

2011-DN-BX-K99E DNA BACKLOG REDUCTION PROGRAM PROGRESS REPORT

INTRODUCTION:

This progress report form is meant to serve as a live reporting document throughout the existence of your award. You will save and use this same document each reporting period, and simply add information semi-annually in its respective category. Therefore, all of your award information will be in one document and will be easy to reference and compare performance metrics and changes/progress between reporting periods. Progress reports submitted through GMS that do not include this template will be automatically change requested back to you.

There are two main sections in this document: Performance Measures and Narrative. Please see instructions for each section below. Note that this template has reporting periods listed for the full 3-year allowable award period. If your award ends before 3 years, you will simply not use the remaining boxes.

PERFORMANCE MEASURES:

In the first two tables of this section, please enter your performances measures as calculated at the beginning of the award period. These numbers should not change throughout the life of your award. If they do, you must justify the change in your report narrative. The third table captures the performance metrics over the course of your award. Because this is a live document, when it is time to submit your progress report you will simply open this document and add the performance metrics for the reporting period you are reporting for in the respective column. By the end of the award period, all of the information captured during each reporting period will be in one document. **Once you have added the metrics for the current reporting period to this document, please input them into the GMS performance module. For your Final Report, please insert the cumulative metrics into the Final column in the chart, as well as the metrics for the months not covered by the last regular report in the appropriate column.**

DNA Backlog Performance Measures at the beginning of the award period (October 1, 2011):

What was the average number of days between the submission of a request for forensic DNA analysis to the laboratory and the delivery of the test results at the beginning of the award period?	71
What was the average number of forensic DNA samples analyzed per analyst per month at the beginning of the award period?	59
What was the number of backlogged forensic DNA cases at the beginning of the award period?	848

Database Performance Measures at the beginning of the award period*(October 1, 2011):

What was the average number of days between the submission of a database sample to the laboratory and the upload of the profile to CODIS at the beginning of the award period?	26
What was the average number of DNA database samples analyzed per analyst per month at the beginning of the award period?	437
What was the number of backlogged DNA database samples at the beginning of the award period?	1,229

*Please enter N/A if you are not a database laboratory

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	Oct – Dec '11	Jan – June '12	July – Dec '12	Jan – June '13	July – Sept '13	Jan – June '14	July – Sept '14	FINAL
What was the average number of days between the submission of a request for forensic DNA analysis to the laboratory and the delivery of the test results at the end of this reporting period?	73	70	78	85	81	N/A	N/A	83
What was the average number of forensic DNA samples analyzed per analyst per month at the end of this reporting period?	57	58	47	55	56	N/A	N/A	57
What was the number of backlogged forensic DNA cases at the end of this reporting period?	849	823	849	898	932	N/A	N/A	932
What was the number of backlogged forensic DNA cases analyzed using funds provided for overtime, supplies, or outsourcing during this reporting period (for final reports, include cumulative metric)?	11	167**	137	92	0	N/A	N/A	407
What was the number of forensic DNA profiles entered into CODIS as a result of the funds provided for overtime, supplies or outsourcing during this reporting period (for final reports, include the cumulative metric)?	8	137**	138	73	0	N/A	N/A	356
What was the number of CODIS hits attributable to the forensic analyses completed using the funding provided for overtime, supplies or outsourcing during this reporting period (for final reports, include the cumulative metric)?	2	29	32**	18	3	N/A	N/A	84
Optional: What was the number of forensic DNA cases analyzed, forensic DNA profiles uploaded to CODIS, and CODIS hits recorded as a result of grant-funded analysts during this reporting period (only include data not counted above)?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
What was the average number of days between the submission of a database sample to the laboratory and the upload of the profile to CODIS at the end of this reporting period?*	26	25	21	35	34	N/A	N/A	33
What was the average number of DNA database samples analyzed per analyst per month at the end of this reporting period?*	415	421	403	419	423	N/A	N/A	425
What was the number of backlogged DNA database samples at the end of this reporting period?*	1,013	952	737	2,303	1,888	N/A	N/A	1,888
What was the number of DNA database samples analyzed using funds provided for overtime, supplies, or outsourcing during this reporting period (for final reports, include cumulative metric)?*	0	1,874	2,398	1,501	227	N/A	N/A	6,000
What was the number of profiles from DNA database samples uploaded to CODIS as a result of the funds provided for overtime, supplies, or outsourcing during this reporting period (for final reports, include the cumulative metric)?*	0	1,804	2,271	1,369	156	N/A	N/A	5,600
What was the number of CODIS hits attributable to DNA database sample analysis using funds for overtime, supplies, or outsourcing during this reporting period (for final reports, include the cumulative metric)?*	0	11	19	13	10	N/A	N/A	53
Optional: What was the number of database samples analyzed, the number of profiles uploaded to CODIS, and the number of CODIS hits recorded as a result of grant-funded database analysts during this reporting period (only count data not reported above)?*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Please enter N/A if you are not a database laboratory

