

OUTSOURCING VS. IN-HOUSE

The Washington State CODIS Laboratory currently types convicted offender DNA samples in-house and by outsourcing to a private laboratory. Both programs are funded by NIJ grants. Assuming current staffing levels, the backlog of convicted offender DNA samples should be eliminated by the end of 2008.

Although the use of outsourcing has enabled the reduction of the backlog, there are a number of reasons the CODIS laboratory recommends phasing out the use of private laboratories for convicted offender DNA typing:

Each new contract requires a time-consuming bid and evaluation process which has a negative impact on productivity. All laboratory protocols used by the vendor must be reviewed and accepted by the Crime Lab and a site visit must be conducted annually.

In the three outsourcing contracts used since 2001, two of the private laboratories have stopped offering forensic DNA typing or were bought out by another company. This further exacerbates the issue raised above and poses a problem with retrieving documentation sought for discovery purposes.

CODIS scientists must manually prepare each sample to be sent to the private lab which is a serious drain on scientist time. Additionally, peer review of outsourced samples takes longer because the reviewer must be aware of the contract requirements and the operating procedures of the private lab.

Repeated contamination events and errors by the personnel of the private laboratory have raised concerns. These quality issues have required follow up by CODIS scientists to ensure the appropriate re-testing has taken place to maintain the integrity of the database.

The CODIS laboratory has validated and implemented a high-throughput system for use in-house by CODIS scientists. The majority of incoming convicted offender DNA samples can be completed with this system.

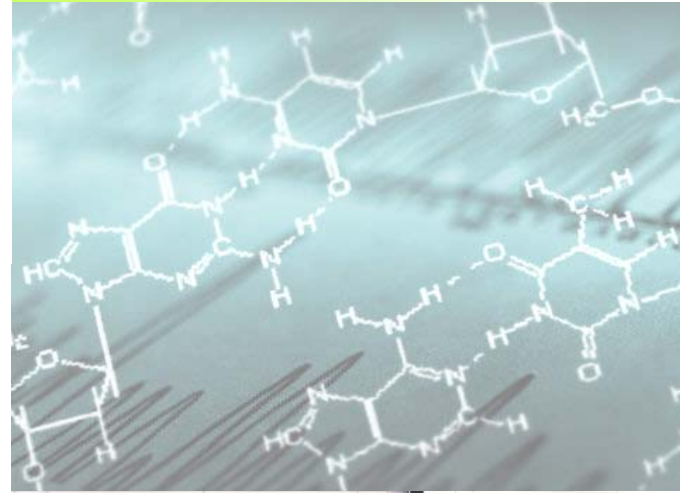
A 30-60 day turnaround time would be possible with the quality improvements and staffing model as outlined in the "Future of CODIS" section of this brochure.

DNA & PRIVACY CONCERNS

The CODIS database has the power to help convict the guilty and exonerate the innocent. This is accomplished through strictly regulated guidelines established by the FBI. Each state has a CODIS administrator who is responsible for the overall quality and security of the DNA data entered into their state's database. **Only state administrators and their designees** have access to their state's database and only the FBI has access to the national CODIS database (NDIS). In addition, all DNA scientists who type DNA for entry into the database **must have a background check by the FBI.**

State law prohibits the use of convicted offender DNA samples for anything other than specific authorized uses. RCW 43.43.753 states in part that DNA samples may only be used for: "purposes related to criminal investigation, identification of human remains or missing persons, or improving the operation of the system authorized under RCW 43.43.752 through 43.43.758."

CODIS contains DNA profiles that are generated from a technology that targets a non-coding region of the DNA strand. While that profile still contains markers where one piece of information comes from the biological father and the other comes from the biological mother, these pieces of information **do not code for biological information** like hair color, eye color or predisposition for medical issues. Convicted offender samples are retained in the laboratory after being entered and re-typed if there is a hit to the database as part of the process to confirm the match. Only a laboratory number associated with a numerical version of a DNA profile is entered into the database - **no mug shot, no name, no address.**



WASHINGTON STATE PATROL

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WASHINGTON STATE PATROL

CODIS LABORATORY

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The CODIS laboratory is dynamic – providing a service to the criminal justice community while improving techniques and efficiency. In the future, the Lab is looking forward to:

New Legislation and Funding

We are preparing for the influx of additional samples due to the new legislation that goes into effect June 12th, 2008 (SHB 2713) which allows for DNA collection from convictions of a sexual nature that weren't formerly covered under the "All Felons" Law.

Funds made available from the DNA Database Account in the 2008 Supplemental Session will go to remodeling part of the CODIS laboratory in preparation for additional equipment and streamlining the workflow.

