



Water Stewardship PSA Contest Background Information

City of Tampa's Water:

Water Source

Most of Tampa's drinking water is treated surface water from the Hillsborough River. However, the source of the drinking water starts north of Tampa. The headwater of the Hillsborough River is the Green Swamp, an 850-square-mile area of swampy flatlands and sandy ridges located in Lake, Polk, Sumter and Pasco counties. Crystal Springs, located in the southeast corner of Pasco County, provides additional freshwater flow to the Hillsborough River. The Hillsborough River flows 54 miles in a south-westerly direction, winding through very tranquil and pristine lands on its way to Tampa, until it reaches Hillsborough Bay. The river has three main surface water tributaries: Blackwater Creek, Trout Creek and Cypress Creek. The entire Hillsborough River watershed covers more than 690 square miles.

The path that the Hillsborough River takes as it winds through central Florida has created a natural wildlife corridor. The Hillsborough River is an ecosystem and the river corridor is the heart of this ecosystem. The protection of this corridor is critical for the preservation of wildlife such as the Great Blue Heron, the Snowy Egret, the Florida alligator, and more than 21 species of threatened or endangered plants. The protection of the corridor is also critical for the sustainability of Tampa's drinking water source.

At Rowlett Park in the city's north central area, the waters of the Hillsborough River reach the Hillsborough River Dam. The dam, in place for more than 100 years, creates a reservoir that impounds 1.7 billion gallons of water. The reservoir holds Tampa's primary drinking water source, which is treated at the adjacent David L. Tippin Water Treatment Facility.

The City of Tampa is permitted to withdraw an annual average of 82 million gallons of water per day (mgd) from the Hillsborough River at the Hillsborough River Reservoir and 5 mgd from Sulphur Springs. Unstable rainfall patterns and fluctuations in water use have a great impact on Tampa's water supply. During the typical dry season, March through June, the city's river supply is supplemented by purchased groundwater from Tampa Bay Water. Additionally, Tampa uses a series of eight Aquifer Storage and Recovery wells to store surplus treated drinking water in the deep underground aquifer (recharge) when excess surface supply is available in the rainy season. This high quality treated drinking water is then recovered to supplement the water supply during dry periods.

System Information

The Tampa Water Department treats and delivers drinking water to a service population of approximately 657,000 people in the Tampa Bay area and is responsible for citywide water conservation efforts to help manage local water demands. The Department's service area encompasses 211 square miles, with approximately 2,300 miles of water mains. Tampa's reclaimed water system delivers highly treated wastewater from the Howard F. Curren Advanced Wastewater Treatment Plant to residents and businesses

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in parts of South Tampa. The current system is capable of providing more than 9,000 customers with reclaimed water for lawn and landscape irrigation and future expansion of the system will include large, non-residential users.

Hillsborough County's Water:

Water Source

The primary source of Hillsborough County's drinking water is an underground limestone formation called the Floridan Aquifer. The two primary wellfields providing water in the northwest part of the county are the Section 21 and Northwest Hillsborough Regional wellfields. The south-central region of the county is served by a wellfield in the Lithia area. Our smaller systems are also served by wells from the same aquifer.

Water to Hillsborough County customers is also supplemented by surface waters from Tampa Bay Water's regional reservoir in the southwest part of Hillsborough County. This reservoir is filled by surface water from the Alafia River, Hillsborough River and the Tampa Bypass canal during the rainy season for use during the dry season. This reservoir can store up to 25 percent of the regions water supply. Another supplemental water source is Tampa Bay Water's Seawater Desalination plant in Apollo Beach. This plant provides up to 25 million gallons a day of drinking water by processing seawater from Tampa Bay.

System Information

Hillsborough County Water Resource Services has more that 141,000 water accounts and more that 132,000 wastewater accounts. We provide an average of 53 million gallons per day of drinking water to our customers through 2200 miles of pipe. We have over 15,000 reclaimed water accounts with an average daily reclaimed water use of 22 million gallons per day.

Hillsborough River Watershed Alliance:

The mission of the Hillsborough River Watershed Alliance is to protect and enhance the ecological sustainability and quality of life in the upper Hillsborough River watershed through coalition building, research, education and advocacy.

The Hillsborough River Watershed Alliance (HRWA), a public-private, non-profit program, was formed in 1992 as an innovative partnership between federal, state and local governments and agencies, environmental and civic organizations, and numerous citizens dedicated to protecting the natural resources of the Hillsborough River watershed. The HRWA is the only non-profit organization that dedicates its entire energies to the Hillsborough River watershed, an expansive and fragile ecosystem that flows directly into Tampa Bay. Projects and activities are conducted through our project networks, each with its own unique focus - Education & Outreach and the Frog Listening Network. The HRWA also hosts a coalition of agencies and organizations that are involved in environmental education within the watershed.

