

# WHAT'S NEWS @ HFSC

HOUSTON FORENSIC SCIENCE CENTER • AUGUST 2019

## HFSC, HPD CHANGE FIREARMS TESTING, DISRUPT GUN VIOLENCE

By Aimee Grimaldi



The Houston Forensic Science Center and the Houston Police Department marked an important milestone on August 15 when a longstanding five-day hold on firearms evidence was lifted, allowing requesters to more quickly receive crucial investigative information.

Getting information to law enforcement more quickly could more immediately disrupt the cycle of gun violence and improve public safety.

Removal of the hold is the culmination of work that began a year ago when HFSC launched a process improvement project that looked at workflows for evidence that needs to be tested by multiple disciplines.

“The more efficient process allows for faster upload into the national firearms database so investigators get information about ‘hits’ more quickly,” said Dr. Peter Stout, HFSC’s CEO and president.

The reason for the five-day hold \_ which was implemented by HPD in 2010 \_ made sense: to get a faster database “hit” to investigators. But HFSC wanted a more efficient process to accomplish the goal of preserving latent print and DNA evidence before a firearm is test fired.

The project team launched in December a new process under which HFSC proactively preserves possible evidence deposited on a firearm’s magazine so the gun can immediately

undergo analysis for the National Integrated Ballistic Information Network (NIBIN,) the national firearm database overseen by the ATF.

The new process minimizes handling of the magazine, where the best prints can be found. The change required close collaboration between HFSC and HPD’s command and property room to ensure investigators would know to place the still-loaded magazine into proper evidence packaging and submit it to the property room.

For the process to truly work, the magazine must be preserved throughout the NIBIN analysis. So the firearm section uses a separate magazine from HFSC’s reference collection for NIBIN processing, preserving the original evidence for future latent prints or DNA analysis.

HPD has hit a 75 percent preservation rate since December, so the agencies agreed to remove the five-day hold.

To ensure DNA and latent print evidence isn’t lost, HFSC analysts will evaluate all firearms for visible biological material. When found, biological material will be swabbed and preserved for future requested analysis. In cases where HFSC does not have a proper magazine in its reference collection to complete the NIBIN testing, latent print processors will conduct their analysis before the firearm moves on to NIBIN.

“The result here is the right answer at the right time. HFSC is both preserving potential evidence while getting information to stakeholders more quickly,” Dr. Stout said.

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# A Few Words From Our PRESIDENT

HOUSTON FORENSIC SCIENCE CENTER

**Peter Stout, PH.D.**  
CEO/President

I went into forensics because of my family's not-so-unique experience with the justice system and the impact it has when it doesn't work as expected. Many in forensics entered the field because of similar personal stories where injustice occurred because objective forensic evidence failed. For my family, that meant a woman who had been charged and originally convicted for participating in my grandfather's murder later had her conviction overturned when the court ruled the circumstantial evidence used in trial was insufficient.

To this day I don't know which answer was right. What I do know is there was a failure of forensic evidence in that case and the impact of it still echoes in my family 40 years later. That failure, though, is not unique to my family.

Crime labs nationally have made mistakes that led to injustice. And there are many cases \_ that get less attention but are no less significant \_ in which a crime lab is overlooked, shunted aside, ignored or bypassed because of backlogs.

This is a cycle that repeats itself across the country. Crime labs balance between the pressure to conform, comply and meet demand. One of my favorite phrases referring to a result that is too slow or has too many explanations: "son, I don't care how the sausage is made, just get me my dinner on time." My reply: "I appreciate the demands on others in the system, but when that sausage poisons you, we are both going to care how it was made."

Crime labs struggle routinely with auditing past work, correcting errors and explaining in court the implications of flawed evidence. We see the patterns that produce systemic failure. And though it is never popular to point out the flaws, crime labs are obligated to speak up when as a system we risk making a toxic sausage.

