

Functions of Amagase Dam

Uji River (Ujigawa) that runs through the city of Uji is the only river that originates in Lake Biwa, the largest lake in Japan, and it is a part of the Yodogawa River system.

Yodogawa River System: Located in the central area of Kinki district, the Yodogawa River System covers a large basin area of 8,240 square kilometers reaching Osaka Bay. The Seta River flows down from the Lake Biwa to join with the Uji River, while Kizugawa River flows from the south and the Katsura River flows from the north to all join together with the main Yodogawa River.

Amagase Dam was built in 1964 as the first multipurpose dam in the Yodogawa River System to serve three purposes: "to prevent floods", "to provide drinking water", and "to generate electricity."

Prevent Floods By integrated operations of the Amagase Dam and the overfall weir of the Seta River, the water level in the downstream area is lowered.

- ① If heavy rain is expected, a preliminary release will be performed to increase the dam capacity of the Amagase Dam to control the flood. At the same time, the Seta River overflow weir located upstream of the dam will be closed in order to prevent excess water inflow to the Amagase Dam.
- ② When a heavy rain hits, the dam lake holds the rainwater to prepare enough capacity in the Amagase Dam so that the water level at Hirakata located downstream does not rise too high.
- ③ After heavy rain, the Amagase Dam and Lake Biwa, which control flooding, holds a tremendous amount of water. Both the Amagase Dam and the Seta River overflow weir start slowly releasing water downstream to prevent flooding in the lower part of the river.

Provide Drinking Water The water reserved in the dam goes to the Uji Water Purification Plant and is used as drinking water for 350,000 people who live in the cities of Uji, Joyo, Yawata, and Kumiyama Town.

Generate Electricity The Amagase Power Plant generates hydropower sufficient for about 100,000 people, and the Kisenyama Power Plant upstream of the Amagase Dam generates electricity for about 500,000 people by pumped-storage power generation.

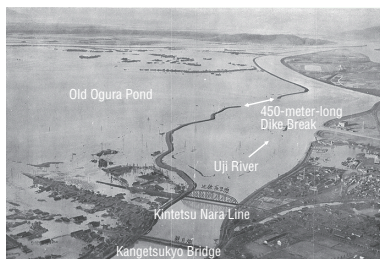
Today, the Amagase Dam is undergoing the "Amagase Dam Redevelopment Project" to construct a tunnel outlet facility on the left bank of the Amagase Dam to control flooding of Uji River and Yodogawa River, to prevent floods around Biwa Lake, to ensure water supply, and to increase electricity generation capacity for Kyoto prefecture.

Dimensions of the Amagase Dam and its Reservoir	
River Name	Yodogawa River of Yodogawa River System (Uji River)
Location	[Left bank] Makishimacho Rokkokuizan, Uji City [Right bank] Makishimacho Makiozan, Uji City
Basin Area	Lake Biwa basin area 3,848 square kilometers *3,848km ² =384,800ha (Area of the lake: 680 square kilometers) *680km ² =68,000ha Amagase Dam Basin area 352 square kilometers *352km ² =35,200ha Total area 4,200 square kilometers *4,200km ² =420,000ha
Type	Dome-shaped concrete arch dam
Length and Height of the Dike	(L) 254m *254m=277.778yd (H) 73m *73m=79.8338yd
Capacity	Main dam 121,500 cubic meters *121,500m ³ =4,290,732.01ft ³ Secondary dam apron 42,500 cubic meters *42,500m ³ =1,500,873.34ft ³ Total 164,000 cubic meters *164,000m ³ =5,791,605.34ft ³
Geology	Sandstone, Slate
Conduit Gate	3 gates, Outflow Rate 1,100 cubic meters/S (capacity) *1,100m ³ /S=38,846.13ft ³ /S 840 cubic meters/S (designed full outflow rate) *840m ³ /S=29,664.3ft ³ /S
Crest Gate	4 gates, Outflow Rate 680 cubic meters/S (capacity) *680m ³ /S=24,011ft ³ /S
Submerged Area	1.88 square kilometers *1.88km ² =188ha
Normal Maximum Reservoir Water Level	O.P.78.5m *78.5m=85.84864yd
Maximum Reservoir Water Level in Flood	O.P.78.5m *78.5m=85.84864yd
Flood Season Control Level	O.P.72.0m (June 16-October 15) *72.0m=78.7402yd
Minimum Water Level	O.P.58.0m *58.0m=63.4296yd
Preliminary Release Level	O.P.58.0m *58.0m=63.4296yd
Effective Depth	20.5m *20.5m=22.41907yd
Total Storage Capacity	26,280,000 cubic meters *26,280,000m ³ =928,069,441.44ft ³
Effective Storage Capacity	20,000,000 cubic meters *20,000,000m ³ =706,293,334.43ft ³

Aha! This and that about Amagase Dam.

