

## Cutting-edge landfill designed to serve the city for 100 years

By Beth Wilson | Corpus Christi Caller-Times  
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Photo by George Gongora/Caller-Times

CORPUS CHRISTI — The land now looks like a cross between a prison farm and a nature preserve. But in 100 years, the more than 2,200 acres at the southwestern edge of the city will have trash piled higher than the Harbor Bridge.

The city's new \$29 million Cefe F. Valenzuela landfill opened this month after more than a decade of planning.

It replaces the J.C. Elliott landfill, 7001 Ayers St., which opened in 1972. Officials said earlier this month the Elliott landfill could have filled to capacity as early as Oct. 20, but now say it likely will have enough space to take trash through mid-November, depending on how much garbage is dumped there.

A long, winding road off County Road 20 leads to high gates with security cameras and 2,274 acres that is the city's new site for trash. Cotton and sorghum fields surround the site near Chapman Ranch and London School, and a low, brick sign is the only thing identifying this area as a landfill.

"Even if there were residential homes (nearby), they'd hardly know what kind of operation was going on here because we own enough land around it," said Landfill Manager Tony Benavides, referring to the 2,274 acre-spread the site is on and the 500-foot buffer between the trash pits and neighboring rural landowners.

The new landfill is expected to take 500,000 tons of waste a year and handle 100 years of Corpus Christi's trash. All that could change, however, if more people come to town, if more recycle or if landfill techniques advance to allow for more waste in less space.

The landfill will have two units, and construction began in August 2005 on the first, which has 12 separate cells, or trash pits. The 18-foot-deep hole was dug for the first 15-acre trash pit

About 10 months ago and lined with high-grade plastic designed as a barrier to keep garbage liquids, called leachate, from seeping into the surrounding soil.

The two units are designed to hold piles of trash about 300 feet high, with about 255 to 265 feet above ground. That's higher than the Harbor Bridge, which has 138 feet of clearance, and more than three times higher than the current landfill's trash peak, which stands about 70 feet above ground.

The Valenzuela landfill's first unit will reach its peak in about 45 years, said Assistant Director of Solid Waste Services Lawrence Mikolajczyk.

"It will be a big mountain out here," he said.

The city picked this site, in part, because of its location and lack of neighbors, said

Kevin Stowers, a city engineer who worked on the project.

London School is drawing people to this area, but city services such as water and wastewater lines aren't likely to be extended near the landfill. Stowers said he doesn't expect any large-scale development because the well water in the area does not meet state drinking water standards.

Stowers said the city met with neighbors and those who farm the surrounding fields before construction began. They worked to address their concerns by putting the trash pits as far as possible from the roads and existing homes, using a 500-foot buffer, which is greater than the required 150 feet, and improving stormwater runoff by building a drainage channel.

The city also upgraded County Road 20 to handle the traffic from the garbage trucks.

### Upgraded operations

Benavides said the new landfill can be taller than the old one because there aren't the height restrictions that are in place for the Elliott landfill, which is in the flight path of the airport and Cabaniss Field, where the Navy trains.

The new site is nearly self-sustaining with its own wastewater system, water, diesel and gas tanks, a mechanic shop and truck wash station.

At the security hut to the right of Valenzuela's entrance gate, Diana McNeil with AmTex Security keeps busy with books, cards and a bike until the landfill gets busy. Cameras watch the entrance, the scale house, hallways in the administration building.

When it is fully operational, employees will check loads randomly to assure what's dumped is allowed at the landfill. Asbestos, containers filled with unidentified fluid and black telephone poles treated with chemicals are not allowed, and soils will be tested to see if they've been contaminated with hazardous material.

In the scale house, computers calculate what has been dumped by weighing trucks when they come in and when they go out. Mikolajczyk said automation means only one employee will be needed

at the scale house instead of the two needed at the Elliott landfill.

The city has 20 employees in landfill operations. Most will transfer to the new landfill, and no additional employees are planned.

The city's solid waste services department is budgeted to bring in about \$29 million in revenue this year, mostly from commercial trash haulers that pay to dump at the city's landfill. Not all of that is needed to cover operations, so about \$8.5 million is projected to go into the city's general fund budget to cover things such as neighborhood cleanups and street repairs.

The new landfill was paid for with certificate of obligation bonds that were covered, in part, by previously approved increases to landfill fees.

### Changing Regulations

Mikolajczyk and Benavides have seen significant changes in how landfills are operated. More stringent regulations were initiated in the early 1990s and led to the closing of a Westside landfill at Greenwood and Carbon Plant roads.