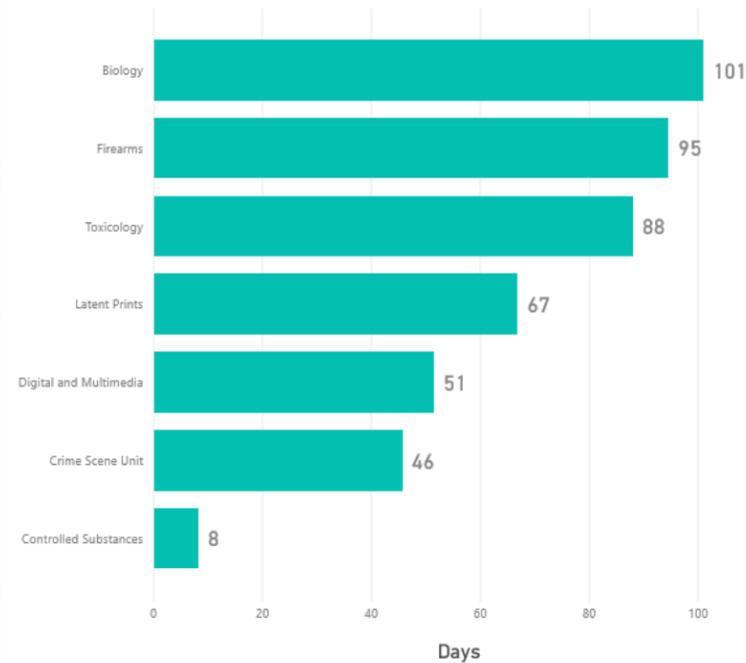
We produce complicated, nuanced results. We know ANY accreditation is ONLY a minimum standard and not a "gold standard." We know the result is only as good as the evidence we receive. Others in the system have their own complexities to juggle, so it inappropriate to assume they understand the nuance. Because of this knowledge, it is our responsibility to try to ensure others understand the implications and limitations of the results. We also have a responsibility to clearly articulate the implications and limitations of actions related to forensic testing. Whether it is a new technology whose capabilities are overstated or policies that make our results inadequate we must speak up.

Crime labs have learned hard, painful lessons from failed results and even greater failures from trying to quietly resolve issues rather than dealing with them openly. We do not speak up lightly.

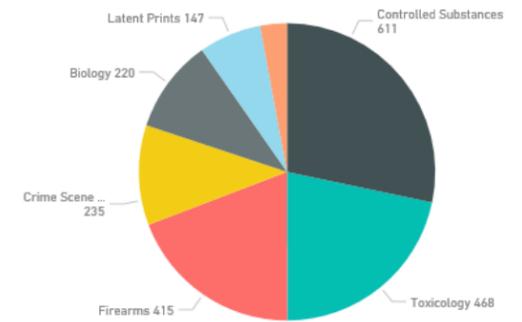
Peter Stout, PH.D.  
CEO/President

# HFSC At A Glance

Average Turnaround Time for - July 2019



Requests Completed by Section



HFSC has talked for some time about the impact the move will have on turnaround times and backlogs.

But three months before the actual move, numbers are creeping up, due in part to the intensive move planning going on labwide, which is already pulling people away from work and diverting attention.

In addition, the firearms section recently eliminated a backlog of guns that were awaiting upload into the database. That backlog has been eliminated and since turnaround times are calculated from the moment of request it artificially increases those numbers when older cases are completed.

