

# Corpus Christi-Nueces County PHL: From Candle Jar to PCR

## Director

Sandra Heatherley became director of the Corpus Christi-Nueces County Public Health District Laboratory in 2000, after a career managing clinical laboratories, teaching laboratory science, inspecting laboratories for the Joint Commission on Accreditation of Healthcare Organizations and running her own laboratory consulting firm. “I just love laboratories,” she said. Heatherley, who has lived and worked in Oklahoma for most of her life, was drawn to Texas for her husband, an avid gardener who “wanted to grow oranges and figs and grapefruits.” Today she is enjoying the bounty of her husband’s garden while working hard to upgrade the infrastructure and technology at her latest laboratory.

## Location

Corpus Christi is the fifth largest port in the US; the local economy is also driven by oil refineries, a US Naval Air Station and a thriving bird-watching industry. Home to 300,000 people, Corpus Christi is 60% Hispanic or Native American, and 56% of the total population is either below age 19 or above age 49. “A lot of our working-age people are going to Austin or Houston,” explained Heatherley.

## Facility

The laboratory occupies 5,000 square feet on the first floor of the district health department in a building dating to 1978. “In order to save money they were doing things that I hadn’t seen since I was a student rotating through the VA in the 1960s,” said Heatherley about her arrival five years ago. “The infrastructure just hadn’t been taken care of very well.” Today, about two-thirds of the laboratory has been remodeled, including the addition of a large BSL-3 workspace. An experienced laboratory designer, Heatherley said, “I have a plan for the other third, if I can make it come true.”



The Corpus Christi lab media making area before (left) and after (right) the renovation.

## Staff

The laboratory has seven staff members, but nine authorized positions—including a newly-approved position for a clinical laboratory technician to work on public health preparedness.

## Revenue

Yearly operating expenses are about \$500,000. Roughly a third of that amount comes from county funds, a third from federal grants and state general funds and a third from laboratory-generated income, mostly water testing fees.

## Distinguishing Characteristics

- One of 11 laboratories in the Texas Laboratory Response Network (LRN).
- A high-volume water testing facility. The laboratory collects and tests marine water from Gulf oyster beds between September and May for the Texas Division of Seafood Safety, tests recreational marine water for the EPA’s Beach Watch program, tests water for the city at the local marina and performs bacteriological testing on drinking water.

## Highest Volume Testing

On the environmental side, drinking water testing is most common. On the clinical side, chlamydia and gonorrhea testing rank highest, with about 25,000 tests per year. The laboratory distributes

influenza collection kits to emergency room physicians as part of national influenza surveillance. Specimens are passed on to the Texas state public health laboratory where scientists perform phage typing to help formulate next year’s influenza vaccine.

## Notable Success Stories

- Renovating a large portion of the facility.
- Select agent program certification and designation as a confirmatory laboratory in the LRN.
- Integration with the local medical laboratory community. “Prior to my taking the job,” said Heatherley, “there wasn’t much interaction between the public health laboratory and the hospital and physician office labs. We’ve changed that. I chaired the program committee meeting for the Texas Association of Clinical Laboratory Science (TACLS) 2005 state meeting held here in Corpus Christi. That was a good way to get myself and other staff members involved in the association. Now we have more open communication with local clinical laboratories, which we need in an outbreak or surge capacity situation.”

- Participation in the CDC Multi-Center Water Validation Study to pilot a new method for detecting biological hazards in large bodies of water, such as water reservoirs and storage tanks.

### Challenges

- Two sets of priorities. “As a city and county public health laboratory, we have five positions that are city-funded (six with the newest position added) and three positions that are county-funded. Federal and state grant funding is awarded by contract to both the county and the city, which then appropriate the monies to the health department. So it’s a challenge when the city and the county don’t see eye-to-eye on things. It’s also a big challenge to remember who’s funding what. There are two sets of rules, two sets of holidays, two benefit packages.”
- A nationwide shortage of laboratory staff. “One of the things I’ve noticed here in Corpus Christi is that labora-

tory workers are aging, but they’re staying in their jobs. We do fortunately have a clinical laboratory program at Del Mar Junior College and a clinical laboratory science program at the local branch of Texas A&M University.”

- Avian influenza. “Corpus Christi is a major thoroughway for migratory birds.”
- A future hurricane.

### Goals

- Acquire the capability for on-site West Nile virus and influenza testing.
- Implement a laboratory information management system (LIMS). “We are a completely manual, paper requisition facility.” The state public health laboratory has issued an RFP for a LIMS.
- Subcontract with the laboratory of a large local grocery chain “to do an ongoing predictable amount of food

testing to use our reagents before they go out-of-date and to keep our skills up-to-date. If you only test food when there’s an outbreak, you can go a year or 18 months without doing any testing. And those are the same skills—such as use of the PCR—that we would need in a bioterror event or infectious disease outbreak within the community.”

- Eventually offer the QuantiFERON-TB Gold® test.
- During Heatherley’s five years as laboratory director, she said the facility has gone from using a candle jar to culture gonorrhea and other bacteria that require reduced-oxygen to high-tech PCR testing (although the candle jar is still around). Within the next five years, she said, “If our staff can achieve all of these goals, I’ll be happy.”

# Serving public health at both the State and Federal levels.



architecture. engineering. planning.



2006 R&D Magazine Lab of the Year Special Mention  
Centers for Disease Control and Prevention  
Emerging Infectious Diseases Laboratory  
Atlanta, Georgia

CUH2A.com