

NORTH CAROLINA STATE CRIME LABORATORY UPDATE

JOHN A. BYRD
LABORATORY DIRECTOR





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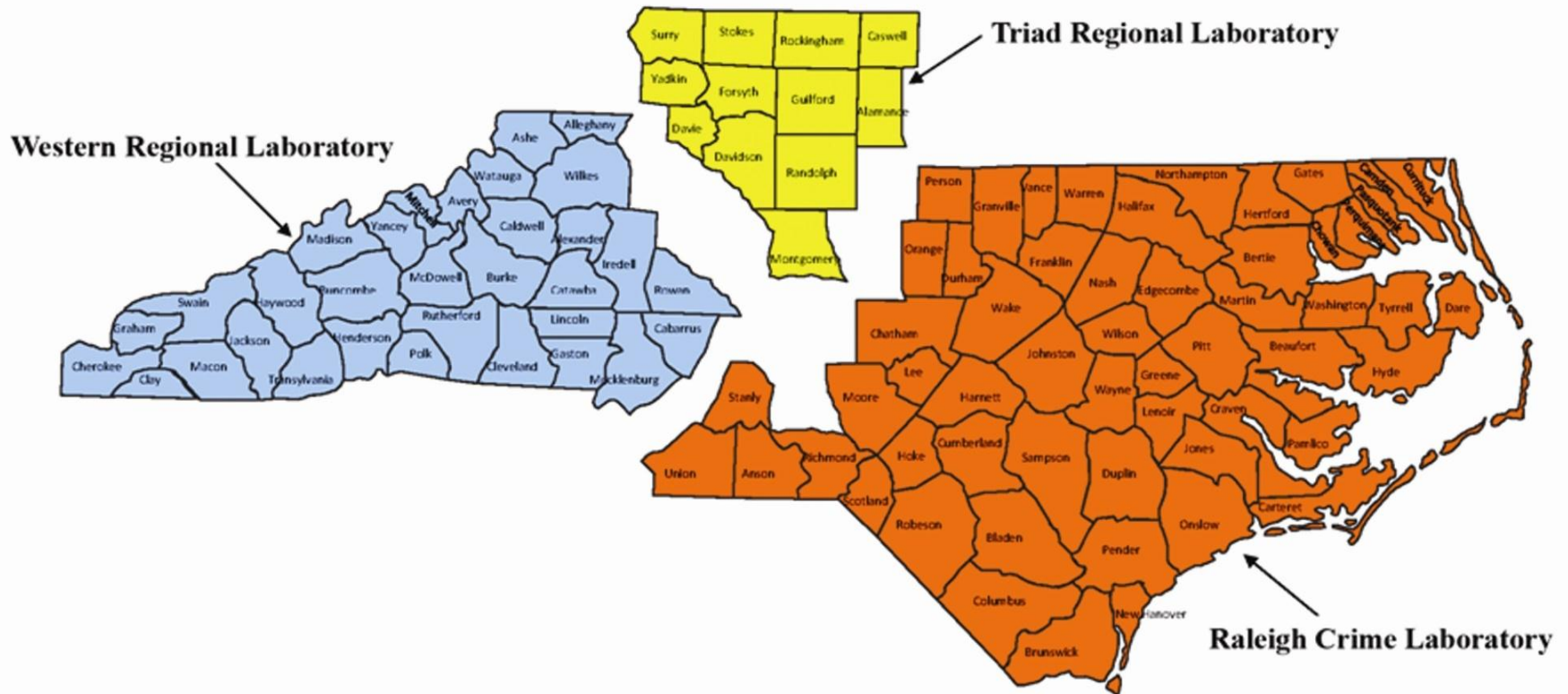
- Appointed June 2, 2014
- 20 Years—Manager in Digital Evidence, Latent Evidence, Forensic Biology (DNA), DNA Database
- Operation Iraqi Freedom
- Brigadier General-North Carolina National Guard



Landscape

- **10TH MOST POPULOUS STATE**
- **10TH LARGEST ACCREDITED STATE CRIME LAB**
- **27,000 LAW ENFORCEMENT OFFICERS**
- **600+ LAW ENFORCEMENT AGENCIES**
- **100 NORTH CAROLINA COUNTIES**
- **44 DISTRICT ATTORNEYS**

