

# FLOWTITE® WATER STORAGE

UNDERGROUND FIBERGLASS TANKS



**CONTAINMENT**  
SOLUTIONS®



GREEN BUILDING APPLICATIONS  
**FLOWTITE**<sup>®</sup>  
FIBERGLASS WATER STORAGE

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## BUILDING ON A TRADITION

Containment Solutions, formerly the special products division of Owens Corning, pioneered a technology in 1965 to manufacture the first fiberglass petroleum storage tank.

Originally our tanks were designed for the safe storage of petroleum and other combustible materials. In fact, our design work resulted in the UL 1316 standard which governs fiberglass tank manufacturing for petroleum tanks. 50 years and 300,000 tank installations later, we continue to improve upon those processes utilizing today's automation to develop new applications and products.

We applied the same manufacturing expertise and ambition to the water industry when we introduced the Flowtite® line of water storage tanks. Flowtite tanks are designed to meet AWWA D120, NFPA 22, NSF 61 and IAPMO standards for water/wastewater storage tanks.

Non-corrosive fiberglass tanks from CSI are lightweight and watertight making them the perfect vessel for any water application. Flowtite tanks are manufactured at multiple locations to serve North America.

## CONTAINMENT SOLUTIONS FULL PRODUCT LINE

In addition to the water tank line of products, Containment Solutions offers oil/water separators, manholes and wetwells which can be combined with Flowtite tanks to create a complete water management system. Many of our customers use a combination of tanks in creative ways to meet ever changing needs. CSI offers custom manufacturing for complex projects as well as a full line of accessories to complement our industry leading quality vessels.

CSI is committed to providing environmentally conscious designs and products. As a member of the U.S. Green Building Council, we promote proper fluid management and sustainable site development.

AUTOMATED MANUFACTURING PROCESS ▼



### FLOWTITE® TANKS

#### IMPACT ON GREEN BUILDING

Water management is a significant component of the LEED® program. Underground fiberglass water storage tanks can apply to several LEED categories.

Flowtite fiberglass storage tanks, from Containment Solutions, contribute to satisfying multiple credits of the LEED Green Building Rating System. Flowtite tanks can store wastewater, graywater, rainwater, stormwater, even potable drinking water. Tanks can be fit with filtering components to separate oil and other contaminants so the water collected can be reused for landscaping and other applications.

With efficient water management strategies in place, your green building decisions will quickly pay for themselves.

Source: U.S. Green Building Council (USGBC)

## RAINWATER HARVESTING

Rainwater harvesting captures, diverts and stores rainwater for later use. Natural rainwater is very clean and therefore needs little filtering to be used as a secondary water supply. Rainwater harvesting is an innovative approach anyone can use.

With proper planning and design, your system can be built to capture up to 100% of the surface area rainwater. Rainwater harvesting can make a dramatic impact through financial tax incentives, compliance with current and future regulations and additional credits toward certification of “green” building. Newer applications include recharging cooling tower water supplies for evaporative cooling systems.