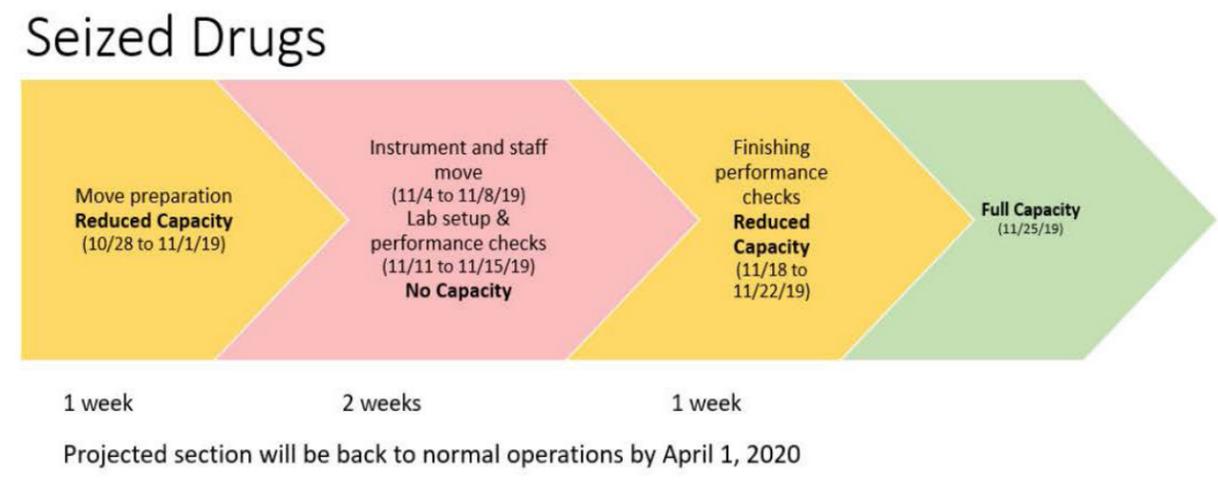
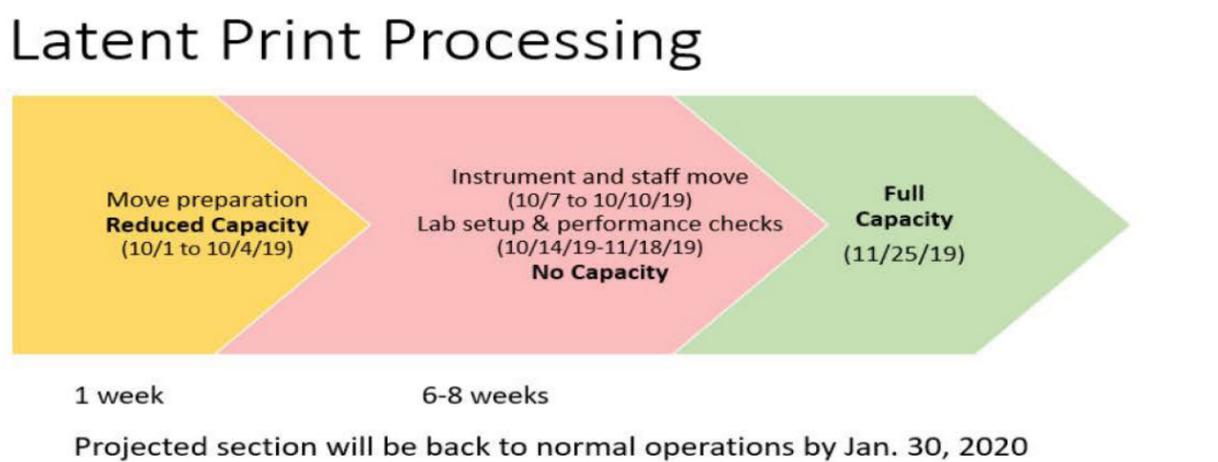
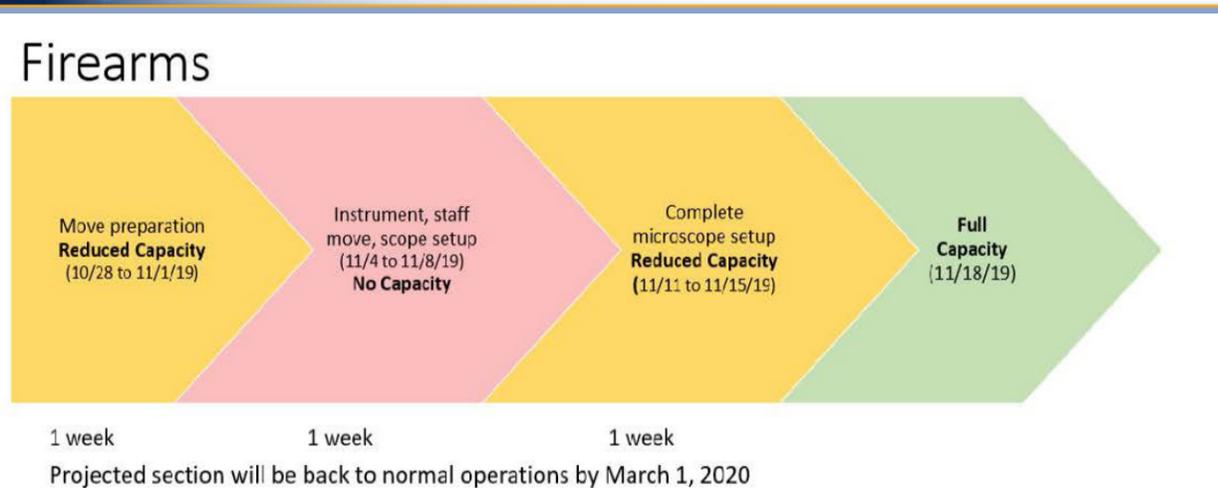
HFSC expects turnaround times and backlogs to grow in the coming months, but most sections should be back on more stable ground come spring.

