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A publication of American Structures, Inc. ~

**“Dedicated to being the trusted supplier of Bolted Stainless Steel Storage Tanks.”**

**Notes From All Over, A Little Bit of This And That . . .**



We at American Structures, Inc. are no more immune to the thrill of getting our name in the media than the next company. So, it was pretty exciting for us to see that one of our project tanks was mentioned as a case study on the website of the engineering firm of Kadrmas, Lee & Jackson at [www.kljeng.com](http://www.kljeng.com).

In 2009, American Structures, Inc. contracted to provide a 46.17' x 44' reservoir water storage tank to the City of Dickinson, ND. Rapid development in the city of Dickinson had taxed the city's water system. Low water pressure issues and inadequate fire protection were limiting or prohibiting further development. The city determined that building additional water storage would correct water storage and pressure issues as well as provide necessary fire protection. Maintenance, aesthetic appearance, affordability, and functionality with existing storage reservoirs were significant elements in considering a

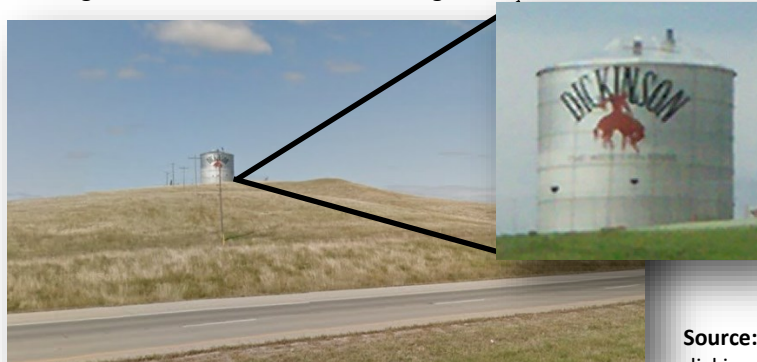
new water storage solution.

Following hydraulic analysis, the engineering firm of Kadrmas, Lee, & Jackson selected a location west of the city limit line as the project site. Site limitations, as well as population growth projections, determined the reservoir's type, size, height and volume.

KLJ performed alternative analysis to determine a solution to meet the city's requirements, ultimately selecting a bolted, stainless steel reservoir. The bolted, stainless steel reservoir required no maintenance, was able to withstand the elements, functioned with existing city infrastructure, and had standard safety features.

A solar operated mixer ensures consistent water quality and generates future electricity cost savings. This alternative reservoir fabrication provided a cost savings of nearly \$200,000.00 over comparable bids. The 525,000-gallon stainless steel standpipe reservoir accommodates the City of Dickinson's current and projected water capacity needs and corrects water pressure concerns.

Six years later, the reservoir is going strong, with no maintenance, leaking, fabrication, or service issues. For any of you that travel west on Interstate 94, the reservoir tank is easily recognizable from the freeway, just west of Dickinson, on the north side of the road. The next time you're out that way, make note of it's pleasing aesthetic appeal with the surrounding landscape.



American Structures, Inc. is extremely proud of being a part of the development adequate water services for the City of Dickinson and our neighbors in the Western Edge!

Source: <http://kljeng.com/projects/dickinsonwater-storage-reservoir>



## Did you Know? Surprising Facts About Water . . .

68.7% of the fresh water on Earth is trapped in glaciers.

30% of fresh water is in the ground.

1.7% of the world's water is frozen

Approximately 400 billion gallons of water are used in the U.S. per day.

Nearly 1/2 of the water used by Americans is used for thermoelectric power generation.

The average American residence uses over 100,000 gallons of water annually.

Water can dissolve more substances than any other liquid including sulfuric acid.

The freezing point of water lowers as the amount of salt dissolved in it increases. With average levels of salt, seawater freezes at -2 °C (28.4 °F).

About 6,800 gallons of water is required to grow a day's food for a family of four.

It takes 20 gallons of water to create 1 pint of beer.

780 million people lack access to an improved water source.

200 million work hours a day are consumed by women collecting water for their families.

1/3 of what the world spends on bottled water annually could pay for projects providing water to everyone in need.

Unsafe water kills 200 children every hour.

.Water weighs about 8 pounds a gallon.

A jellyfish and a cucumber are each 95% water.

70% of the human brain is water.

80% of all illness in the developing world is water related.

Up to 50% of water is lost through leaks in cities in the developing world.

In Nairobi urban poor pay 10 times more for water than residents of the city of New York.

In some countries, less than half the population has access to clean water.

40 billion hours are spent collecting water in Africa alone.

The average cost for water supplied to a home in the U.S. is about \$2.00 for 1,000 gallons, which equals about 5 gallons for a penny.

A person can live about a month without food, but only about a week without water.

Americans drink more than one billion glasses of tap water per day.

The United States draws more than 40 billion gallons (151 million liters) of water from the Great Lakes every day—half of which is used for electrical power production.

85% of the world population lives in the driest half of the planet.

Thirty-six states are anticipating water shortages by 2016.

300 tons of water are required to manufacture 1 ton of steel.

1 of 6 gallons of water leak from utility pipes before reaching U.S. customers

American use 5.7 billion gallons of water per day in order to flush toilets.

Refilling a half-liter water bottle 1,740 times with tap water equals the cost of a \$0.99 water bottle at a convenience store.

It takes about 12 gallons per day to sustain a human (this figure takes into account all uses for water, like drinking, sanitation and food production).

By 2025 half the world's people will live in countries with high water stress.

A water-efficient dishwasher uses as little as 4 gallons per cycle, but hand washing dishes uses 20 gallons of water.

The average family of four uses 180 gallons of water per day outdoors. It is estimated that over 50% is wasted from evaporation, wind, or overwatering.

There have been 265 recorded incidences of water conflicts from 3000 BC to 2012.

If the entire world's water were fit into a 4 liter jug, the fresh water available for us would equal only about one table-spoon.

Over 90% of the world's supply of fresh water is located in Antarctica.

Water use has grown at more than twice the rate of population increase in the last century.

If everyone in the US flushed the toilet just one less time per day, we could save a lake full of water about one mile long, one mile wide and four feet deep.

It takes seven and a half years for the average American residence to use the same amount of water that flows over the Niagara Falls in one second (750,000 gallons).

Source: <http://www.seametrics.com/blog/>