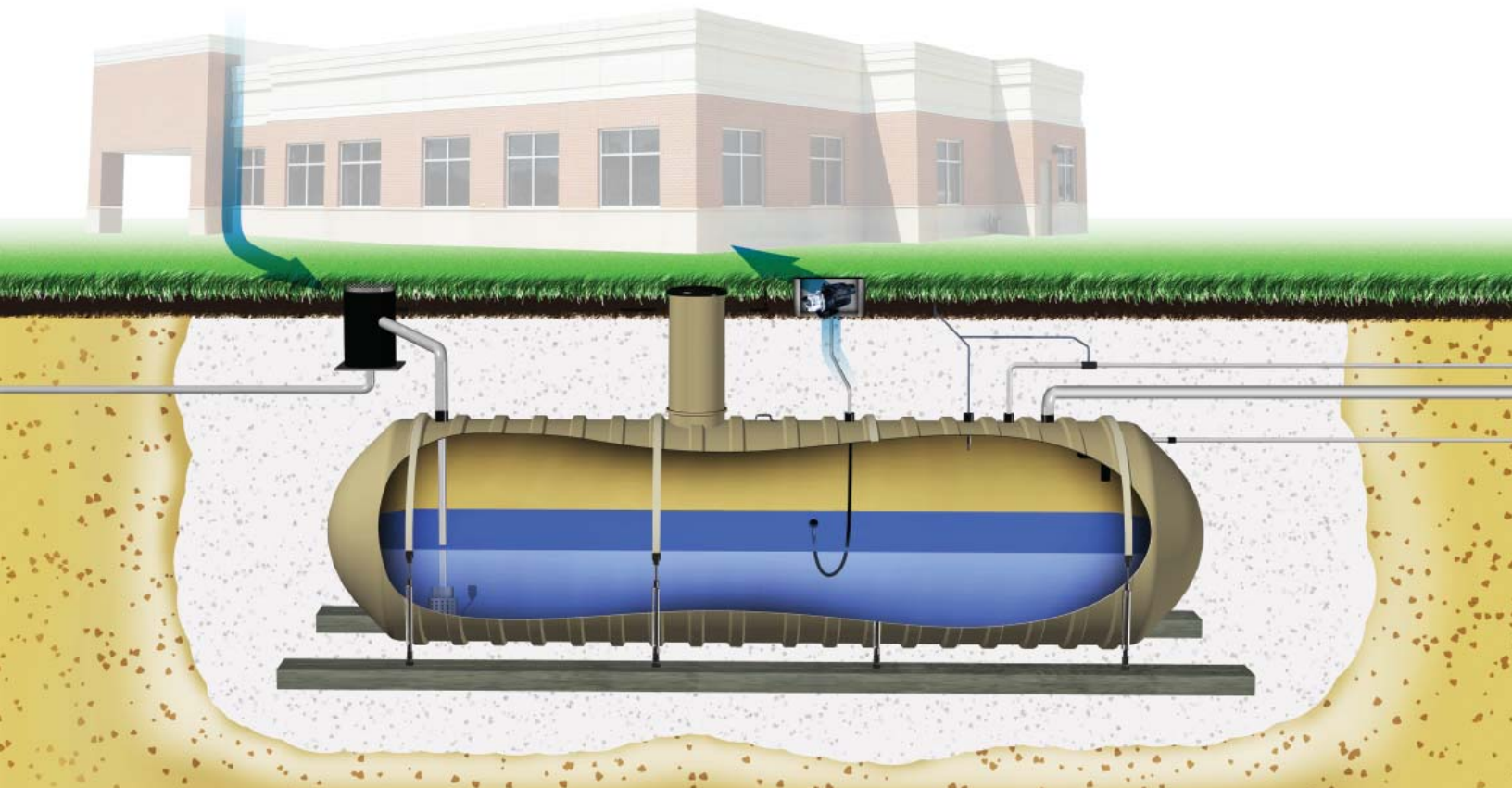
Tank sizes and accessories can be customized to meet both residential and commercial design plans.

### Typical Applications

- Commercial rainwater harvesting
- Residential rainwater harvesting
- Gray water reuse
- Irrigation systems
- Cooling Tower Recharge



Even where annual rainfall averages only 12 inches, you can save money by collecting and storing rainwater then using it to irrigate your trees, shrubs and lawn or as an alternative water supply for household needs.



## STORMWATER COLLECTION

In many rural areas of the world water can be scarce where annual rainfall is low. Although stormwater is a proven water collection source for these abnormally dry rural communities, similar water shortages can occur in urban areas as well even where average rainfall amounts should be sufficient.

Urban development introduces impervious surfaces to an environment, which prevent stormwater from soaking into the ground. Common impervious surfaces include parking lots, highways, rooftops, etc. These surfaces cause runoff water to funnel through waterways and out of the city too quickly to be absorbed naturally. The result is a unique situation where areas with average rainfall suffer from flooding during normal rains and unnecessary drought conditions during expected dry periods. The solution of course is to collect and store the flooding water for drier times.