**These metrics were accidentally reported incorrectly in previous reports. During the final report, our performance metrics were reviewed and we found that we accidentally attributed 12 cases to this award that should not have been. This affected the number of cases and profiles uploaded during the Jan-Jun 2012 reporting period, and also affected hits for the Jul-Dec 2012 reporting period. These metrics are now accurate.

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NARRATIVE SECTION

Instructions:

The narrative section of your progress report consists of the 1) goals and objectives of your award, and 2) your progress during each reporting period. In the first section, you will list all the goals and objectives of your project when you create the report for the first reporting period and will only update this section if there is a change in your goals and objectives. **If there is a change made in the goals and objectives, please make a note in the narrative for the period in which the change occurred and update the Goals and Objectives section.**

An easy way to complete this section is to simply copy and paste the Goals and Objectives section from your application form into this document. You may have to modify your goals to be more specific to your particular award. The goals of your project should follow one of the 3 overarching programmatic goals: to improve capacity, to improve throughput, and to reduce backlogs. If your goals are broad (i.e. “to improve throughput”), you need to include specific objectives on how those goals will be addressed. For example, if your listed goal is to improve throughput, a listed objective could read “we intend to increase throughput by purchasing a liquid handling robot and by purchasing validation services through an outside contractor through this award.”

The narrative for each reporting period (there are separate pages for each period), should provide a clear picture of how funds were utilized over the course of that reporting period. While the narrative can include a discussion of the performance metrics, there should be more to the content than just a rehash of the metrics. **If you report metrics for the casework section and/or the optional metric, you MUST address the reason for reporting these metrics (i.e., use of overtime to analyze cases, use of supplies to work cases, use of outsourcing to analyze cases, or your grant-funded DNA analyst completed cases).**

Each narrative should also include challenges incurred, changes made to the project, successes, etc. Although we provide a 1- page space for each Progress Report section, please feel free to use more space as needed. Any charts or tables that you would like to accompany the narrative can be included in the sections below, as well.

In GMS, please enter “See attached document” in the Narrative module, and do not forget to attach this document to every progress report submitted in GMS for this award.

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GOALS AND OBJECTIVES OF PROJECT:

Goal 1: Reduce the casework backlog through overtime and outsourcing.

Objective A: Fund overtime and purchase supplies for analysts to work backlogged cases.

Objective B: Outsource 30 cases to Orchid Cellmark.

Goal 2: Reduce the backlog of DNA database samples .

Objective A: Fund overtime for the CODIS analyst to analyze, review, and upload samples.

Objective B: Purchase supplies to be used in the analysis of DNA database samples.

~~**Objective C:** Purchase collection kits for convicted offender and arrestee DNA samples (Removed via a Budget Modification GAN, approved February 2013.)~~

Goal 3: Increase capacity in the forensic casework laboratories.