Q. Why was Amagase Dam constructed?

A. In 1953, Typhoon No. 13 hit the area and caused flooding of the Yodogawa River of an unprecedented scale. In the aftermath of the tremendous damage along the river due to a dike break in Ujigawa-Mukojima, the flood control plan of the Yodogawa River System was revised, and the new plan included the establishment of a dam on the Uji River. The dam construction started in 1959 to achieve three objectives of "preventing flooding," "supplying drinking water," and "generating electricity." Thus, the Amagase Dam was completed in 1964.



▲The broken dike at Ujigawa-Mukojima after Typhoon No. 13 in 1953.

Q. What is a concrete arch dam?

A. A concrete arch dam is also known as an arch dam. It is a concrete dam designed to transmit most of the force of the water against it onto the bedrock on both sides of the river employing the properties of a rounded arch so that it can be thinner. It is economical but requires robust bedrock to bear hydraulic pressure.

Q. What are other types of dams?

A. Dams are classified into various types such as concrete gravity dam, zoned type dam, concrete facing dam, and others depending on the purpose of use and structure.



▲Concrete gravity dam (Otaki Dam)



▲Rock-fill dam (Kuzuryu Dam)

Q. How many tourists visit Amagase Dam every year?

A. Approximately 26,000 tourists visit the dam annually (as of the end of March 2020). (5,600,000 tourists visit Uji City annually according to the aggregated data from January to December 2019)



*The photos are for illustrative purposes.

Contact

**Amagase Dam Branch,
Yodogawa River Integrated Dams control office,
Ministry of Land, Infrastructure, and Transport**

See here for details: <http://www.kkr.mlit.go.jp/yodoto/>
15 Uji Kaneido, Uji City, Kyoto 611-0021
TEL: 0774-22-2188 FAX:0774-24-1705
E-mail: kkr-yododamu@mlit.go.jp



Initiatives for Infrastructure Tourism in Japan

In addition to Amagase Dam, the Ministry of Land, Infrastructure, Transport, and Tourism is making a progressive approach toward developing more attractive internal tours of infrastructure facilities and construction sites throughout Japan.

For more information, please visit the Infrastructure Tourism Portal Website...Search by "infrastructure tourism"

Yanba Dam

Gunma



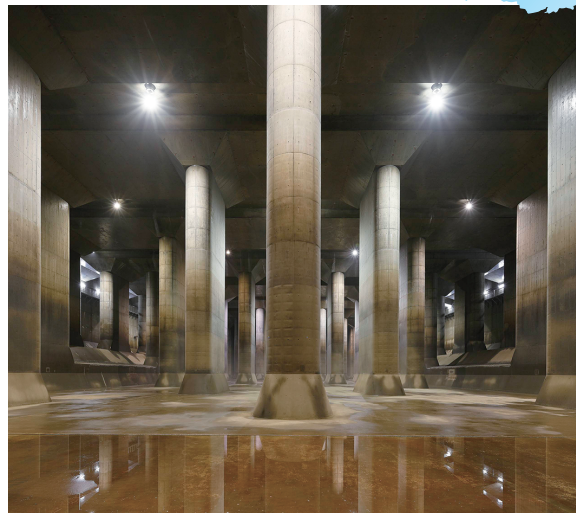
Yanba Dam is the latest dam that started operation in April, 2020. Amphibious buses, sightseeing boats, canoes, and SUP will be in service in the future.

(Contact)

Naganohara Town Hall: 0279-82-2244

Metropolitan Area Outer Underground Discharge Channel

Saitama



Three types of courses are available to see the interior of the gigantic "Disaster Prevention Underground Temple."

(Contact)

Tour Reception at Metropolitan Area Outer Underground Discharge Channel: 048-747-0281

Akashi Kaikyo Bridge

Hyogo



Experience a 360° panorama view of the world's longest suspension bridge from the 300-meter high main tower.