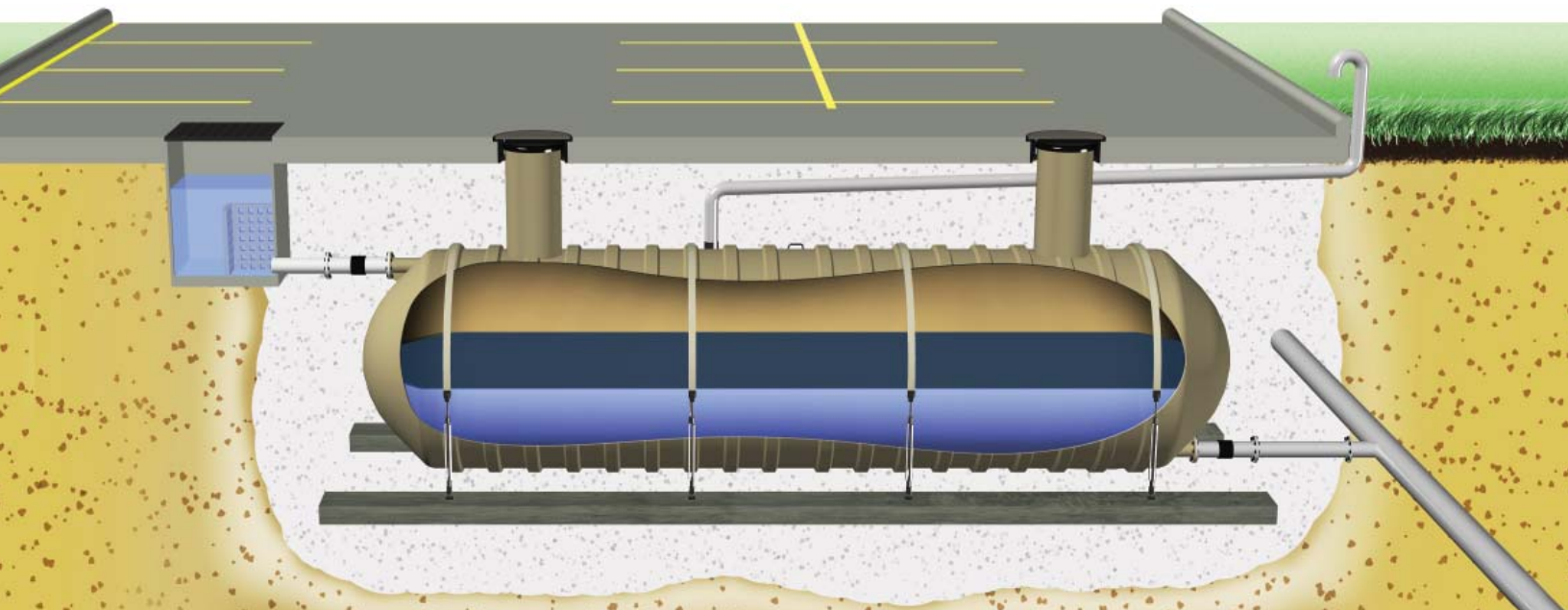


According to the US Department of Energy, landscaping irrigation and indoor plumbing account for 61% of all water usage in office buildings.

Collecting stormwater often begins with storm drains built directly into streets and parking lots. These drains would then channel the water to a Flowtite stormwater tank. With the proper accessories attached to your storage tank, collected water can be filtered and reused in both indoor and outdoor applications thus minimizing overall potable water use.

### Typical Applications

- Stormwater runoff collection
- Gray water reuse
- Irrigation systems
- Chilled water storage



## ONSITE SEPTIC

EPA statistics show that onsite septic systems serve approximately 25% of the U.S. population and 40% of all new housing development. Conventional systems can leak, causing “blackwater” to contaminate soil and ground water. The key to the onsite market’s growth is a watertight tank.

CSI manufactures fiberglass tanks for both aerobic and anaerobic septic applications. Our watertight tanks are a cost effective, long-term solution for private homes, commercial developments, industrial and municipal applications.

Government and state regulation of septic storage and distribution is changing to help reduce infiltration and exfiltration contamination. CSI Flowtite septic tanks, sometimes referred to as cisterns, eliminate leakage problems inherent in concrete septic systems.

