

ARIZONA
DEPARTMENT OF PUBLIC SAFETY

RAPID DNA QUARTERLY REPORT
SECOND QUARTER, FY2022



January 15, 2022

Arizona Department of Public Safety

“Courteous Vigilance”

Quarterly Report of Rapid DNA Partner Sites

Second 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. A Memorandum of Understanding (MOU) is completed and executed between AZDPS and Yuma County Sheriff's Office and MOUs with the other three agencies are currently in the process of being signed. All purchased instruments have either been received or are in the process of being shipped.

Additionally, using additional funding from capital equipment 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. 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

Once the new 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. Specific training was provided to one current Rapid operator on the use of the new RapidHit ID instrument for the purpose of completing the first Rapid DNA run on this new technology in the statewide law enforcement program.

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.

Utilization of AZDPS Rapid DNA Instruments

The following data represents Rapid DNA analysis performed exclusively with instruments already owned by AZDPS and does not yet include data from the instruments that have been purchased with the FY22 one time funding. This data does, however, include the first run on a RapidHit ID instrument currently owned by AZDPS. This instrument, for which a validation was recently completed, is the instrument that will be deployed statewide.

Since the inception of AZDPS Rapid DNA program in April 2014, 632 cases have been run on the two AZDPS instruments with 230 leads provided, translating to a success rate per case of 36.3%.

In Quarter 2 of FY22, 11 cases involving 23 DNA samples were processed through the Rapid DNA instruments already owned by AZDPS. These tests resulted in 5 out of 23 (22%) samples providing leads in 3 of the 11 (27%) cases. This run data includes the first DNA samples run on the newly validated RapidHit ID. 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).

FY22 Q2 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	11	3	27%	23	5	22%
Pima County	0	0	N/A	0	0	N/A
TOTAL	11	3	27%	23	5	22%

With one exception, the cases run during this reporting period were property crimes. Cases of note include:

- Three residential burglaries from various locations around Maricopa County, previously believed to be unrelated, were unexpectedly linked to one another through Rapid DNA.
- Three agencies worked cooperatively using Rapid DNA to develop a lead in a jewelry theft case.

One homicide case was run as well. This was the first case to use the newly validated RapidHit ID that will be deployed statewide for the law enforcement program. The case was a shooting during a home invasion at an apartment complex where one suspect was previously identified and arrested. The samples run for this homicide case resulted in the identification of a second suspect who was previously unknown in the case. Later in the same week, another potential suspect in the case was identified and run on the RapidHit ID. A direct comparison between a crime scene sample and this individual resulted in the identification of the individual as the third suspect.

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	15	7	47%	30	10	33%
Pima County	11	5	45%	15	5	33%
TOTAL	26	12	46%	45	15	33%