Objective A: Purchase 2 ABI 3500xl genetic analyzers, and service contacts.

Objective B: Purchase an AutoMate Express DNA extraction robot for the East laboratory.

Objective C: Purchase thermal cyclers to replace aging equipment.

Objective D: Purchase laptops for each analyst to replace aging desktop computers.

Objective E: Hire evidence technicians to help with reagent preparation, QA/QC, and evidence intake.

Objective F: Purchase flash drives to assist with transfer of data from desktops to laptops (added via Budget Modification GAN, approved August 2012).

Objective G: Obtain contractor services for a process improvement and efficiency study (added via Budget Modification GAN, approved February 2013).

Objective H: Purchase 5 desktop computers for data interpretation stations to be used with the new 3500s, LIMS stations, and evidence intake area (added via Budget Modification GAN, approved February 2013).

Goals 4: Provide required continuing education.

Objective A: Fund analysts' travel to conferences and training opportunities.

Objective B: Purchase texts.

Objective C: Purchase a subscription to the Journal of Forensic Sciences (JFS).

~~**Objective D:** Provide an in-house training program on DNA Mixture interpretation (Removed via Budget Modification GAN, approved August 2012.)~~

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PROGRESS REPORT 1: October 1, 2011 – December 31, 2011

Goal 1: *Reduce the casework backlog through overtime and outsourcing.*

Objective A: The casework analysts have started utilizing overtime to analyze cases, and several reagents and kits have been purchased. The overtime and supply use has been limited due to the holiday season, but 11 cases were analyzed in this reporting period, with 8 profiles uploaded to CODIS so far. We've had 2 hits to convicted offenders – one for a sexual assault and one for a four year old homicide. The hit from the homicide came from a piece of evidence recently discovered in Dane City's police evidence storage – the evidence had previously not been submitted to our lab. Other pieces of evidence from this case yielded only partial profiles and mixtures that could not be uploaded.

Objective B: A shipment of 7 sexual assault cases was sent to Orchid in late December. The results have not been delivered to our agency yet.

Goal 2: *Reduce the backlog of DNA database samples*

Objective A: The overtime has not been utilized during this reporting period.

Objective B: The laboratory placed an order for 5 kits in mid-December. The supplies have not been received. When the supplies are received, the CODIS analyst will start to use both the overtime and grant-funded supplies to analyze database samples.

Objective C: The collection kits have not been purchased yet. The laboratory procurement department is drafting a purchase order for approval in January or February.

Goal 3: *Increase capacity in the forensic casework laboratories.*

Objective A: The 3500xl genetic analyzers have not been purchased yet.

Objective B: The AutoMate Express has not been purchased yet.

Objective C: Two thermal cyclers have been purchased from ABI. They were received at the laboratory in mid-December and performance checks are still underway due to the holiday season and analyst time off.

Objective D: The IT department has met and began to evaluate the laptops available for purchase under the RSBI-DFS administrative supply contract. We expect the evaluation results in March or April 2012.

Objective E: The laboratory has drafted announcements for the 2 technician positions now available under this grant. The announcements are being processed through HR and will be posted early 2012.

Goals 4: *Provide required continuing education.*

Objective A: Two analysts attended the 2011 Promega conference at the National Harbor in Maryland. The two analysts that were supposed to attend this conference will be attending the 2012 Promega conference. One analyst attended the CODIS conference in November 2011.

Objective B: Ten "Fundamentals of Forensic DNA Typing" textbooks were purchased. They have not been received at the laboratory yet.

Objective C: An institutional subscription to the Journal of Forensic Sciences (JFS) has been purchased. The laboratory now has access to scientific articles online and in hard copy.

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Objective D: The Mixture Interpretation training has not occurred yet. A meeting will be held in February to decide when this training will be held in the laboratory and to discuss who will put on the training.