(Contact)

Bridge World Office: 078-784-3396

Yunishigawa Dam Amphibian Bus

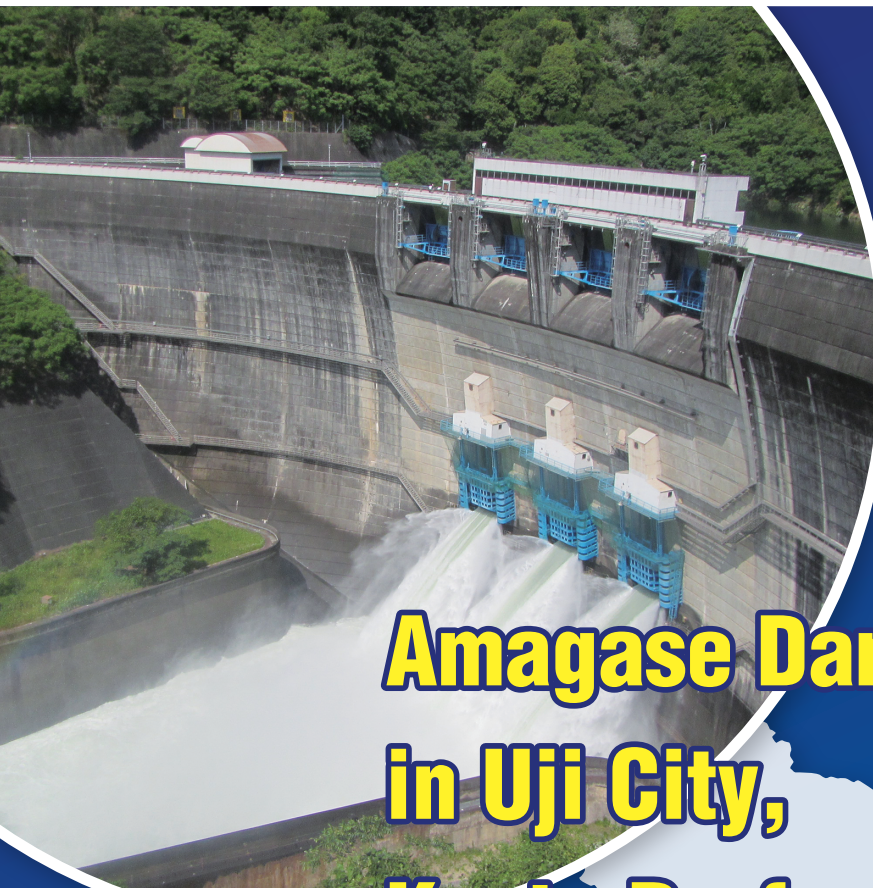
Tochigi



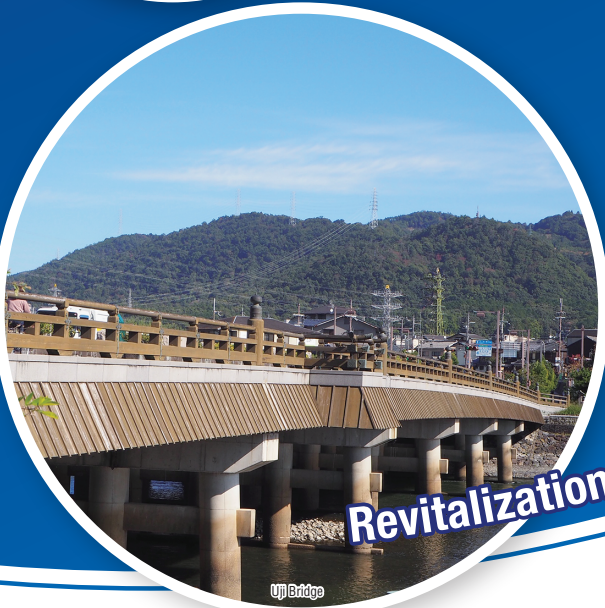
The open-air bus dives directly into the dam lake for sightseeing. You can also visit the inside of the dam.

(Contact)

Yunishigawa Duck Tour: 0288-78-0345



Amagase Dam in Uji City, Kyoto Prefecture Attractiveness Boosting Project



Revitalization of new tourism in Kyoto by infrastructure tourism



What is Infrastructure Tourism?

