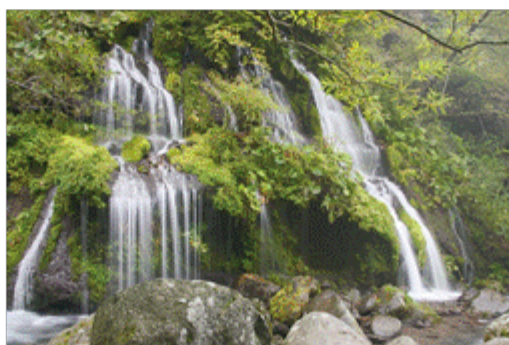
Nishizawa intake renovation commemoration (photographed in 1957)



Waterway bridge (Source: National Midori Net "Agricultural Waterway Directory HP")



Doryu Falls, the water source (photographed in 1929)



Doryu Falls, which still nurtures the blessings of the Earth (currently)



Stairs canal

Jikkasegi Irrigation System

[Nagano Prefecture / Azumino City /
Matsumoto City]

- The irrigation canal, which was excavated in 1816, was meticulously surveyed in 18 days using the advanced spirit level of the time. Then, under a detailed financial plan and work plan, the irrigation canal with an extension of about 15 km was completed in just three months.
- Water was successfully diverted to the barren central portion of the alluvial fan, leveraging a so-called "horizontal weir" that traverses the canal along the contour line, unlike the conventional canal "vertical weir" that allows water to flow in the direction of the slope.
- It crosses rivers and many existing canals with a gentle incline of about 1/3000 and adopts various advanced technologies that are also used for modern canal repair, such as using cotton and rice straw as cushioning materials and measures against water leakage and subsidence.

Jikkasegi Irrigation System

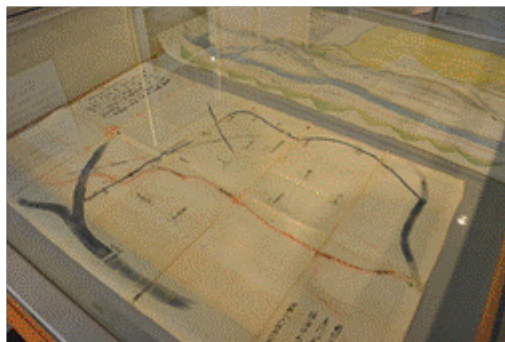
Supplying water to the alluvial fan in
Azumino with advanced technology



Jikkasegi that is also used as a relaxation venue for walking and cycling



Photograph of the time when the river crossing was renovated from a plane crossing to a siphon (Taisho 9th year, 1920)



The drawing at that time used for the excavation plan
(Collection of Toyoshina Folk Museum, Azumino City)



Jikkasegi head work that takes water from the Narai River

Genbegawa Irrigation Canal

[Shizuoka Prefecture /
Mishima City]

Genbegawa Irrigation Canal

A canal integrally maintained and
managed by locals

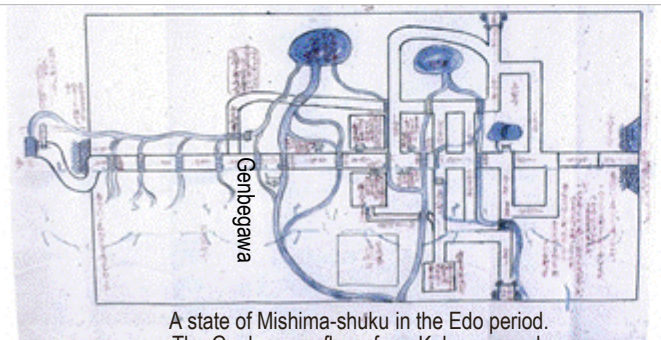


- The Genbegawa was constructed in the 16th century by prominent local Terao Genbe, whereupon the Nakazato area was reborn as a rich paddy field. To this day, it remains an irrigation facility that supports regional agriculture.
- The revetment is masonry utilizing lava from Mt. Fuji and leveraged ingenious solutions, such as widening the upstream portion of the canal and keeping the water depth shallow to raise the low temperature of the spring water from Mt. Fuji to a suitable temperature for agriculture.
- Since the 1960s, there have been times when water quality and the environment have declined due to urbanization and basin development. Since the 1990s, however, clear streams have been restored by efforts on the part of various actors to protect the environment, such as citizens, NPOs, companies, and governments. Moreover, it has become a relaxation venue for citizens as a symbolic facility of "Mishima, the city of water".



Kohama pond

Genbegawa, a relaxation venue for the citizens



A state of Mishima-shuku in the Edo period.
The Genbegawa flows from Kohama pond.



It is also a base for environmental education.



Genbegawa with abundant spring water
(mid-1990s)



Dirty Genbegawa (1960~1989)



Environmentally regenerated Genbegawa (in 2002)

(Source: Groundwork Mishima)

Uwae Irrigation Canal

[Niigata Prefecture /
Joetsu City / Myoko City]

Uwae Irrigation Canal

A major production area for
high-quality rice thriving for
130 years thanks to the
project



- This area is famous nationwide as a place where the finest rice is produced. However, securing water until the harvest season was difficult until the Uwae Irrigation Canal was constructed.
- From 1573 onward, the canal construction had been progressing with the farmers' own plans and funds. The leader of the construction was still venerated, as reflected in the name of the new village and the creation of Buddha statues.
- It involved dangerous and difficult tunnel construction, which is why daily wages were paid, but errors were minimized due to advanced technology. Once complete, the canal helped bring food for 12,000 people.

Tunnel picture at the time of construction



The Buddha statues of the leader

Kawakami tunnel in around 1931



Uwaeyousui irrigation canal repair
work at Yonemasu in 1915