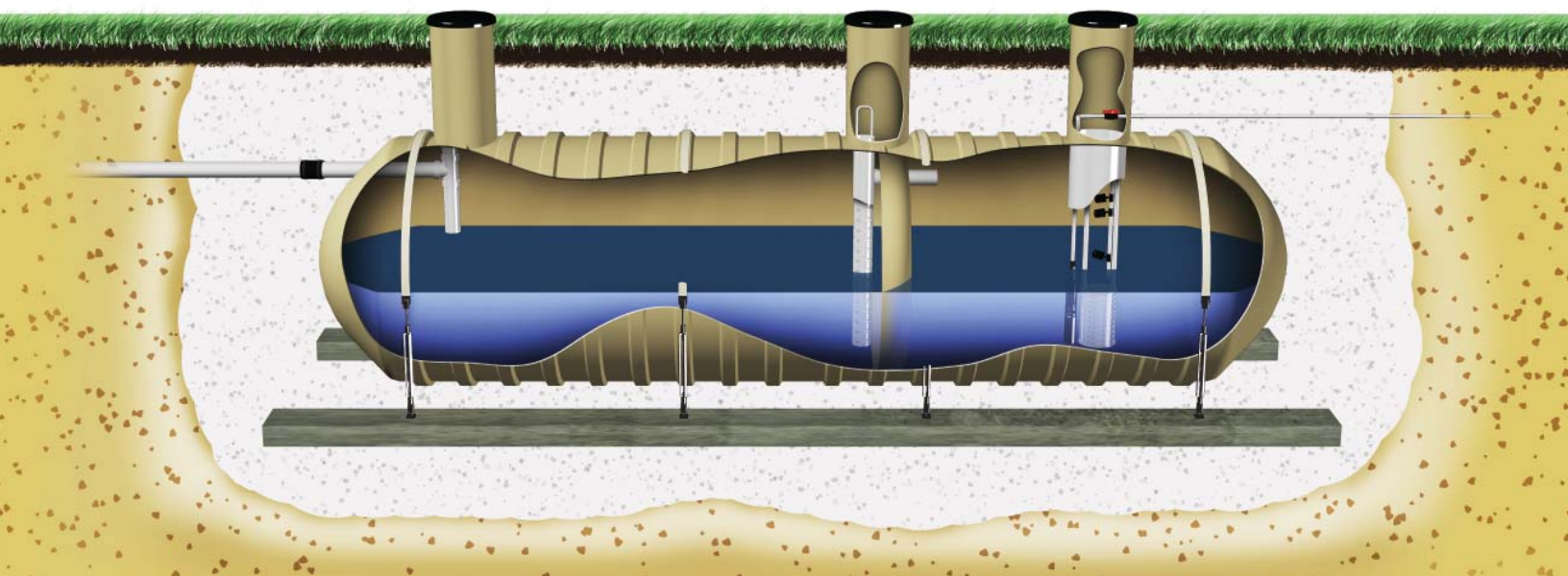
Flowtite tanks are engineered to meet and exceed current requirements and standards. We offer IAPMO approved tanks in various sizes up to 12’ diameter including fiberglass baffles and other accessories.



Filter housings were fabricated and assembled before shipping to the tank installation site.

### Typical Applications

- Resorts and spas
- Suburban developments
- Rural developments
- Rest areas
- Truck stops
- Municipalities



## FIRE PROTECTION

Lightweight Flowtite tanks can be custom built for any fire protection system design. We understand the requirements of fire protection systems, and manufacture our tanks to National Fire Protection Association (NFPA) specifications.

By providing a dedicated source of water required by local codes in residential development, CSI fiberglass tanks are the preferred way to have access to large volumes of water. The tanks provide unseen protection for the residents, yet are easily accessible for fire and municipal vehicles.

Large volume underground tanks can store enough water to suppress a potentially devastating fire before emergency vehicles arrive. Standard systems often use either a fiberglass bottom sump or a vertical pump vault to direct the water to the dispensing equipment.

