

Spotlighting Kumamoto's Water Sights



Kumamoto city Water Protection Section

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kumamoto water life

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A World-Class Pure Groundwater City Kumamoto, Japan

Protecting Our Pure Groundwater for Future Generations



A World-Class Groundwater City Kumamoto, Japan

Protecting Our Pure Groundwater for Future Generations

In March 2013, Kumamoto City became the first city in Japan to win the United Nations “Water for Life” Best Practices Award. Going forward we will continue to protect Kumamoto’s groundwater, our regional treasure, so that we may pass it down to future generations.



Kumamoto : A World-Class Groundwater City



Kengun Fountainhead (Well No.5)

100% of the municipal water supply for the 740,000 residents of Kumamoto City is drawn from groundwater.

Kumamoto is the only city in Japan with a population of over 500,000 with this notable distinction, and it is one of just a handful of similar cities worldwide.

Furthermore, almost all of the water resources used in the Kumamoto region, which is home to approximately one million residents (across eleven cities and municipalities, including Kumamoto City), are provided entirely by groundwater, as well. By the same token, Kumamoto’s groundwater protection efforts are wide-ranging and exceptional within Japan.

Our groundwater protection efforts received acclaim from all over the world, culminating in Kumamoto receiving the “Water for Life” Best Practices Award in March 2013.

In addition, the Ministry of the Environment selected two locations in Kumamoto City, the Suizenji & Lake Ezu Springs and the Mt. Kinpo Springs, as part of the “Top 100 Bodies of Water of the Heisei Era.”



Lake Ezu (Suizenji-Lake Ezu Springs)



Lake Tensui (Mount Kimpo Springs)



The 11 cities and municipalities of the Kumamoto Region



The Mechanisms and Formation of Groundwater

Aso's Natural Blessings

The landmass of the Kumamoto region was formed by the Mt. Aso volcano through four great eruptions.

The resulting layers of earth have a large number of subterranean gaps, allowing water to effortlessly seep through. This means rainfall in the Kumamoto region can easily filter down into groundwater and collect in massive reserves of high-quality water beneath Kumamoto.

In this way, the origin of Kumamoto’s world-class groundwater is actually Mt. Aso.



Kato Kiyomasa, Master of Civic Engineering and His Groundwater Recharge System



Kengun Fountainhead (Well No.5)

Kato Kiyomasa, the famous lord who built Kumamoto Castle, was well-respected as a “Master of Civic Engineering” for his achievements in riparian infrastructure and flood control. Kiyomasa undertook a large-scale rice field development operation on the central banks of the Shirakawa River, which was

known locally as the “sieve fields” for its ability to absorb water. Through this development, a large volume of water percolated down into the ground from the rice fields, bolstering the amount of groundwater in the Kumamoto region.

The Flow of Groundwater in the Kumamoto Region

Most of Kumamoto’s groundwater flows along a path that originates from the “groundwater pool,” where water accumulates after permeating down from Shirakawa’s central banks. This stream moves southwest towards the groundwater springs of Lake Ezu and then flows west towards Kumamoto’s open fields.

Out of the whole Kumamoto region, Kumamoto City benefits the most from this resource.

The Current State of Groundwater in the Region



Mid-stream region of the Shirakawa River (Ozu Town and Kikuyo Town)

While the Kumamoto region has been blessed with a bountiful supply of groundwater, factors such as urbanization and the decrease of land area used for rice farming have reduced the amount of land that is actively recharging our groundwater supply. For this reason, Kumamoto’s groundwater levels are expected to

recede in the long term.

In addition, while the overall quality of the groundwater is excellent, reports of increasing concentrations of nitrate-nitrogen in select areas are raising concerns about future groundwater supplies and quality.

In recent years we have observed that the multi-year trend of falling groundwater levels has slowed and there are signs of replenishment in all but one region, which indicates that our efforts so far have been successful. However, though our current progress is promising, we must redouble our conservation efforts going forward.