Quality Improvements

- A new collection method to improve the quality of DNA samples received
- An all-in-one collection method for the DNA sample and submission card which will save time, resources, and reduce collection errors
- Validation of a new protocol to significantly decrease reagent costs
- Validation of an Expert System (a software program that streamlines data review) to reduce analysis time.

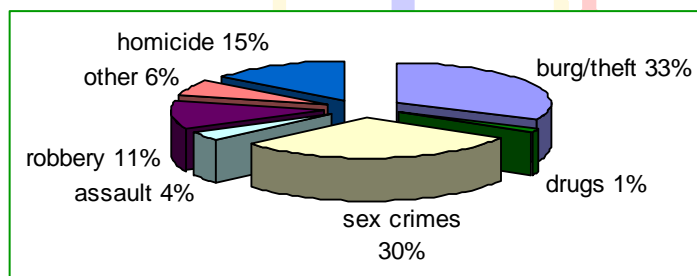
Staffing Needs

- Based on the current volume of incoming samples, the Crime Lab has identified the need for three permanent positions (two Forensic Scientists and one Office Assistant).
- Two of these positions will come from WASPC grant money. However, funding for these positions ends in 2009.
- By converting these two positions to permanent status and adding a third FTE, the CODIS Lab will have a 30–60 day turnaround time for processing convicted offender DNA samples.

The Future of Washington State's CODIS Laboratory

Approximately 60% of CODIS hits are to a convicted offender in the database for a "minor" crime such as drug possession or burglary. This demonstrates the impact of the "All Felons" law that was passed in 2002 which requires that all convicted felons provide a DNA sample for CODIS use. Coupled with the resources to type the incoming DNA samples, the law has dramatically increased the number of CODIS hits.

Prior to the passage of the "All Felons" law, the size of Washington's convicted offender database was about 35,000 profiles and it took approximately 2 ½ years to achieve 100 CODIS hits. **The database has grown to 120,000 profiles and it took only three months to achieve 100 hits!**



Washington's CODIS program has had nearly 700 hits since implementing STR-DNA typing technology in 2001. A hit is defined as a confirmed match between a convicted offender and a casework DNA sample (or matching casework samples) that aids the investigation. Since CODIS is a national program, hits include not only in-state confirmed matches but also matches to DNA profiles from other states.

Data collected on these hits demonstrate the value of the program. **About 60% of cases producing a hit are in a violent crime such as homicide, rape, robbery or assault:**

In 1968, 16-year-old Sandra Bowman, a pregnant newlywed, was brutally murdered and the case remained unsolved for decades. Years later, due to scientific advances, a forensic scientist at the Crime Lab was able to develop a male DNA profile from Sandra Bowman's pubic hair sample, which had semen adhering to it. The male DNA profile was searched against Washington's CODIS database which produced a hit to John Canaday, a convicted murderer serving a life sentence for killing two other women. When confronted with this evidence, Canaday pled guilty to the murder of Sandra Bowman making this case one of the oldest in the nation solved by the use of the CODIS database.

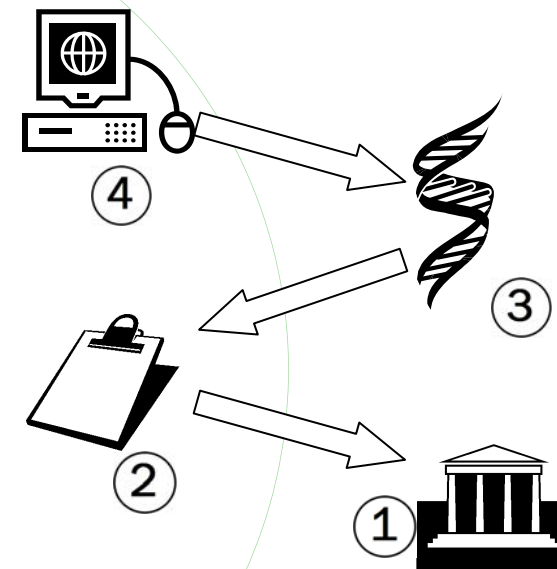
SUCCESSES

Agency Collection: A DNA sample is collected from a qualifying offender by law enforcement. The sample is mailed to the CODIS Lab.

Administrative Processing: In the lab, the offender data is reviewed, assigned a unique lab number, and entered into the laboratory's administrative database. ④

DNA Typing: The sample is processed, analyzed, and peer reviewed to obtain a DNA profile. ③

CODIS Entry: The profile is entered into the CODIS database and subsequently searched against all casework profiles. A "hit" occurs when an offender profile matches a forensic profile, providing important leads to the submitting agency. Hits can occur at the state level of CODIS or at the national level ①



WHAT HAPPENS TO A CONVICTED OFFENDER DNA SAMPLE?