North Carolina State Crime Laboratory





FORENSIC ANALYSES CONDUCTED AT RALEIGH LABORATORY (STATEWIDE):

- **DNA Database**
maintenance of State DNA Database
- **Drug Chemistry**
controlled substances
- **Firearm & Tool Marks**
weapons, ammunition, unidentified markings
- **Forensic Biology**
blood, body fluids, DNA testing
- **Latent Evidence**
fingerprints, palm prints, footprints, footwear, tire impressions
- **Toxicology**
controlled substances; alcohol/drugs in blood/urine
- **Trace Evidence**
hair, fiber, glass, paint, headlight filaments, gunshot residue, explosives and fire debris

REGIONAL LABORATORIES

FORENSIC ANALYSES CONDUCTED AT TRIAD LAB (12 COUNTIES):

- **Drug Chemistry**
- **Latent Evidence**
- **Toxicology**

FORENSIC ANALYSES CONDUCTED AT WESTERN LAB (36 COUNTIES):

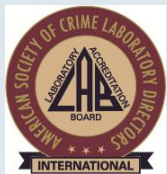
- **Drug Chemistry**
- **Firearm & Tool Mark**
- **Latent Evidence**
- **Trace Evidence**
 - (fire debris only)



Crime Lab Achievements

Quality Assurance

- Laboratory Director with science background
- Dual ISO/IEC 17025 Accreditation
- Each analyst individually certified
- DNA Quality Assurance Audit
- Forensic Science Advisory Board
- Lab Legal Counsel
- Ombudsman



DUAL ACCREDITATION

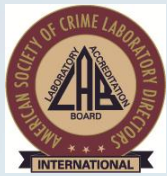




Crime Lab Achievements

Transparency & Awareness

- Forensic Advantage (Lab Information Management System) enhances transparency for users
- Tours of Laboratory Facilities for judicial and defense stakeholders
- Customer Feedback through formalized court reports & annual survey



Crime Lab Achievements

Efficiency

- Lean Six Sigma Project
- Identification of resolved cases / analysis to be returned via Forensic Advantage
- Case management guidelines
- Robotic Technology
- Convenience Contract for private lab analysis
- Blood Alcohol analysis by hospitals
- Mandatory Overtime (>7,700 hours 2013-2014)
- Training by outside experts



Crime Lab Achievements

Collaboration

- Court Scheduling
- School of Government Crime Lab Working Group
 - 17 recommendations
- Training for Conference of District Attorneys & Defense Attorneys
- Local law enforcement / DA evidence submission training
- Judicial Education trainings with School of Government



BIGGEST CHALLENGE:

- **ATTRITION AND NON COMPETITIVE FORENSIC SCIENTIST PAY**

JANUARY 1, 2010 – October 31, 2014

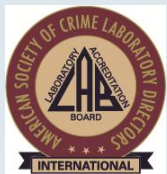
71 – Scientist Separations:

36 – “better employment” (50%)

8 -- retirement

16 -- no reason or “personal reasons”

11 -- miscellaneous reasons



Per analyst training cost to State:

Assuming a 2 year Lab investment in employing, training & developing a new scientist and adding scientist salary & costs: \$114,625

36 x \$114,625 =

\$4,126,500

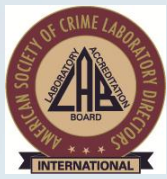
2013 NC DOJ Independent Salary Survey of Forensic Scientists:

NCSCS 16% *“below the average minimum, maximum and survey total averages”*

HB 1093 requested:

- Proposal from House Committee on Judicial Efficiency and Effective Administration of Justice - Sponsored by Co-Chairs, Bipartisan 24 House Members
- Provides a 10% Salary Increase
- Supported by NC Sheriff's Ass'n., NC MADD, NC Forensic Science Advisory Board, NC Ass'n. of County Commissioners
- Referred to House Appropriations Committee

\$992,237



ADDITIONAL CHALLENGES

- **LABWIDE CASE SUBMISSIONS**

FY 2009/10--2013/14: 181,023 case submissions

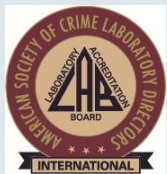
Average: 36,204.6 per year

- **TOO FEW FORENSIC PERSONNEL--**

FY 2013/14: 124 case working scientists**

- **EXTENSIVE OVERTIME--**

**FY 2013-14: 7,776 hrs. (= 3.7 FTE @ 40 hrs./wk for 52 weeks);
\$318,401**



Toxicology

TOXICOLOGY CASE SUBMISSIONS

FY 2010/11 - 2013/14: Average 8,010 per yr.