We'd like to note that one casework analyst has been training to become a CODIS analyst and will be added to the database unit mid-2012. The laboratory has posted an analyst position for hire and will hopefully be able to get either a DNA analyst or a serologist in the laboratory at the same time the casework analyst leaves her position. When a new analyst or serologist comes into the laboratory, one casework analyst will have to temporarily leave his or her position to train the new analyst. This may impact turnaround time and throughput, but in the long run will add capacity to our laboratory.

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PROGRESS REPORT 2: January 1, 2012 – June 30, 2012

Goal 1: *Reduce the casework backlog through overtime and outsourcing.*

Objective A: The casework analysts have continued to utilize overtime and supplies to analyze cases – 157 cases have been analyzed, with 148 profiles uploaded and 29 CODIS hits. Three of the hits were case-to-case hits, tying a string of now 5 unsolved aggravated sexual assault cases to a single, unidentified offender.

Objective B: A shipment of 15 cases was sent to Orchid Cellmark. Both the earlier shipment and this shipment's results were sent back to the lab in early June. There are about 20 profiles that appear to be suitable for CODIS upload, but the lab is still reviewing these results. No profiles have been uploaded yet.

Goal 2: *Reduce the backlog of DNA database samples.*

Objective A: The CODIS analyst has started to use the overtime and supplies to analyze database samples. There were 1,874 database samples analyzed, with 1,804 profiles uploaded to CODIS, and 11 CODIS hits so far.

Objective B: The laboratory placed an order for 5 kits in mid-December. These supplies were received and used for database sample analysis. The price for these kits went up, and the budget has been adjusted to reflect the change in cost. The unit has recently placed another order for kits that have yet to be received.

Objective C: The collection kits have not been purchased yet. The laboratory procurement department drafted a purchase order for these kits that was not approved. The department is revising the draft and the kits will hopefully be purchased in August or September of this year.

Goal 3: *Increase capacity in the forensic casework laboratories.*

Objective A: The 3500xl genetic analyzers have been ordered, and were received in the lab at the end of June, 2012. They have not been validated yet. Goal completed.

Objective B: The AutoMate Express has been purchased and received. The validations are underway and the results of the validation and SOP are being evaluated by the Technical Leader. Goal completed.

Objective C: Two thermal cyclers have been checked and are in regular use. Goal completed.

Objective D: The IT department has evaluated laptops and has decided on a model. The purchase order for 10 laptops is being drafted.

Objective E: The 2 technician positions were posted in February 2012, and 2 candidates were identified. One has been hired, and the other is undergoing background checks and drug testing before being officially hired. The start dates for both candidates are July 16, 2012, and September 3, 2012 (tentatively).

Goals 4: *Provide required continuing education.*

Objective A: Two analysts will attend the 2012 Promega conference. No other activity on this objective occurred in this reporting period.

Objective B: The 10 “Fundamentals of Forensic DNA Typing” textbooks purchased earlier were received in the laboratory. Goal completed.

Objective C: Goal completed previously.

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Objective D: The Mixture Interpretation training has not occurred yet. Discussions are ongoing as to when this training will be and who will be the instructor.

We'd like to note that one casework analyst has been training to become a CODIS analyst and will be added to the database unit during the next reporting period. The laboratory has posted an analyst position for hire and has identified a couple viable candidates. When a new analyst or serologist comes into the laboratory, one casework analyst will have to temporarily leave his or her position to train the new analyst. This may impact turnaround time and throughput, but in the long run will add capacity to our laboratory.

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PROGRESS REPORT 3: July 1, 2012 – December 31, 2012

Goal 1: *Reduce the casework backlog through overtime and outsourcing.*

Objective A: The casework analysts have continued to utilize overtime and supplies to analyze cases. During this reporting period, 129 cases have been analyzed, with 113 profiles uploaded and 32 CODIS hits. Two more aggravated sexual assaults were linked to the serial rapist, who still remains unidentified.