Infrastructure tourism enhances people's understanding of infrastructure by providing "extraordinary" tours to visit the interior of infrastructure facilities normally inaccessible or the scenes behind construction sites visible only momentarily. By doing so, it brings people to the region to revitalize the local community. We have been trying to connect various tourism resources all over Japan with infrastructure facilities and create new sightseeing tour routes. In infrastructure tourism, we will enhance the value of infrastructure facilities as a tourism resource together with local people by making a tour of infrastructure facilities more enjoyable and easier to understand. Why don't you step into the world of infrastructure tourism to have such an "extraordinary" experience?

We are struggling to convey the appeal of infrastructure facilities by employing various devices.

Amagase Dam is taking on a challenge of "next-generation infrastructure tourism."

Amagase Dam has been designated as a model facility of the "Infrastructure Tourism Attractiveness Boosting Project" of the Ministry of Land, Infrastructure, Transport and Tourism, and is among the first to research the ideal way of next-generation infrastructure tourism.



Group Tour

- 1 Field trip for students
- 2 Special dam tour in conjunction with infrastructure tourism

Amagase Dam is "close to the city center"

Amagase Dam is a unique example in Japan because it is located near an urban area, and there are two World Heritage sites, Byodoin Temple and Ujikami Shrine on the Uji River downstream. At the same time, the Amagase Dam Lake is a habitat for wild birds, and the surrounding area is famous for cherry blossoms and colorful autumn leaves. It lies in a rich natural environment.

HO-O-KO (Phoenix Lake): It is called Phoenix lake because the Amagase Dam is located near Byodoin Temple, a World Heritage, and when viewed from the air, the lake looks like a Phoenix spreading its wings.



Reservoir condition after Typhoon No. 15 in September 2013.



Points of Interest near the Uji River

Uji Bridge 1

Uji-bashi

One of the Three Oldest Bridges in Japan

It is said that the original bridge was built in 646, and the current bridge was completed in March 1996.

There is a balcony known as "San-no-Ma" or the third room on the upstream side of the bridge which can be traced back to a shrine for the guardian goddess "Hashi-hime" or Bridge Princess.

History has it that Toyotomi Hideyoshi, the 16th-century warlord, had water drawn from the "San-no-ma" for a tea ceremony. Every year, a ceremony to draw water from here is conducted for the Tea Festival.

Upstream of the Uji River, about 2,000 cherry trees bloom and the view from the Uji Bridge is breathtaking.



Uji Bridge

Contact

Address: Ujihigashiuchi, Uji City, Kyoto
TEL: 0774-23-3334 (Uji City Tourism Center)

Kyoto Prefectural Park of Uji 3

Kyoto Furitsu Uji Koen

Seasonal Beauty of the Uji River

To-no-shima and Tachibana-jima are the islands in the stream of the Uji River. The Park of Uji consists of these islands and Yorimichi Park on the left bank of the Uji River. It is a popular place for tourists and residents from the surrounding area to refresh themselves by strolling about the riverbanks and the islands connected by Kisen Bridge, Tachibana Bridge, Asagiri Bridge, and Nakanoshima Bridge. In spring, the "Uji River Cherry Blossom Festival" is held here.



Kyoto Prefectural Park of Uji

Contact

Address: Ujitougawa, Uji City, Kyoto
TEL: 0774-22-3141 (Uji City Hall)

Hashidera Hojo-in Temple 4

Hashi-dera (Hojo-in)

Guardian Temple of the Uji Bridge

This temple is said to have been constructed by Prince Shotoku's command in 604. It is better known as "Hashidera" or the bridge temple because it is closely related to the Uji Bridge. In the precincts, there is a stone monument called "Ujibashi Danpi" telling how the Uji Bridge was built.

Admission: Main Hall 500 yen, Ujibashi Danpi 300 yen (*Request for visit required.)



Hashidera Hojo-in Temple

Contact

Address: 11 Ujihigashiuchi, Uji City, Kyoto
TEL: 0774-21-2662

Cormorant Fishing on the Uji River 6

Ujigawa no Ukai

Summer Tradition of All Time

On the Uji River, two female cormorant fishermen play an active role. Watch the flamboyant professionalism of controlling the cormorants with a rein.