36%--Western Lab Counties

TOO FEW TOXICOLOGISTS

FY 2013/14: 12 case working toxicologists

****July 1, 2013 Appropriations Act - 19 New Toxicologist Positions
89% fill; training ongoing with expected completion in spring 2015.**



Forensic Biology

FORENSIC BIOLOGY CASE SUBMISSIONS

FY 2010/11 - 2013/14: Average—2,921 per yr.

2,337 (80%) were 1-20 item cases
average 3.5 days or 28 hours to work

584 (20%) were 21+ items
(occasionally exceeding 100)
average 8 days or 64 hours to work

$2,337 \times 28 = 65,436$ required work hrs

$584 \times 64 = \underline{37,376}$

102,812 total required work hrs

TOO FEW DNA ANALYSTS

$102,812 \div 2080$ (52 weeks X 40 hours) = **49.4**

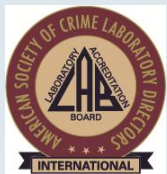
Minimum number of scientists to complete work—
IF analyzing evidence a full 40 hours *every week*

FY 2012/13: 24 case working DNA positions

****2014 Appropriations Act:**

10 positions, effective Mar. 1, 2015,

**“to establish a new Forensic Biology/DNA Unit at
the Western Regional Laboratory”**



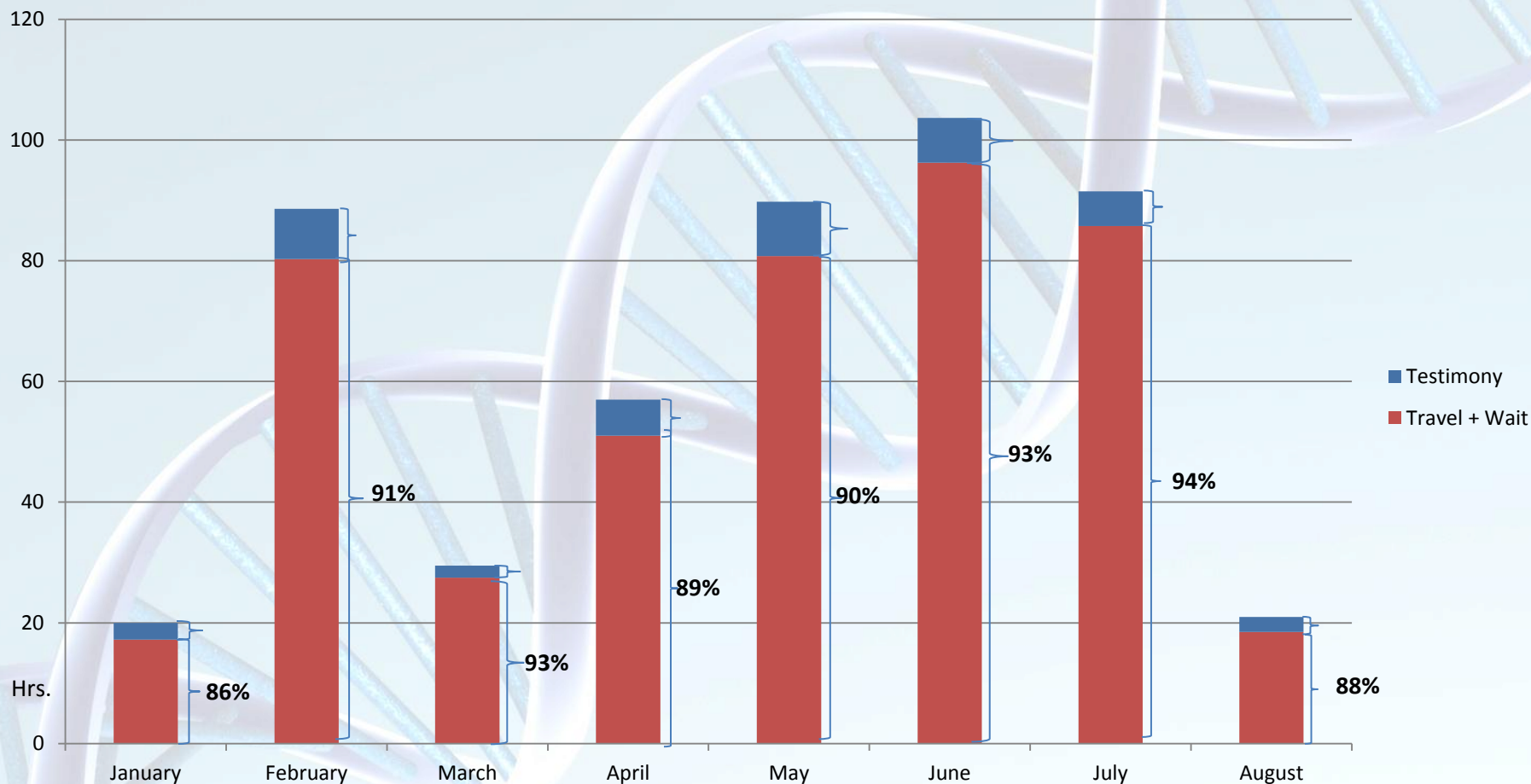
MELENDEZ-DIAZ V. MASSACHUSETTS

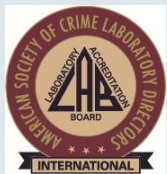