For more information, please visit [www.houstonforensicscience.org](http://www.houstonforensicscience.org)

# The big move:

## HFSC'S NEW DIGS BY JORDAN BENTON

Although HFSC's upcoming move will ultimately provide a lab that is far more suited to the city's needs, there will be some pain during and after the move, including complete work stoppages, backlogs and phased plans to come back online in the new facility.



The Houston Forensic Science Center is three months from completing a complex laboratory move to a new facility located at 500 Jefferson Street in downtown Houston.

About two-thirds of the 200-member staff moved to the new facility in the spring. But the final moves in October and November \_ the lab moves \_ are more complex, critical, quality driven and labor intensive. There will be a period of time when the lab is completely shutdown and a lengthier time when production will be slowed or partial as instruments and other equipment make the move and come back online.

Instruments and microscopes for forensic biology, toxicology, seized drugs and firearms will move in three phases.

Six fume hoods \_ four from latent prints and two from toxicology \_ are moving from the current facility at HPD's downtown headquarters at 1200 Travis

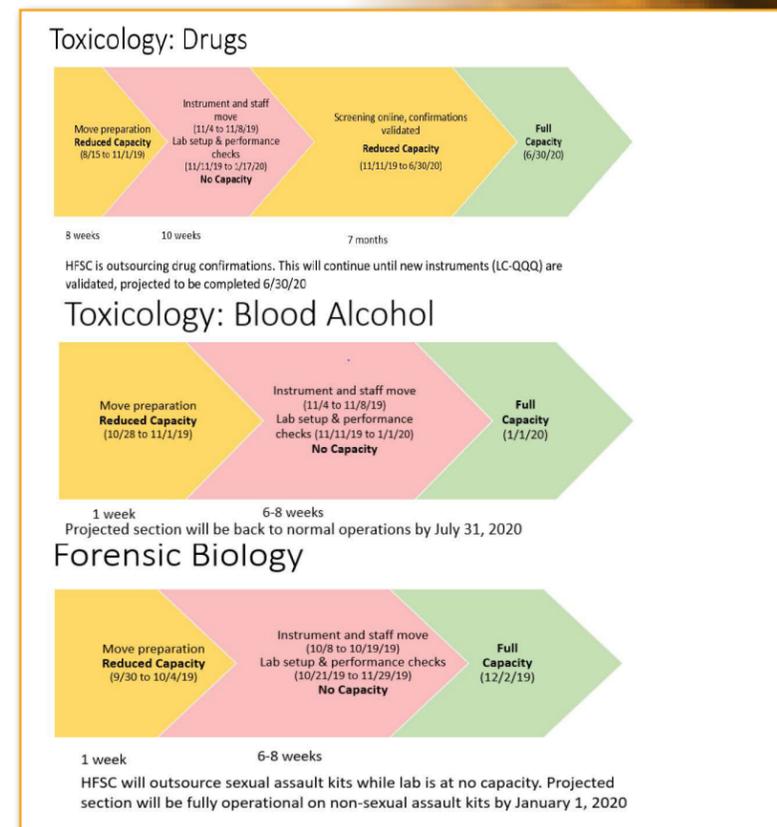
this month.

Five new fume hoods have been delivered directly to the new building.

Once equipment and networks are taken offline, there will be work stoppages that differ in time between sections depending on how long it takes them to bring their equipment back online and run all the necessary performance checks. HFSC will work closely with stakeholders to handle rush cases and other emergencies during the move.