In 2014 in Japan, the first chicks of Japanese Cormorant hatched artificially, and the cormorant fishermen take care of them with love and affection.

Please experience the wonderful world of cormorants and the handlers who work together in perfect harmony.

Period: From July to September



Cormorant Fishing on the Uji River

Contact

Address: Ujitougawa, Uji City, Kyoto
TEL: 0774-23-3334 (Uji City Tourism Center)

Amagase Suspension Bridge 2

Amagase Tsuru-bashi

Suspension Bridge over the River Uji

It was first constructed in 1942, and after being washed away eleven years later, it was completely renovated to its current appearance in 1996 and renewed in May 2020.

The width is a little over two meters and the length fifty-four meters. It is supported by thick wire ropes connecting the anchors on both banks. The bridge rails and plates are all made of wood, and it blends easily into the landscape. It is solely for pedestrians and it is recommendable as a hiking trail.

The unique touch and smell of natural wood bring pleasure to everyone.



Amagase Suspension Bridge

Contact

Address: Uji, Uji City, Kyoto
TEL: 0774-22-3141 (Uji City Hall)

Uji River Cherry Tree Project

Ujigawa Sakura Project

Taking Care of the Cherry Trees with the Citizens

In February 2009, the landscape of Uji including the World Heritage-listed Byodo-in Temple, Ujikami Shrine, tea gardens and towns in the city, and the upstream of the Uji Bridge were designated as Important Cultural Landscapes of the country.

The area is always a famous spot for many tourists from Japan and abroad. Since 2013, cherry trees have been planted on both sides of the river upstream of the Uji Bridge. By planting cherry trees with the local people, and protecting and nurturing them for a long time, we will pass on the wonderful scenery of this region, including historical heritage, to the next generation.



CC by Uji City Tourism Association

Contact

TEL: 0774-23-3353 (Uji City Tourism Association)

Thirteen-Story Stone Pagoda 5

Jusanju-sekitou

Japan's Tallest Stone Pagoda

This pagoda is about fifteen meters high, the tallest in Japan. In 1286, Eison, a Buddhist monk, of Saidaiji Temple built it. As he believed that the loss of the Uji Bridge was caused by the curse of fish, he buried AJIRO, a type of fishing net, and other fishing gear, and built this stone pagoda upon them to calm the fish spirit and to pray for the safety of the Uji Bridge.



Thirteen-Story Stone Pagoda

Contact

Address: Ujitougawa, Uji City, Kyoto
TEL: 0774-23-3334 (Uji City Tourism Center)

Contact

Address: Ujitougawa, Uji City, Kyoto
TEL: 0774-23-3334 (Uji City Tourism Center)

About Utty the Cormorant

You can see cormorant fishing in eleven locations nationwide including Uji. They use tamed wild Japanese Cormorants that are caught mainly in Hitachi City, Ibaragi Prefecture. Cormorants are very skittish. They usually do not lay eggs in captivity but in the spring of 2014, the cormorants of the Uji River laid eggs for the first time. The eggs were put in an incubator for artificial hatching, then for the first time in Japan, it was a success. A cormorant that was hatched in Uji was named "Utty the Cormorant" and is active in cormorant fishing on the Uji River.



うみづのウツター
Utty the Cormorant

Sightseeing around Amagase Dam

MLIT Japan Infrastructure Tourism Attractiveness Boosting Project Transform the public infrastructures into new tourism resources



New Recommendation for Tourism in Japan Kyoto Tourism for Future Project



Byodoin Temple (World Heritage)

In 1052, Fujiwara no Yorimichi founded this Buddhist temple by converting a villa of his father, Michinaga. The Phoenix Hall is depicted on the 10-yen coin.

Hours: Entrance 8:30-17:15

Admission: Adult 600 yen (ages 13 and over) /
Elementary School Child 300yen
(ages 6 to 12)

Contact: 0774-21-2861



Ujikami Shrine (World Heritage)

Until the Meiji period, the Ujikami Shrine and the Uji Shrine were called "Rikyu-kamisha" and were treated as one. The main shrine, a national treasure, is the oldest surviving shrine buildings in Japan.

Hours: 9:00-16:30

Contact: 0774-21-4634



Uji Shrine

The main hall was built in the Kamakura period. It is said to be the remains of a palace of Emperor Ojin, and it enshrines his son, Uji-no-Waki-Iratsuko.

