

History of Wells in Hangzhou City

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1. Objective and background of study

Wells have been influencing the development of cities as residential water resources for residents. However, wells are diminishing along with development of water supply systems and urban redevelopment projects. In recent years, there have been initiatives in China to protect wells and utilize them in community development. In this study, the objective was set to clarify the history of wells with Hangzhou City's case.

2. Study Methods

Hangzhou City is located along the coastal area in Zhejiang Province, which is in East Central China. In this city, utilization of wells started approximately 1700 years ago. The objective of this study was set to analyze the history of wells in relation to changes of a city. Existing resources such as topography and maps and online information were used to study the number and locations of wells, population, and urban planning in Hangzhou City.

3. History of wells in Hangzhou City

(1) Formation stage

The first well in Hangzhou City was called Longjing. It was built during the Three Kingdoms Period (220-280 A.D.) and is located on the west side of West Lake. Another well, which is called Guopo Jing, was built during the Dongjin Dynasty (317-420 A.D.) on Daijing Street near Wushan in Shangcheng District. It also provided large amount of water, and served as the first public well for the Hangzhou City citizens.

(2) Development stage

At the beginning of the 8th century, Hangzhou City grew larger in size due to the development of silk and shipbuilding industries. The number of residents also grew from 15,000 in the 7th century to 86,000. In order to solve the drinking water shortage among the citizens, Li Mi (722-789 A.D.), who was the civil governor of Hangzhou City, used culvert. In between Yongjin Men and Qiantang Men (current Shangcheng District), where population was heaviest, he drew water from West Lake through the culvert and built six wells to secure daily life water in this castle town. These wells are called 'Six Wells', and each of them is called Xiangguo Jing, Xi Jing, Fang Jing, Jinniu Chi, Baigui Jing, and Xiaofang Jing respectively; and contributed to the expansion of the residential area of citizens.

(3) Maturity stage

In 1139, Hangzhou City became the capital of Nansong (1127-1279 A.D.). Due to the development of politics, economy and culture, the population of Hangzhou City reached 1,905,000 and many wells were built. During Minguo Era (1912-1949 A.D.), 4,842 wells existed in Hangzhou City, and on average, every 20 houses had one well.

(4) Decline stage

During the 1970s, water quality of wells in Hangzhou City rapidly deteriorated due to development of water supply systems, groundwater pollution, and city development projects. This led to close down many wells, usage of wells diminished; and many of the old wells disappeared.

In 2009, Hangzhou City government researched the number of wells and their ages. According to this research, there are 211 wells that were built during or earlier than 1950s. Among those, only 78 had been built before the 1900s. Compared to the number of wells counted in the maturity stage, which is 4,842, it has been clarified that remaining old wells are only approximately 1.61%.

(5) Revival stage

Hangzhou City established the 'Old Well Preservation Regulation' in 2009, and re-established old wells and the surrounding environment. Water quality purification was also put in place. Some wells are protected as cultural properties, and they have been restored for reuse, and the surrounding environment has been better managed.

4. Conclusion

In this study, the transition of wells was observed: Wells were built to support people's lives and disappeared as their standard of living improved. However, wells influenced city economy and culture, created regional sceneries, and developed city environment rich in nature. It can be concluded that our lives will be more convenient by utilizing wells in community development.

Keywords: Well, Hangzhou City, History

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- ② 317-420
- ③ 781-784
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- ⑨ 960-1279
- ⑩ 1127-1279
- ⑪ 1127-1279
- ⑫ 1127-1279
- ⑬ 1368-1644
- ⑭ 1644-1912
- ⑮ 1644-1912
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