Meanwhile, construction is progressing in the 18th floor lab area \_ which will include installation of medical-grade ceiling tiles and durable flooring \_ and the basement, where CSU will process evidence and firearms will have a firing range. Lab furniture will arrive in early September and the lab's generator is scheduled to be crane-lifted to the roof on Saturday.

"This move is complex but vital to the lab's continued



viability. We outgrew the old facility in Travis years ago, but even more important is that it was never properly configured for a crime lab, and efficiency suffered," said Dr. Peter Stout, HFSC's CEO and president.

"So despite some short-term pain, we expect everyone to see improvements in the future, including our staff."

# BLOOD ALCOHOL REQUESTS SPIKE TOXICOLOGY BATTLES BACKLOG

Requests for blood alcohol testing \_ or DWI samples \_ have increased 31 percent since January 2018 compared to the same period last year, leading to a backlog that rapidly developed in the toxicology section.

The sharp increase in requests is in part due to increased enforcement by the Houston Police Department and is largely expected to be the new norm. However, this also means staff size and capacity in HFSC's toxicology section has to increase.

In the short term, Dr. Dayong Lee, the section's manager, and the staff are focused on an ambitious plan to eliminate the current backlog of more than 700 alcohol requests by July 1, 2020. This will occur as the team moves to a new facility, validates methods for two new instruments and trains additional staff.

"We have a plan in place but it can only be successful if all the parts \_ including those outside of our control \_ fall into place," Dr. Lee said.

The section's backlog



elimination plan is based on the assumption there will be about 445 new alcohol requests per month, similar to the current trend, but if this number increases significantly, the plan won't work. It also assumes three new alcohol analysts will be hired and trained by March 2020.

In addition, the section is anticipating being back online after moving into 500 Jefferson by December

## "THERE ARE THINGS OUT OF OUR CONTROL, BUT WE HAVE A PLAN," DR. DAYONG LEE

13. However, if instruments do not respond as expected that timeline could stretch.

"Clearly, there are things out of our control, but we have a plan and we can tweak it if necessary. The goal is to eliminate this backlog and increase our current capacity of about 240 requests per month today to about 500 requests by March of next year," Dr. Lee said. "If the plan is successful, we should be able to sustain the current caseload. But if

requests increase, we will again need more staff."

An added complexity is that a growing number of alcohol tests have negative results, meaning more cases are moving onto full toxicology and drug screening, analysis that is more time-consuming and difficult to interpret. The number has increased fivefold in recent years, putting additional strain on a section that has been relying on outdated, antiquated instruments drug analyses.

At least part of that problem will be solved after the move to 500 Jefferson as the section will be getting two new instruments for drug analysis, equipment far more suited to that type of testing than what HFSC currently uses.

"Unfortunately, we had to fix the facility before we were able to fully fix toxicology because we didn't have enough space or power for the new instruments at 1200 Travis," said Dr. Peter Stout, HFSC's CEO and president. "We are all looking forward to having a facility that truly suits the demand for our services and the important work we do."

## Focus on the right answer: quality first

BY AIMEE GRIMALDI AND PAULA EVANS



HFSC's current process improvement projects are solely focused on quality as HFSC seeks to measure something that is both crucial and nebulous.

The projects align with HFSC's four strategic objectives: quality, performance and value, staff skills and transparency. The teams are focused on making quality more visible in daily work.

"It's the right answer AND the right time. You cannot have one without the other, yet laboratory metrics focus on turnaround times and backlogs because measuring production is easy," said Dr. Peter Stout, HFSC's CEO and president.

Quality is inherent and subjective. HFSC has a strong quality management system that minimizes errors, which can be seen in internal and external audits, technical reviews and in stakeholder feedback.

But daily metrics focus on production, sending an inaccurate message that HFSC cares more about quantity than quality.

### TECHNICAL AND ADMINISTRATIVE REVIEWS

One-third of the findings in HFSC's 2018 audit resulted from an ineffective review so it was easy to focus improvement efforts on that process. Reviews are required under accreditation and yet all labs can improve. Reviews are also inherently wasteful, so if they are not useful they are simply burdensome.