- **June, 2009—forensic scientists must present “live” testimony in criminal trials**
- **600% Toxicology Court Hours Increase in First Six Months**
- **Video Testimony – Pilot project**
- **School of Government – Crime Laboratory Working Group**



Forensic Biology 2013

Court and Travel/Wait Times





Western Laboratory Toxicology Renovation Update

Expected completion of renovation - late 2014
Toxicology operations expected - early 2015



Update on New Western Laboratory

**2014 Appropriations Act, § 36.12 (f) (1) :
\$15,400,000 “to finance the capital facility costs
of a Western Crime Lab”**

36,031 Square Feet

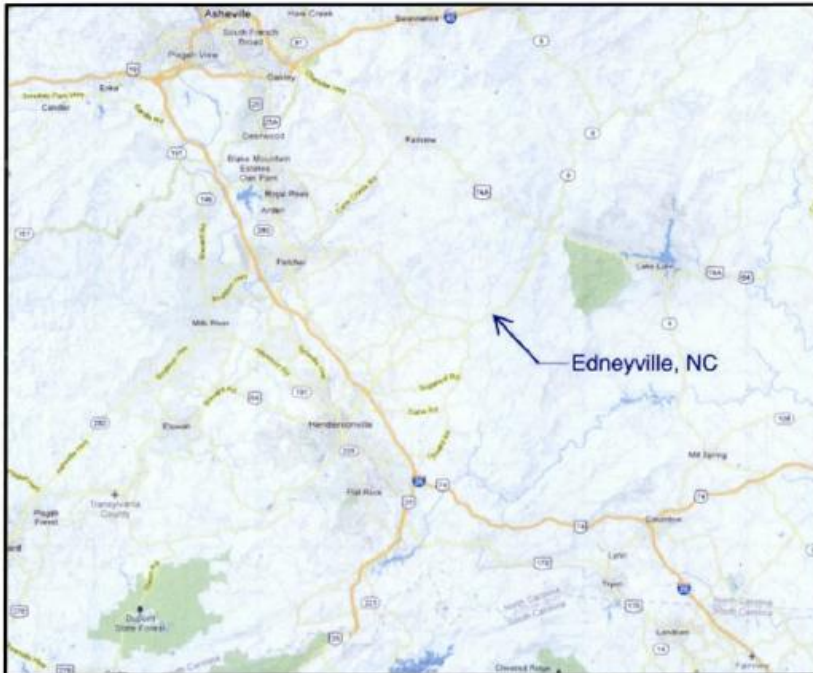
48 Staff Members

751 Sq. Feet/Staff Member

Add Forensic Biology & Toxicology Services

Serve 36 counties

Site Plan Page 7



Edneyville, NC



Larry T. Justus Western Justice Academy



North Carolina State Crime Laboratory – Western Regional Laboratory

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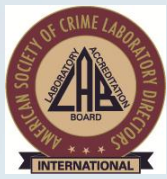
Aerial Photograph of Edneyville & Vicinity/Location Maps

Scale:

1" = 40'-0"

Project No.

1238.01



Questions

<http://ncdoj.gov/crime-lab.aspx>