Objective B: The previous 22 cases were reviewed, and 19 profiles were uploaded to CODIS, and 4 CODIS hits were obtained. The last shipment of 8 cases was sent in August, and was returned to the lab in November. All of those cases have been reviewed, and another 6 profiles were uploaded to CODIS, with no CODIS hits being obtained. This goal is complete. A total of 30 cases were analyzed, 25 profiles were uploaded to CODIS, and 4 hits were obtained.

Goal 2: *Reduce the backlog of DNA database samples.*

Objective A: The CODIS analyst continued to use the overtime and supplies to analyze database samples. There were 2,398 database samples analyzed, with 2,271 profiles uploaded to CODIS, and 19 CODIS hits so far. Note: We are only counting CODIS hits from these that are not counted in the forensic casework section metrics.

Objective B: The laboratory has used 11 of the 17 budgeted kits so far. One final order will be made soon.

Objective C: The collection kits have not been purchased yet. Bode, the producer of these kits, has decided to discontinue the kit we had under contract and to upgrade. The new kit costs \$50 more than the old ones, though it does offer some advantages. In light of the price increase, the RSBI will have to put the collection kits out to bid again before purchase. The RFP is being drafted for release for hopefully early 2013.

Goal 3: *Increase capacity in the forensic casework laboratories.*

Objective A: Goal completed previously. The 3500xls were validated and have been implemented in the laboratory as of December 18, 2012.

Objective B: Goal completed previously.

Objective C: Goal completed previously.

Objective D: The laptops were purchased and delivered. The laptops have been set up and are in use. The old desktops were donated to a university with a forensics program.

Objective E: Both technicians have started and have completed training on QA/QC, and evidence handling in the laboratory.

Objective F: (new objective) Flash drives were purchased after the laptops arrived and are in use.

Goals 4: *Provide required continuing education.*

Objective A: Four* analysts attended the 2012 Promega conference and the new CODIS analyst attended the 2011 fall CODIS conference in Jacksonville, FL. Goal completed.

*It was brought to our attention that we obligated funds for the 2011 Promega conference before we were able to (i.e., before the award started). We removed the 2011 Promega conference expenses from this award and instead sent 2 more analysts to the 2012 Promega conference.

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Objective B: Goal completed previously.

Objective C: Goal completed previously.

Objective D: Objective removed in GAN approved August 2012.

The casework analyst that has been training to become a CODIS analyst was added full-time to the database unit mid-September 2012. The laboratory has hired an experienced serologist in the laboratory who started on August 26, 2012. The serologist is completing the lab-specific training, and will undergo DNA analysis training at the end of the lab-specific serology training. The productivity and turnaround times have been negatively impacted during this reporting period, and will probably continue to be impacted until this new analyst has been fully trained.

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PROGRESS REPORT 4: January 1, 2013 – June 30, 2013

We had to ask, via a GAN, for a no-cost extension on this award. It was granted. The new project period end date is 9/30/2013. We expect to be finished with the project at that time.

Goal 1: *Reduce the casework backlog through overtime and outsourcing.*

Objective A: The casework analysts have continued to utilize overtime and supplies to analyze cases. All of the overtime and supplies were used up during this reporting period. From the 95 cases that have been analyzed, 73 profiles were uploaded and there were 18 CODIS hits. Two more aggravated sexual assaults were linked to the serial rapist, and finally, during this reporting period, the forensic profiles hit on a newly uploaded profile from an arrestee. He is undergoing further investigation at the moment and we hope be able to report more success on this in the Final narrative.

Objective B: Goal completed previously.

Goal 2: *Reduce the backlog of DNA database samples.*

Objective A: The CODIS analyst continued to use the overtime and supplies to analyze database samples. The overtime was used up during this reporting period, and the supplies (below) are almost gone. There were 1,501 database samples analyzed, with 1,369 profiles uploaded to CODIS, and 13 CODIS hits during the period. Note: We are only counting CODIS hits from these that are not counted in the forensic casework section metrics.