This team's goal is to create a more effective and efficient review process.

To collect data and gain visibility on HFSC's review process, the team created and

launched an interface to capture data, including the most common corrections made in review and how many cases go through with no changes needed.

The interface will also assist the quality score design team.

The team recently conducted staff interviews, indicating some contradictions between the need to restrict the reviews and the desire to give as much freedom as possible. As a result, the team will do a second round of interviews with smaller groups.

### QUALITY SCORE

This project team has been tasked with designing a way to measure quality at HFSC.

At the moment, the team knows more about what they will NOT do than about what they will do. The goal is NOT to count mistakes \_ those happen. The goal is NOT perfection. We are NOT going to count typos in a report.

And the score will drill down to the section level, not to individuals.

After talking to nearly all staff, the team has a better idea of what HFSC expects and requires of a quality score and the goal is to create a system that gathers meaningful statistics while carefully avoiding the risk of creating a metric that discourages self-reporting of errors, something forensic laboratories, including HFSC, rely on heavily to identify errors.

"This is not an easy task but ultimately will help ensure HFSC's work is of the greatest quality and results from an efficient system that can spot weaknesses," Dr. Stout said.



# SYMPOSIUM REGISTER TODAY

## *Evidence Handling: Challenges, Pitfalls and Solutions*

The Houston Forensic Science Center will host on September 27 its 5th annual symposium in honor of National Forensic Science Week.

This year's event will focus on one of the most vital parts in the forensic process: evidence handling.

From the moment an item of evidence is collected, its integrity must be preserved to ensure the subsequent forensic analysis is of the highest quality.

Titled "Evidence Handling: Challenges, Pitfalls and Solutions," the free event will address the proper preservation, storage, transfer and handling of evidence and its direct impact on public safety.

Guest speakers include:  
**Rebecca Vieh:** sexual assault evidence tracking

program specialist at the Texas Department of Public Safety's Crime Laboratory  
**Gerald Doyle:** chief of the conviction integrity division at the Harris County District Attorney's Office

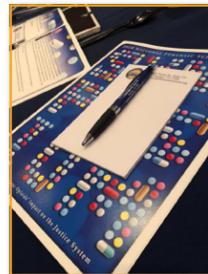
**Steve Campbell:** director of the International Association for Property and Evidence

**Melisse Huffmaster:** director of the Las Vegas Metropolitan Police Department  
**Dr. Peter Stout:** CEO and president of the Houston Forensic

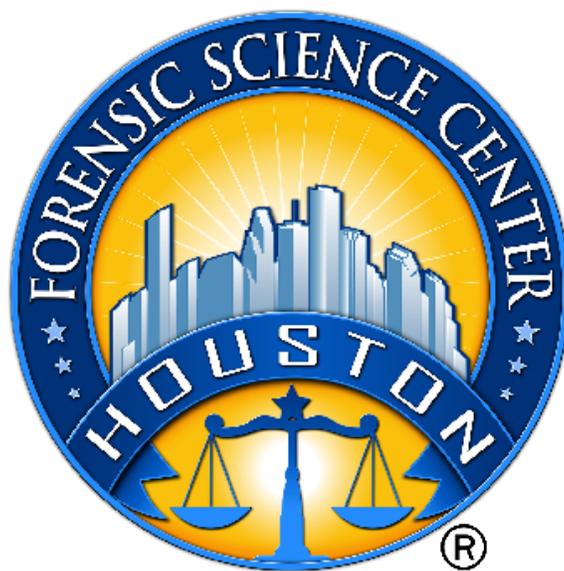
Science Center

The symposium will be held at Rice University's Grand Hall on Friday September 27 from 8 a.m. to noon.

Register [HERE](#) today. CLE, TCOLE and CFE credits are available to attendees.



*HFSC will host its 5th annual symposium on Friday September 27 at Rice University's Grand Hall. The topic will be evidence handling, one of the most crucial parts of forensic testing but one that is often overlooked. The speakers include the head of the conviction integrity unit at the Harris County District Attorney's office, the head of the Texas DPS' rape kit tracking program and the head of the Las Vegas Police Department property room. Registration is free. CLE, TCOLE and CFE credits available.*



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