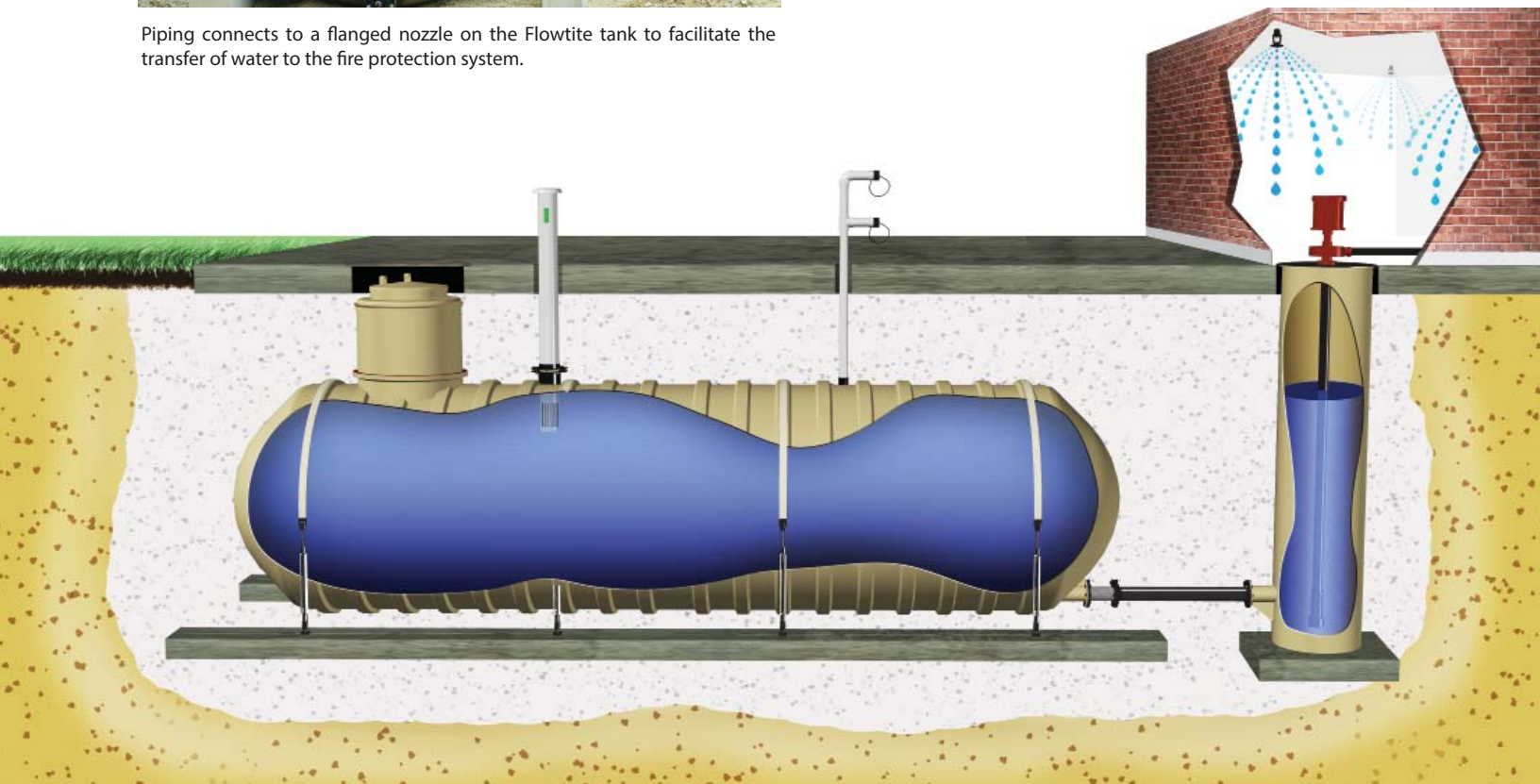
Flowtite tanks are often used for commercial fire protection due to the inherent water tight properties of fiberglass and the large volume capacities. The benefit of having concealed underground emergency water storage will help protect property values and thus protect your business investment.



Piping connects to a flanged nozzle on the Flowtite tank to facilitate the transfer of water to the fire protection system.

### Typical Applications

- Dry hydrant tanks
- Surge tanks for fire sprinkler systems
- Horizontal suction pump tanks
- Vertical suction pump tanks



## POTABLE WATER

CSI manufactures fiberglass tanks according to NSF 61 and AWWA standards for potable water storage. Because of their lightweight design, Flowtite tanks are easy to transport and easy to install making them popular in remote areas and any other location where a dependable and clean water source is critical.

According to the World Health Organization, less than 1% of the water on Earth is readily available for human use and consumption. With this finite supply of resource it is clear why conserving potable water is a key focus of green building project designs.