Objective B: The laboratory has used 16 of the 17 budgeted kits so far. The last kit is being used and will be used to complete the database samples until it is gone. This goal is nearly complete.

Objective C: The original objective C (purchase of buccal swab collection kits) has been removed. The state has agreed to fund this. Through a GAN approved in February 2013, we removed this objective and added an objective under Goal 3.

Goal 3: *Increase capacity in the forensic casework laboratories.*

Objective A: Goal completed previously.

Objective B: Goal completed previously.

Objective C: Goal completed previously.

Objective D: Goal completed previously.

Objective E: Both technicians are working in the laboratory. They are working on quality control measures, extraneous paperwork, evidence intake and return, etc. They have been a tremendous help in taking care of routine tasks so the analysts have more time to work on forensic casework.

Objective F: Goal completed previously.

Objective G (new objective): Added with a GAN approved in February 2013, this new objective is to obtain contractor services for process mapping and efficiency improvement in the casework laboratories. We have already completed the RFP and awarded the contract to Pearson, Pierson and Sounder, LLC., who are a leader in process improvement theory in Redrum state. The study started on April 15, and we are looking forward to the results.

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Objective H (new objective): This objective was added through a GAN approved in February 2013. The 5 desktop computers were ordered in mid-June and have not arrived at the lab yet. They will be immediately put into use.

Goals 4: *Provide required continuing education.*

Objective A: Goal completed.

Objective B: Goal completed previously.

Objective C: Goal completed previously.

Objective D: Objective removed in GAN approved August 2012.

The database analyst lost a member at the very beginning of this reporting period and the newly expanded arrestee legislation kicked in on October 1, 2012, which caused a large increase in the backlog of database samples (most of them convicted offender samples since arrestee samples take priority). The turnaround time for the database samples rose as did the backlog. The productivity for the analysts stayed the same. We hope to improve the productivity and capacity of this unit in the coming months.

In the casework side, the serologist who began during the last reporting period was in training during this reporting period. We also underwent a change in technical leader in the West lab, and this caused the backlog and turnaround time to rise as we deal with the transition and training.

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PROGRESS REPORT 5: July 1, 2013 – September 30, 2013

Goal 1: *Reduce the casework backlog through overtime and outsourcing.*

Objective A: This goal was completed in the previous reporting period. There were 3 hits during this period that were from profiles uploaded at the end of June. The serial rapist case will be reported on in the Final narrative.

Objective B: Goal completed previously.

Goal 2: *Reduce the backlog of DNA database samples.*

Objective A: The overtime was completed in the previous reporting period.

Objective B: All supplies were used up in July, and 227 samples were analyzed. A total of 156 profiles were uploaded during this period and 10 hits were obtained. Note: we are only reporting hits here that were not reported for the casework portion.

Objective C: Removed.

Goal 3: *Increase capacity in the forensic casework laboratories.*

Objective A: Goal completed previously.

Objective B: Goal completed previously.

Objective C: Goal completed previously.

Objective D: Goal completed previously.

Objective E: Both technicians worked under this award until September 30, 2013. They worked on quality control measures, extraneous paperwork, evidence intake and return, etc. They have been a tremendous help in taking care of routine tasks so the analysts have more time to work on forensic casework.

Objective F: Goal completed previously.

Objective G: Pearson, Pierson and Sounder, LLC., started the process mapping-slash-efficiency study in April 2013 and it lasted until the end of the award period. We received the results and the final invoice in November. We have started to implement several suggestions they have made and though the implementation process may impact our stats negatively at first while we get used to it, we believe that their suggestions will help us through times of tight budgets.

Objective H: The 5 desktop computers were received in July and were immediately put into use. The fifth computer was hooked up to the 3130xl that is still in the database lab, but that instrument will be upgraded to a 3500xl with the FY13 award. The lab staff has already noticed an improvement in the functionality of the LIMS and data interpretation software.

Goals 4: *Provide required continuing education.*

Objective A: Goal completed.