Protecting our Groundwater

Groundwater Protection Efforts – Past and Present

City residents first became concerned about our groundwater when plans were announced to construct a high-rise residential building near an important water source. In 1976, the “Declaration of the Groundwater Preservation City” was passed by the city of Kumamoto, and the following year the “Kumamoto City Groundwater Protection Ordinance,” the first of its kind in Japan, was enacted.

The ordinance was revamped in 2007 into an all-encompassing piece of legislation outlining the formation of a water-conserving society and the protection of both water quality and supply.



Ensuring Groundwater Quality



Every year we test the groundwater quality of about 220 wells and further develop conservation methods of groundwater purification.

We are creating partnerships with stakeholders in agriculture to collaborate on programs to counteract the effects of fertilizers and domesticated animal waste in accordance with the city’s Nitrate-Nitrogen Reduction Plan. As part of this effort, the Kumamoto City Tobu Compost Center began providing services in April 2019 as a facility to properly treat and dispose of animal waste.

Creating Groundwater

We are currently working to maintain the water-recharge forests upstream of the Shirakawa River, Midorikawa River, and other bodies of water. In addition, we are conducting a program with the cooperation of local farmers to convert farmland to rice fields around the central banks of the Shirakawa River, which are particularly important groundwater-recharge areas.



Flooded rice fields

Water Conservation



Kumamoto City Water Conservation Mascot “Sessui-chan”

Residents enthusiastically support activities run by the Water Conservation Movement.

The movement’s current goal is to decrease citizen daily water usage to 210 liters per person by 2025.



Wide-Ranging Collaboration Efforts

The Kumamoto Groundwater Foundation – A Public Interest Incorporated Foundation

The Kumamoto Groundwater Foundation was inaugurated in April 2012 as an organization for the protection of the groundwater across the entire region. Members rise above their respective statuses of citizen, businessman, and local official to focus on the foundation’s fundamental goal of implementing effective groundwater protections throughout Kumamoto.



Kumamoto Water's Brand Development

We would like to expand the brand of our high-quality groundwater to include the local produce, food, natural landscapes, history and culture that it nurtures, and to spread the word both in Japan and internationally about our preservation efforts that have united citizens, businesses, and local governments under one banner.

Kumamoto's Water Guardians

Those who work to promote and protect Kumamoto’s water and water culture register as and are given the title “Kumamoto Water Guardians,” and we provide them with information and personnel training.



Kumamoto's Water Heritage

This is a system established by Kumamoto City to register bodies of water as shared public assets in order to pass down our natural water resources and culture to future generations. (We have 92 registrations as of the end of 2019)



The “Kobori-ryu” water treading technique



Nakamuta Locks

Kumamoto's Water Knowledge Certification Program



Kumamoto was first in the nation to create a water certification program. There are three exam levels, level 3 is interview-based and levels 2 and 1 are on-site, through which

we aim to spread information, raise awareness about conservation, as well as raise Kumamoto’s profile as the Groundwater City.

Over 50,000 people have taken the test so far.



An inscribed certificate

Water is Close at Hand in the Hearts of the City

For the Opening of the Full Kyushu Shinkansen Line, Kumamoto implemented projects to show its appeal as Japan’s premiere Groundwater City. A series of facilities were established from Kumamoto Station’s west entrance to downtown so visitors can experience the magic of Kumamoto’s water for themselves.

Alongside the facilities were water fountains that allowed people to taste our delicious, healthy, mineral-packed groundwater.

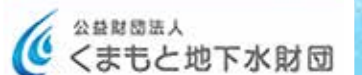
“Mineral water straight from the tap!” Is a local saying, so we hope you try a sip.



“Aso’s Blessing of Water” JR Kumamoto Station (Shinkansen Entrance Plaza)



“Castle View Fountain” Tetori Honcho (Kumamoto Castle/City Hall)



Kumamoto Ground Water Foundation