Tampa Bay Water

Tampa Bay Water is a non-profit government agency created by interlocal agreement to supply wholesale water to its Member Governments: Hillsborough County, Pasco County, Pinellas County, New Port Richey, St. Petersburg and Tampa. In turn, these Member

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Governments provide this drinking water to more than 2.4 million people in the tri-county region. Tampa Bay Water delivers an average of 182 million gallons per day to the region through a diverse water supply network that includes a Surface Water Treatment Plant, the three sources that supply it, seven groundwater treatment plants, 13 regional wellfields, and almost 200 miles of pipeline. Each of these facilities is part of the Master Water Plan, a blueprint to meet the long-term drinking water needs of the Tampa Bay region.

How Can You Help Protect Our Water Sources?

Local sources of drinking water include surface water, such as rivers, lakes and streams, and groundwater from springs and aquifers. As water travels over the land surface or through the ground, it picks up minerals and other substances from plants and animals. A major source of surface water pollution is rainwater run-off traveling directly into the surface waters from dirty pavement, industrial sites and agricultural areas. You can help protect the Hillsborough River by using lawn and garden fertilizers and pesticides sparingly. Properly recycling and disposing of car batteries, used motor oil and other fluids, hazardous household products, including cleaning solvents, paints and chemicals, also helps to protect local surface water and ground water sources.

Water Conservation

The Tampa Water Department works to help consumers change attitudes and water use behaviors through public education. Tampa began an aggressive water conservation program in 1989. The program focuses on five areas: alternative water supplies, code provisions, conservation projects, a multi-tiered rate structure and educational activities. In 2007, Tampa Water Department became a WaterSense Partner through a program sponsored by the U.S. Environmental Protection Agency. Its mission is to protect the future of our nation's water supply by promoting and enhancing the market for water-efficient products and services.

Similarly, Hillsborough County Water Resource Services has a multi-faceted water conservation program that includes enforcement of watering restrictions, a multi-tiered rate structure to encourage less water use, in-school education programs and research into new water conservation methods.

Both Tampa's and Hillsborough County's water conservation programs continue to expand and change to better meet our present needs and prepare for the future.

Florida and Tampa Bay's Water

The average rainfall of west central Florida is 53 inches a year, making it one of the rainiest regions in North America. However, much of the rainfall occurs in June through September, and most is lost to evaporation or runoff. The remainder replenishes the region's ground waters. Groundwater is rainwater that has soaked into the ground to an aquifer, an area of underground rock and sand, where it is "stored." Surface water refers to water on the surface of the earth, such as lakes, rivers and streams. Of the approximately 14 inches of rainfall that remains after evaporation has taken its toll, about 9 inches go to surface waters, leaving only an average of 5 inches to resupply Florida's underground water reserves.

In some areas of the region, aquifers are connected with the lakes, rivers and wetlands above them. If too much water is withdrawn from the aquifers, the water level of the lake or river above may decline. Excessive groundwater withdrawals could also cause the salt water that surrounds the Floridan aquifer to move or intrude into freshwater areas, which decreases the

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amount of fresh water available and increases the cost for providing clean, potable water to residents. Once salt water enters an aquifer, that source of drinking water is lost forever.

It's expected that ground water will always be a source of drinking water, but access to other sources is essential. The balance of the region's water supply comes from surface water. The use of surface water will most likely increase in the future because the ability of the groundwater system to satisfy an ever – growing need for fresh water is limited. But there are limits to surface water as well. It is anticipated that by 2025, about 45 million gallons of additional water may be necessary each day to supplement current water resources to meet the projected water demand of all the current and future water users within the Hillsborough-Pasco-Pinellas County region.

Currently, water shortages are occurring in areas throughout Florida. Within five years, at least 36 states will face water shortages. Water supply problems will only get worse, especially if future population growth predictions are accurate. Florida's population is projected to increase 34 percent by 2025 from over 18 million to more than 24 million people. This will increase the annual water demand from approximately 2.4 trillion gallons of water a year to nearly 3.3 trillion gallons.

According to the Environmental Protection Agency (EPA), the average American uses approximately 100 gallons of water each day. Currently, water users served by the City of Tampa and Hillsborough County use an average of less than 100 gallons per day. While overall consumption is below the national average, it is estimated that 30 percent of Tampa's drinking water is being used for irrigation.

Many people use water extremely inefficiently and that must change. Cost-effective and reliable water conservation technologies are readily available. We have the know-how and ability to use water much more efficiently. We just need the will to change the way that we use our precious and limited water resources. By working together, we can conserve our water resources by using water more efficiently.

Resources

To find more information please visit:

Local:

Tampa Water Department - www.tampagov.net/water

Hillsborough County Water Resource Services - www.hillsboroughcounty.org/water/

Hillsborough River Watershed Alliance - www.hrwa-fl.org

Regional:

Tampa Bay Water - www.tampabaywater.org/

SWFWMD - www.swfwmd.com

Florida and Beyond:

EPA WaterSense - www.epa.gov/watersense/

Florida Section of the AWWA - www.fsawwa.org/

Florida's Water - www.floridaswater.com

Florida Yards - www.floridayards.org