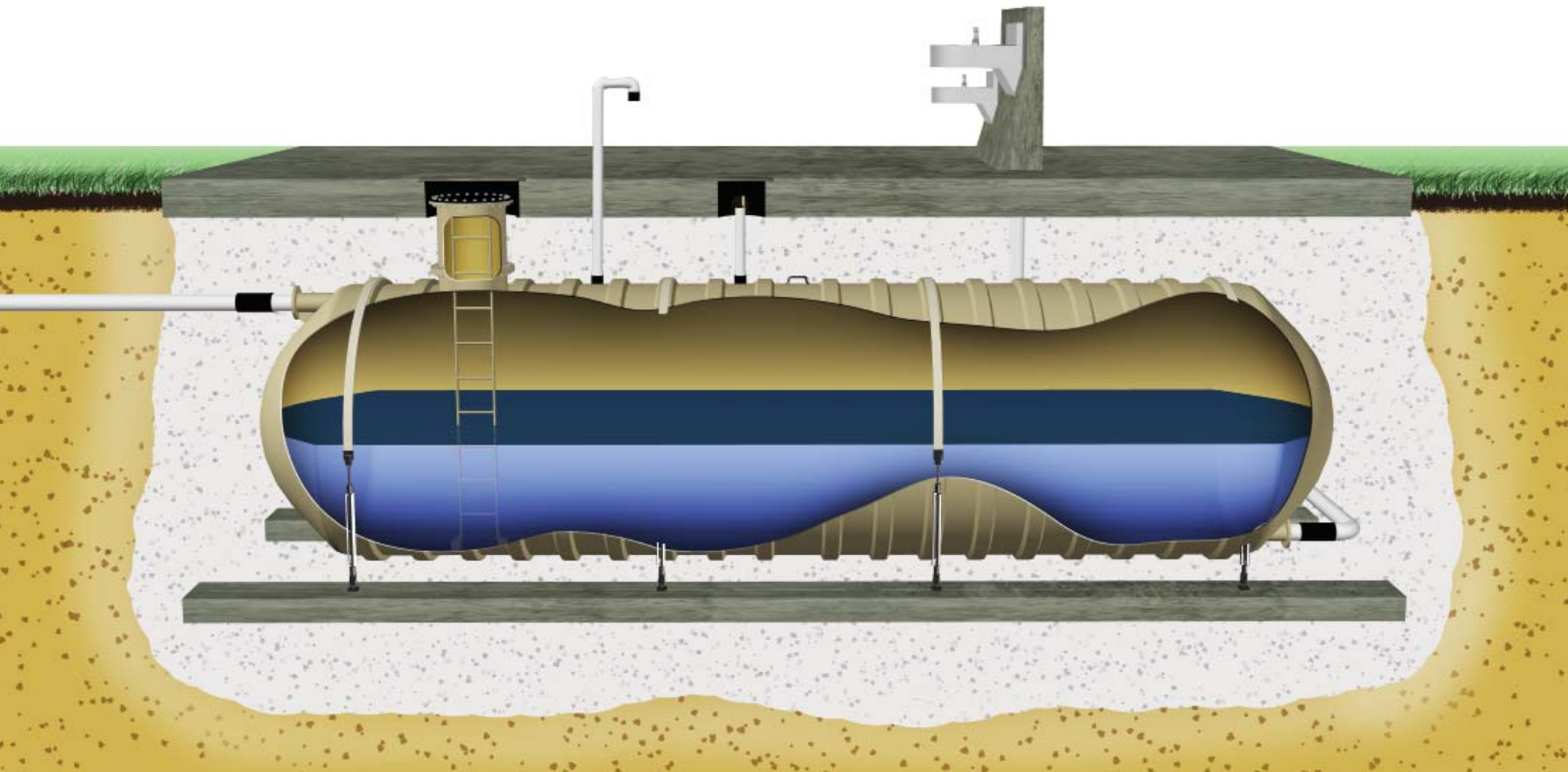
Flowtite water tanks have the advantage of being adaptable. Many customers install a tank for a combination of uses. For instance fire protection tanks are often built to store potable water.

### Typical Applications

- Rural properties
- Commercial business complexes
- Livestock feeding stations
- Emergency water supplies
- Large private resorts



Potable water tanks are frequently used for back-up or emergency water supplies at parks, resorts, rural development as well as heavily populated areas with limited excavation possibilities.





## GREASE INTERCEPTOR

Grease interceptors (also referred to as grease traps for smaller applications) are temporary storage/disposal tanks for wastewater in grease producing environments. Contaminants in this particular type of wastewater are made up of "fats, oils, and grease" ( FOG ). As FOG materials cool they congeal in sewer lines causing massive blockages and costly back-ups.

A grease interceptor is designed to store wastewater long enough for the immiscible materials to naturally separate and float to the top of the water level where the FOG can be collected and disposed of properly. Typically this wastewater flows directly from a sink drain or wash area. Due to the unpredictable nature of contaminants, the storage vessel should be rust proof and non-corrosive which makes fiberglass an ideal structural material.

Any establishment that introduces grease, oil or any other FOG material into the sewer system in quantities large enough to cause line blockages is required to install a grease trap or interceptor.

Flowtite tanks are engineered to meet and exceed current requirements and standards. We offer IAPMO approved grease interceptors in various sizes up to 12' diameter including fiberglass baffles and other accessories.