Mikolajczyk said the new regulations required an expensive, heavy-duty plastic liner to be placed in the bottom of new trash pits. The city was operating the Westside and Elliott landfills simultaneously and chose to close the Westside location and update Elliott when the regulations were enacted.

Before the city took over the Westside landfill in 1976, Corpus Christi landfills were much smaller operations and practically just holes in the ground filled with trash, Mikolajczyk said. They started when someone excavated an area for fill dirt for construction. Soon after, the hole became the dump.

Those operations weren't heavily regulated, and not all such locations are known. But as more was learned about hazardous materials and groundwater contamination, safety regulations were enacted to protect the air and water

quality surrounding these large operations.

Now, a city must fill out extensive paperwork before building a new landfill. It has to meet an increasing number of regulations and pass inspection by the Texas Commission on Environmental Quality, the state agency that permits, inspects and monitors landfills.

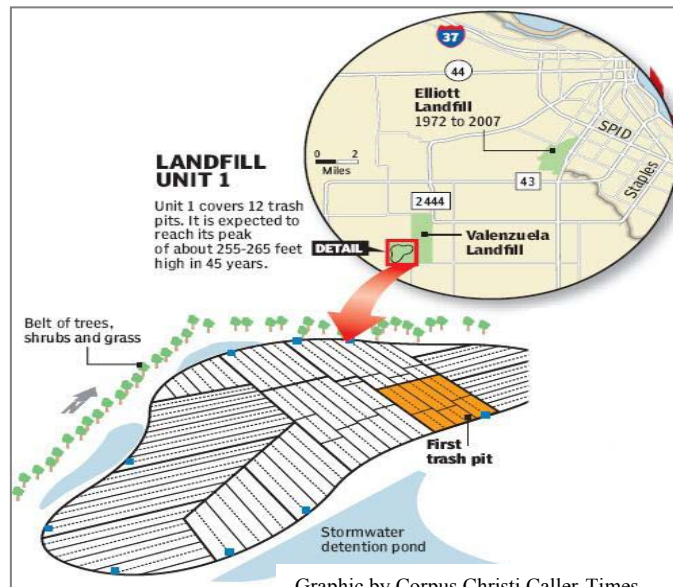
Benavides said his correspondence with

built, and city officials are seeking to modify that permit and hope to eventually get permission to use the ponds.

Until then, the state is allowing the landfill to open using temporary leachate storage tanks. The tanks will collect the liquids, which would be pumped into trucks and hauled in 7,000-gallon batches to the Greenwood Wastewater Treatment Plant, about eight miles away. The plant is expected to generate 8,000 to 10,000 gallons of leachate a day.

Elliott was scheduled to meet capacity last year, but changes in landfill management allowed for more garbage there in part because of improved compaction techniques. It will remain an integral part of the city's waste collection system as the site of the \$4 million Citizens Collection Center and Transfer Station.

Mikolajczyk said city officials worried people wouldn't make it the extra 12 miles to the new landfill and would dump their trash along roads. Instead of risking the extra litter, which means extra costs to pick it up, officials decided to turn Elliott into a collection and transfer point.



the state agency to get the new landfill built already fills five binders. He has a wall full of empty shelves in his new office to fill up with the required records on the landfill's operation.

Loads of household waste and some commercial loads began dumping at the new landfill Oct. 13.

The city planned to open the new landfill in September but was delayed because construction didn't match what was described in permits approved by the state.

The new landfill planned to pipe the garbage liquid into one of two 10-acre leachate evaporation ponds where it would be filtered through the water and evaporate.

That method was not described in the state permit that sets up how the landfill is

To the side of the filled landfill pits, another smaller pit will continue to take trash. There are four dump stations for residents with containers underneath that can each hold 40 cubic yards.

On the commercial side, some haulers will drive up there and dump their loads, which will be pushed off the ledge and into one of two containers that can hold 100 cubic yards each. Once filled, those containers will be trucked to the new landfill.

When the last load is dumped at Elliott's main pit, it will be covered with the same type of plastic it's lined with. A system of vents in the cover will allow for release of pressure from trapped methane.

"It ends up being like a big burrito and then you have to vent it (for gases)," Benavides said.

After the last load is dumped at Elliott, the city has 180 days to cover up the pits. Mikolajczyk said they may get an extension to fill up every available space and go through the complicated process of covering the pits, which will be completed by a contractor. It's unclear how long that will take.

The site will be monitored and groundwater tested for 30 years, at which point an evaluation will determine whether further testing is needed.

The city is testing out the new landfill now before opening it up to all the commercial haulers, Mikolajczyk said. Construction is ongoing at the new transfer and collection station at Elliott. A formal opening ceremony has not been scheduled.

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