Free access

Contact: 0774-21-3041



Koshō-ji Temple

Dogen Zenji founded the Koshō-ji Temple, and Nagai Naomasa rebuilt it later. A slope leading to the gate is called "Kotozaka" and is famous for the beauty of autumnal leaves.

Hours: 5:00-17:00

Admission: 500 yen

Contact: 0774-21-2040

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■ Contact

Uji Tourism Center

Address: 2, Ujitougawa, Uji City
TEL: 0774-23-3334

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Uji City Botanical Park

Uji City Botanical Park

"Tapestry of Flowers and Water" in this herbarium has the largest three-dimensional flower exhibit in Japan.

There are a library and sitting areas, and interesting seasonal events are held in the park.

Hours: 9:00-17:00

Admission: Adult 600 yen,
Elementary and Junior High School Child 300 yen

Contact: 0774-39-9387

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Obaku-san Manpuku-ji Temple

Obaku-san Manpuku-ji Temple

Manpuku-ji was founded by Ingen, a Chinese Zen master. It is the head temple of the Zen Obaku sect. It is surely an exotic temple.

Chinese-style vegetarian cuisine, "Fucha Ryori" is also popular.

Hours: 9:00-17:00

Admission: Adult (ages 13 and over) 500 yen/
Elementary School Child 300 yen
(ages 6 to 12)

Contact: 0774-32-3900

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Mimuroto-ji Temple

Mimuroto-ji Temple

It is the tenth Fudasho (temples that issue sacred amulets) of the Saigoku 33 Kannon Pilgrimage. In the precincts, you can enjoy seasonal flowers such as azaleas, lotuses, and hydrangeas.

Hours: 8:30-16:00

Admission: Adult 500 yen, Child 300 yen
*Admission may vary according to the season.

Contact: 0774-21-2067

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The Tale of Genji Museum

The Tale of Genji Museum

The museum offers exhibits and films introducing the world of The Tale of Genji especially the "Uji Chapters" in an easy-to-understand way. It is a facility where you can learn about the culture of the Heian period through many experience-based contents.

Hours: 9:00-17:00 (Closed on Mondays)

Admission: Adult 600 yen,
Elementary and Secondary School
Child 300yen

Contact: 0774-39-9300

Uji, a "Town of Tea"

History of the Uji Tea

The Uji Tea is said to have been brought to Uji by Myoe Shonin, a Buddhist monk during the Kamakura period.

In the Muromachi period, some tea gardens and water springs collectively referred to as "Shichi-meien (seven fine gardens)" and "Shichi-meisui (seven fine fountains)" were established, and they were granted the protection of the warlords such as Oda Nobunaga and Toyotomi Hideyoshi, and Uji became a famous tea production area.

In the Edo period, once a year an "Uji Chashi (tea producer)" carried the tea to present it to the Tokugawa Shogun Family all the way to Edo. This was called "Ocha-tsubo Dochu," and in return, Uji was established as a production area of high-quality tea.

How the Uji Tea is Made

The growing method of Uji Tea is called "ooishita (covered cultivation)." This is a unique method using coverings to protect the tea leaves from sunlight, to increase the flavor of the tea.

Besides, even today the tea leaves are picked by hand. Tencha (the material of matcha, powdered tea) and Gyokuro are produced only with hand-picked small leaves and young buds, and everybody enjoys them as high-quality green tea.

Tea and Town of Uji Historical Park, CHAZUNA 15

*This is a preliminary drawing of the park.
The final form is subject to change.

Ocha to Uji no Machi Rekishi Koen CHAZUNA

The park is scheduled to open in June 2021. It has a "historic site zone" and an "interaction zone." In the historic site zone, there will be Shukei Chaen, a tea garden with a reproduction of cultural remains, and you can also experience tea picking there. In the interaction zone, there will be a restaurant and facilities where you can experience various things related to Uji's history and culture.

The museum will communicate the history of the Uji Tea, and how it has spread all over Japan and will approach the secrets of the Uji Tea, such as color, taste, aroma, ingredients, and efficacy. Also, we plan to introduce the history of the town of Uji, as well as tourist attractions such as Byodoin Temple, Uji Shrine, Ujikami Shrine, and Uji Bridge in an illustration of famous places, and to set up a photo spot where people can take photos to commemorate the visit.

