

Cisterns—Water, Water, Everywhere!

Water is an essential part of life. The human body is made up of about 60% of water. Domestically, it is crucial for drinking, cooking, cleaning, bathing, and watering gardens. Industrially, water is used for cleaning, cooling machinery, diluting solvents, making paper, pumping oil, and generating power just to mention a few. Water is also used to put out fires. Obtaining and storing water to satisfy our needs is an important part of our society. Before modern plumbing, cisterns were a common way to collect and store water for later use. However, not all cisterns were made the same. Human ingenuity can be seen archaeologically in how cisterns were constructed. This article will explore a few examples of cisterns found at archaeological sites in Indianapolis, Indiana.

Rain barrels, wells, and cisterns were earlier forms of water collection before public plumbing. Cisterns and wells were very similar consisting of cylindrical holes in the ground. However, wells were constructed to connect to the water table, while cisterns stored water from runoff. Cisterns were typically made of brick with a lining to keep it watertight. Most cisterns had a domed top, and many had interior partial walls to assist in filtration. Pipes often connected to adjacent buildings. Cisterns also were modified over time for repair or improvements.

Indianapolis became a capitol city in 1821, starting with the square mile surrounding Monument Circle. By the 1860s, the population was contaminating the water supply. As the *Encyclopedia of Indianapolis* notes in 1871, the Woodruff Water Works Company (later called the Indianapolis Water Company) started to install water lines and pumping stations connecting public wells, the Central Canal, the White River, and its tributaries for a source of water and power to pressurize the pipes. Prior to public plumbing, fire fighters used buckets of water from wells. Some cisterns, which held larger amounts of water, were built specifically for fire control in key areas of the city. As the city's plumbing network expanded, fire fighters were able to tap into either the cisterns or the public water lines.

1). Riley House (residential)

James Whitcomb Riley was an Indiana author (born in 1849 and died in 1916) who lived at a boarding home Lockerbie Square in Indianapolis. This home has been turned into a museum. In 2013, construction activities next door encountered a large brick-lined cistern with mortar and cement plastering that was documented by AMES Environment & Infrastructure. Connecting to the top of the cistern was a terracotta overflow pipe, metal pipe to provide water to the house, and a concrete intake drain with a metal grate.



Figure 1: Cistern adjacent to the Riley House (IDNR, DHPA)

2). IndyGo (commercial)

In downtown Indianapolis, commercial buildings along Washington Street were torn down in the 1950s and 1960s and the area had been a parking lot until the construction of the IndyGo Bus Station. As part of this project, archaeological investigations were conducted by AECOM recording many features related to multiple time periods in the city's history. In addition to the many features encountered, there were also 10 cisterns and 13 wells in the backlot of the site.

3). Citizens Dig Indy (firefighting)

In 2019, a brick cistern was inadvertently uncovered underneath Madison Avenue during a sewer improvement project. The brick feature was documented before being demolished. A smaller cistern was built inside a larger, previous cistern with a cast iron cap and was lined with plaster. After extensive research by Cardno Energy Group, it is suspected that this cistern was part of early firefighting infrastructure for the neighborhood.

Technology enhances our way-of-life and changes through time. Archaeologically we can see human ingenuity tackle one of life's most essential resources- water. Cisterns provided ways to collect and store water for residential, commercial, and firefighting functions. Indianapolis has a rich history and many examples of significant archaeological sites that gives us a glimpse into our past.



Figure 2: Cistern at Madison Street (Parsell, Cardno)

For Further Reading see:

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