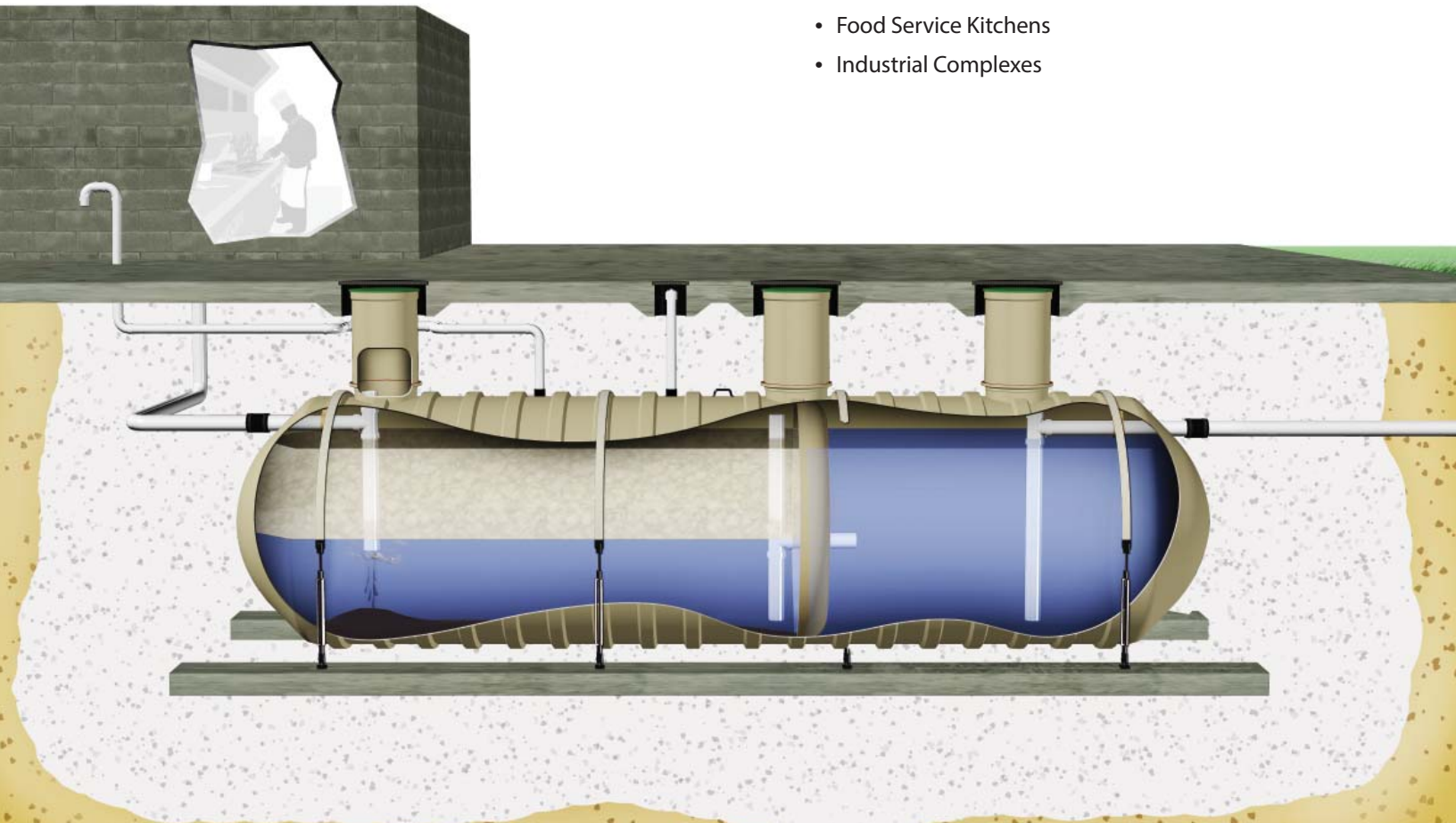


The National Renewable Energy Laboratory estimates that there is about 22 pounds of waste grease for every person in a major city.

*Source: U.S. Department of Energy*

### Typical Applications

- Restaurants
- Hotels
- Hospitals
- Schools
- Grocery Stores/Chains
- Food Service Kitchens
- Industrial Complexes



# TANK ACCESSORIES

## CUSTOM MANUFACTURED OPTIONS

Regardless of which water or wastewater tank your project demands, CSI has the accessories to match. From multi-compartment tanks to common appurtenances, our fiberglass storage tanks can handle any water application.