Contact TEL: 0774-24-2700



Historic Site Zone

In the historic site zone, a presentation shows the changes in the times from the formation of the sandbars to the period during which they were used as a tea garden (late Edo period to early Meiji period) by reproducing the historical transition since the construction of the Uji River Taiko Dike and the process of being buried under sand, or by recreating the continuity and the grandeur of the river wall.

▶ "North Area"

(Exhibition of a replica of the cultural asset/Plaza)

The historical remains will be reproduced as a restored cultural asset on top of the actual remains, and the appearance of the original dike will be reproduced in combination with the waterfront space in front of the Taiko Dike.

▶ "South Area"

(Exhibition of a replica of the cultural asset/Shukei Tea Garden)

Shukei Tea Garden will be developed not only to bring back the old days when it was actually used as a tea garden but to provide tourists with a tea picking experience.

In addition, the Taiko Dike will be recreated as it was when buried in sand in order to reproduce the historical tea garden landscape different from today.

Interaction Zone

▶ Space-1 Tea Town Interaction Center (CHAZUNA)

- **Museum:** It conveys the history and culture of Uji and the charm of Uji Tea, and provides information that leads to a sightseeing trip.
- **Experience room:** Various menus concerning the Uji Tea are served.
- **Restaurant / Cafe:** Food and drinks are available in a glassed-in space with an expansive and quiet environment.
- **Museum Shop:** Sells original goods and products in collaboration with local companies.
- **Lecture/Conference Room:** Provides a space for 200 people. It can also be used as a shelter at the time of disaster.
- **Scenic Terrace:** Offers a space to provide a fabulous view of the Uji River and the mountains of Uji.

▶ Space-2 Garden

- **Garden for Open-air Tea Ceremony:** The layers of greenery of Tsukiyama (artificial hill) creates profoundness and a perfect space to perform an open-air tea ceremony.

- **Waterside Garden:** The garden is also used as a rainwater reservoir. Normally it is covered with gravel but when it stores rainwater, appears a waterscape reflecting the changes of climate and time.

- **Garden of Trees:** This area is filled with the lush greenery of different types of trees that keeps changing through four seasons.

▶ Space-3 Plaza

- **Entrance Plaza:** It functions as an approaching area that invites visitors to the Interaction Hall. It can be used combined with the adjacent plaza, or it can also be used as a temporary parking lot.
- **Tea Festival Square:** It forms an attractive approaching space of spacious lawn field with gentle curvilinear paths leading to the Historic Site Zone. It also provides space for strolling and resting.
- **Bustling Square:** Vending cars can ride into this paved area so some sales events can be held here. By using three areas collectively, larger events such as flea markets and handmade craft markets can be held.

Uji Tea Ceremony Hall TAKUMI NO YAKATA 16

Ujicha Dojo
TAKUMI NO YAKATA

Learn how to make delicious tea at Uji Tea Village

It is a hands-on facility where you can make, drink, and eat Uji Tea.

A "Japanese Tea Instructor" will explain thoroughly how to make delicious Gyokuro and Matcha tea. There are a tearoom and tea-making class, and you can participate in a game of tea tasting called "Chakabuki."

Hours: 11:00-17:00

Closed: Wednesdays, 14th -16th August, 29th December-4th January



Uji Tea Ceremony Hall, TAKUMI NO YAKATA
Photos: Kyoto Prefecture Chamber of Tea Industry (Public Corporation)

Contact Address: 17-1, Ujimatafuri, Uji City, Kyoto
TEL: 0774-23-0888

Uji Municipal Tea Ceremony House TAIHO-AN 17

Uji-Shieit-Chashitsu
TAIHO-AN

Enjoy elegant moment on the banks of the Uji River

It is a rare example of a city-run tea ceremony house even in Japan, and it was named "TAIHO-AN" because it facing the Phoenix Hall of Byodoin Temple.

You can see an instructor dressed in kimono prepare and serve tea, and you can experience it by yourself.

Taste the fragrant Uji Tea with Japanese sweets of the season. The first-timers are always welcomed as a clear explanation will be provided to everybody.

Open Period: 10th January - 20th December

Hours: 10:00-16:00



Uji Municipal Tea Ceremony House, TAIHO-AN

Contact Address: Ujitougawa, Uji City, Kyoto
TEL: 0774-23-3334 (Uji City Tourism Center)