Objective B: Goal completed previously.

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Objective C: Goal completed previously.

Objective D: Objective removed in GAN approved August 2012.

During this short 3-month period, the activity of the database unit was not much improved. We hope to improve the productivity and capacity of this unit in the coming months.

In the casework side, the serologist who was in training during the last reporting period started supervised casework in mid-September. We hope to see an improvement in casework turnaround time and productivity with her addition.

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FINAL REPORT:

Goal 1: *Reduce the casework backlog through overtime and outsourcing.*

Objective A: Analysts used a total of 2,295 hours and \$313,389 in supplies to analyze forensic biology and DNA cases.

Objective B: A total of 50 cases were outsourced to Orchid Cellmark (which became Cellmark Forensics owned by LabCorp during the time we were using them).

In total, this award funded the analysis of 407 cases, the upload of 356 forensic profiles to CODIS, and had 84 CODIS hits attributable to this work.

One major success was tying 10 cases total (9 hits from this program and one from a case worked without these funds) to a serial rapist named Oliver Sturmo. The 10 cases ranged across three small towns: Steppenville, Stubbard, and Locard. The RSBI's Sexual Crimes Unit took up the investigation when the cases were linked. Sturmo was arrested for breaking and entering with intent to commit assault in April 2013 in Galton, the fourth city he had targeted, and, under the new expanded arrestee legislation, had to submit a DNA sample for analysis and upload to CODIS. He immediately hit to all 10 cases that we had previously linked forensically.

The RSBI's Sexual Crimes Unit worked quickly to move the investigations forward and had Sturmo indicted on 32 charges in 8 cases by August 20, 2013. The Redrum Attorney General's has indicated that at least 7 more charges will be brought against Sturmo for the crimes committed in Locard. His trial began on November 1.

Goal 2: *Reduce the backlog of DNA database samples.*

Objective A: The database analyst used 200 hours of overtime during the award period to analyze, review, and upload database samples.

Objective B: A total of \$123,091 was used to purchase kits for the database unit to analyze convicted offender and arrestee samples.

In total, the database unit worked 6,000 samples and uploaded 5,600 profiles to CODIS. A portion of the 6,000 samples analyzed were QA/QC samples and therefore were not uploaded to CODIS. There were 53 hits from these profiles that were not duplicative of any hits reported in the casework section.

Together, the RSBI-DFS recorded 137 CODIS hits that would not have occurred if not for the opportunities afforded to us under this award. The DFS is grateful to the funding under this program and to NIJ for continuing to provide these opportunities.

Objective C: This objective was removed due to the discontinuation of the buccal swab collectors for database samples by the original manufacturer (Bode). The state funded the database expansion legislation and we were able to use state funding to purchase these kits, which allowed us to add a couple more objectives to this award (see Goal 3, Objectives G and H).

Goal 3: *Increase capacity in the forensic casework laboratories.*

Objective A: The 2 genetic analyzer model 3500xls were purchased and received in the laboratory in June 2012. They were validated and were implemented at the end of 2012.

Objective B: The AutoMate Express robotic extraction unit was purchased at the beginning of 2012 and was validated in the same year. The AutoMate Express was sent to the East lab due to the West lab having

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already completed the evaluation, validation, and SOP on the Express in their lab. The East lab reports that the AutoMate has tremendously helped their lab processes.

Objective C: The DFS laboratory purchased 2 thermal cyclers from Life Technologies to replace instruments that were aging and in constant need of repair. Both were sent to the East laboratory since they had the instruments with the most problems.

Objective D: Ten laptops for the analysts in the casework section of the RSBI-DFS were purchased and received. These laptops ensure that the analysts can work on data interpretation at their desk or wherever they want. They serve as the analysts' personal work computer and have improved the analysts' morale as they can now work in the Forensic Library.