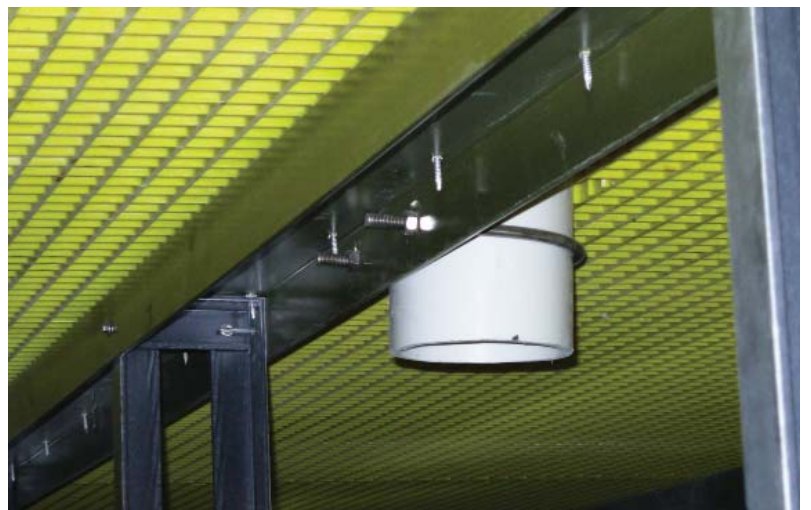
### Tank Accessories:

- Fiberglass vertical pump vaults
- Baffles
- Fiberglass manways
- Fiberglass collars and extensions
- Flanged nozzles
- FRP risers for access openings
- Watertight riser covers
- Threaded full couplings
- Hold down straps
- Concrete deadmen and anchors
- Tank ladders
- Fill/Draw pipes
- Pump platforms
- Dry hydrants and strainers
- Vent/level indicators
- Fill assemblies

▼ FIBERGLASS NOZZLES AND PVC PIPING



FIBERGLASS GRATING ▼



# STANDARD TANK SIZES

	Tank Capacity (gal./liters)	Tank Length (ft. & in. / mm)	Nominal Weight (lbs. / kg)
<b>4' Dia.</b>	600 / 2,294	7' 2" / 2,184	320 / 145
	1,000 / 3,657	11' 0" / 3,353	400 / 181
<b>6' Diameter</b>	2,000 / 7,976	11' 1½" / 3,391	1,050 / 476
	3,000 / 12,579	16' ½" / 5,029	1,500 / 680
	4,000 / 14,983	19' 8¼" / 6,000	1,650 / 748
	5,000 / 18,984	24' 7¼" / 7,500	2,000 / 907
	6,000 / 23,390	29' 6¼" / 8,998	2,300 / 1,043
<b>8' Diameter</b>	4,000 / 15,135	13' 11" / 4,236	1,550 / 703
	5,000 / 18,726	16' 8" / 5,080	1,800 / 816
	6,000 / 22,322	19' 5" / 5,944	2,050 / 930
	8,000 / 29,511	24' 11" / 7,595	2,450 / 1,111
	10,000 / 36,703	30' 5" / 9,296	2,900 / 1,315
	12,000 / 43,892	35' 11" / 10,947	3,350 / 1,520
	15,000 / 55,059	44' 5½" / 13,564	4,500 / 2,041
<b>10' Diameter</b>	10,000 / 38,827	20' 5" / 6,248	3,600 / 1,633
	12,000 / 44,944	23' 4" / 7,112	4,000 / 1,814
	15,000 / 57,175	29' 1½" / 8,871	4,750 / 2,155
	20,000 / 75,523	37' 4½" / 11,386	6,100 / 2,767
	25,000 / 94,522	45' 11" / 13,995	7,550 / 3,425
	30,000 / 112,866	54' 2" / 16,510	8,750 / 3,969
	35,000 / 131,865	62' 8½" / 19,114	10,050 / 4,559
	40,000 / 150,863	71' 3" / 21,717	11,600 / 5,262
	45,000 / 169,859	79' 10" / 24,333	12,900 / 5,875
	50,000 / 188,298	88' 1" / 26,848	14,200 / 6,450

**NOTE:** 12' diameter tanks available in sizes from 25,000 - 60,000 gallons. Please call your local representative for more information.

▼ **DEADMEN ANCHORS**



**LIGHTER IN WEIGHT THAN STEEL OR CONCRETE** ▼



## **CONTAINMENT SOLUTIONS MANUFACTURES:**

Underground and Aboveground Storage Tanks

Urea DEF Storage Tanks

Automotive Oil and Lubricant Storage Tanks

Oil/Water Separators and Interceptors

Flowtite® Water Tanks

Chemical Storage Tanks

Fiberglass Manholes and Wetwells



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