

ARIZONA
DEPARTMENT OF PUBLIC SAFETY

RAPID DNA QUARTERLY REPORT
THIRD QUARTER, FY2022



April 15, 2022

Arizona Department of Public Safety

“Courteous Vigilance”

Quarterly Report of Rapid DNA Partner Sites

Third Quarter, FY2022

BACKGROUND

The Arizona FY22 budget appropriated \$600,000 in onetime funding to the Arizona Department of Public Safety (AZDPS) to “purchase and deploy rapid DNA testing devices throughout this state” and, “subject to availability of monies and upon request of the county sheriff, to train law enforcement personnel on properly using the Rapid DNA testing devices”.

Once purchased and deployed, these new instruments will supplement an existing Rapid DNA program that the AZDPS has been operating since 2014.

Statute also requires the AZDPS to submit quarterly reports to the chairpersons of the Judiciary Committees in the Arizona House and Senate. These reports must include: 1) The number of rapid DNA tests performed by the department and county sheriffs. 2) The number of criminal suspects identified or matched by rapid DNA testing to the combined DNA index system. 3) The total number and types of crimes identified or matched by Rapid DNA testing.

While the instruments funded with this appropriation have been purchased and just becoming operational, AZDPS felt it would be beneficial to include data from the Rapid DNA program the Department has been administering since 2014 with Rapid DNA instruments located within AZDPS Crime Laboratories in Maricopa and Pima County.

Rapid DNA Instrument Deployment

The AZDPS has purchased four Rapid DNA instruments with the one-time funding and will distribute them around the state for greater access to law enforcement personnel. Four regional sites have been identified and each has agreed to take receipt of an instrument - Yuma County Sheriff's Office, Cochise County Sheriff's Office, Yavapai County Sheriff's Office, and Pinal County Sheriff's Office. These agencies are currently working to renovate their sites prior to receiving instruments. Memorandums of Understanding (MOU) are completed and executed between AZDPS and all four partner sites. All purchased instruments have been received. The instrument at Yuma County Sheriff's Office has been installed and is in the process of being brought online. The Cochise County Sheriff's Office and Pinal County Sheriff's Office sites are ready for approval. The Yavapai County Sheriff's Office site is still undergoing renovation. Installation of the remaining instruments has been delayed by a vendor issue with providing necessary reagents. Pending resolution of the vendor supply issue, AZDPS hopes to have the remaining instruments installed before the end of FY22.

Additionally, using other Department funds and trade-ins of older Rapid instruments, the AZDPS will replace the current Rapid technology at the Phoenix and Tucson lab sites with the new Rapid technology to provide alternate, regionalized sites for all Rapid operators statewide. Installation is complete at the Phoenix lab and is online and being used. Installation at the Tucson lab is delayed along with the other instruments due to the vendor supply issue. Plans are also in the works to put instruments at the Flagstaff and Lake Havasu City lab sites to further increase regional coverage. In total, this plan will place ten instruments at nine sites around the state of Arizona.

Training of Rapid Operators

Rapid DNA Operator training established by the AZDPS is a weeklong course that provides training in basic biology and DNA, basic DNA interpretation, collection and preparation of samples for use on the rapid instrument, running the rapid instrument, using the standalone database associated with the Rapid DNA Law Enforcement Program, and court testimony training. To complete the course, trainees will be required to pass a written exam and complete a practical exam where they correctly walk through the steps of a sample collection, preparation, and run on the Rapid DNA instrument.

Training is underway for five new Rapid Operators at the Yuma County Sheriff's Office. Once the remaining instruments have been deployed to their host agencies, AZDPS Crime Lab staff will administer Rapid DNA Operator training to ensure the instruments and samples are being used in a way that supports the integrity of the science and evidence.

Utilization of AZDPS Rapid DNA Instruments

The following data represents Rapid DNA analysis performed exclusively with instruments already owned by AZDPS or Maricopa County and does not yet include data from the instruments that have been purchased with the FY22 one-time funding.

Since the inception of the AZDPS Rapid DNA program in April 2014, 658 cases have been run on Rapid DNA instruments with 240 leads provided, translating to a success rate per case of 36.4%.

In Quarter 3 of FY22, there were 26 cases involving 42 DNA samples processed through the Law Enforcement Rapid DNA program. These tests resulted in 11 out of 42 (26%) samples providing leads in 9 of the 26 (35%) cases. As Rapid DNA data from crime scenes is currently not allowed to be uploaded to the Combined DNA Index System (CODIS), the number of criminal suspects identified or matched by Rapid DNA testing being reported comes from the standalone Arizona DNA index system. A breakdown of these cases and samples is included in the below table (Pima County did not utilize the Rapid DNA instrument during this reporting period as the instrument at that location is offline and waiting to be replaced with the new instrumentation once the vendor supply issue is resolved).

| FY22 Q3 REPORTING – AZDPS RAPID DNA PROGRAM | | | | | | |
|---|----------------|-----------------------|--------------|------------------|-------------------------|--------------|
| INSTRUMENT SITE | # OF CASES RUN | # OF CASES WITH LEADS | SUCCESS RATE | # OF SAMPLES RUN | # OF SAMPLES WITH LEADS | SUCCESS RATE |
| Maricopa County | 26 | 9 | 35% | 42 | 11 | 26% |
| Pima County | 0 | 0 | N/A | 0 | 0 | N/A |
| TOTAL | 26 | 9 | 35% | 42 | 11 | 26% |

Cases run during this period were primarily samples from residential or commercial burglaries. Samples from one homicide case, one aggravated assault case, and two fatal collision cases (for victim and/or driver identification) were analyzed. In one of the collision cases (a single-vehicle fatality), fingerprints and facial recognition were not an option for identification. By utilizing the RapidHit ID, investigators were able to identify the victim hours after the collision and provide same-day next of kin notification.

| FY22 CUMULATIVE REPORTING – AZDPS RAPID DNA PROGRAM | | | | | | |
|---|----------------|-----------------------|--------------|------------------|-------------------------|--------------|
| INSTRUMENT SITE | # OF CASES RUN | # OF CASES WITH LEADS | SUCCESS RATE | # OF SAMPLES RUN | # OF SAMPLES WITH LEADS | SUCCESS RATE |
| Maricopa County | 41 | 16 | 39% | 72 | 21 | 29% |
| Pima County | 11 | 5 | 45% | 15 | 5 | 33% |
| TOTAL | 52 | 21 | 40% | 87 | 26 | 30% |