Objective E: Both technicians worked under this award for about 1 year. They worked on quality control measures, extraneous paperwork, evidence intake and return, etc. They were a tremendous help in taking care of routine tasks so the analysts had more time to work on forensic casework. The lab has decided to continue to use funds for technicians and will add a technician on the next DNA Backlog Reduction program award. The state is in a hiring freeze and will not be able to give the labs a permanent technician until this freeze is over. Though the productivity has only gone up somewhat, there have been other issues that the lab is dealing with that keep negatively impacting our stats. The impact of these technicians has been felt in the lab processes that can't be described by mere numbers.

Objective F: This goal was added due to the removal of the in-house training from this award. Flash drives were purchased to help store and transport data in the laboratory.

Objective G: This objective was able to be added when we decided that we would no longer purchase the buccal swab collection kits under this award. Pearson, Pierson and Sounder, LLC., conducted a process mapping-slash-efficiency study for about 6 months in 2013 in both the East and West casework labs since both buildings have the same architecture and were set up in the same way. We have started to implement several suggestions they have made and though the implementation process may impact our stats negatively at first while we get used to it, we believe that their suggestions will help us through times of tight budgets.

Objective H: This objective was also able to be added when we decided that we would no longer purchase the buccal swab collection kits under this award. The 5 desktop computers were received in July 2013 and were immediately put into use. The lab staff has already noticed an improvement in the functionality of the LIMS and data interpretation software.

Goals 4: *Provide required continuing education.*

Objective A: One analyst attended the 2011 CODIS conference in Jacksonville, FL, and four analysts attended the 2012 International Symposium on Human Identification (Proemga conference) in October 2012 in Nashville, TN. Two analysts attended the 2012 American Academy of Forensic Sciences (AAFS) meeting in Atlanta, GA, in February. All analysts reported back to the laboratory with important information about new DNA technologies and some of our protocols were altered due to new findings and in order to start getting ready for the CODIS core loci expansion.

Objective B: The "Fundamentals of Forensic DNA Typing" textbooks were purchased in December 2011 and were received in the lab in January 2012. These have been of great use to the technicians and to the analysts to help refresh on technique and theory behind forensic DNA analysis. The previous texts that were in the lab were published in 1993 and were severely outdated.

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Objective C: The RSBI-DFS laboratory purchased an institutional subscription to the *Journal of Forensic Sciences* (JFS) so that the laboratory could have access to scientific articles online and in hard copy. This has been very helpful as the lab has been conducting validation processes for Yfiler on the FY12 award and articles in JFS have helped to shape some of the experiments to see if Yfiler is useful for our laboratory.

Objective D: The in-house training for mixtures was difficult to get scheduled, and we decided to remove it from this award. We did bring in someone to teach mixture interpretation in January 2013, but it was funded through the state.

During this award period, we transferred a casework analyst to the database section and hired a casework analyst who was in training most of the award period. We also lost and replaced a technical leader. All of this impacted our case statistics' turnaround time and productivity. It did not have the impact on our backlog as we thought it might, but the technicians also started the task of calling detectives on some cases to make sure that the analysis was still needed. This caused many cases to be taken out of our backlog so the rising turnaround time was offset by taking cases out of the backlog that did not need to have analysis completed. Though, in 2012, case submissions did increase by about 20%, we were almost able to keep up.

We also lost a database analyst who left for personal reasons at the same time an expanded arrestee legislation bill became effective. Arrestee samples must be analyzed and uploaded within about 30 days because any sample from a person who does not have charges brought against them within 60 days has to be expunged. Arrestee sample submission increased after October 1, 2012, when the legislation became effective, and our convicted offender backlog is now rather large. We have taken steps to combat this backlog and will continue to find ways to keep productivity up.

Overall, this was a successful award. We received 137 CODIS hits that would not have occurred, or would have occurred much later than they did; we replaced or upgraded equipment that was failing; and we now have a path forward in terms of efficient processes with the results of the process map/efficiency study. We look forward to working with NIJ on these awards in the future.