

#### MATTHEW NOEDEL FORENSIC SCIENTIST

### EDUCATION

#### **University of Montana**

Missoula, MT 1985

Bachelor of Science - Microbiology Bachelor of Science - Medical Technology Minor in Chemistry

#### **California State University**

Sacramento, CA 1987

Bachelor of Science - Forensic Science

30 Quarter units of graduate credit in Criminal Justice with Forensic Emphasis

# **PROFESSIONAL AFFILIATIONS**

American Academy of Forensic Scientists

Association of Crime Scene Reconstruction

Association of Firearm and Toolmark Examiners (AFTE)

International Association of Bloodstain Pattern Analysts

Northwest Association of Forensic Scientists

- Regular Member
- Board of Directors (February 2005) \*Program Chair Annual Meeting 2007
- Treasurer (February 2007)
- Distinguished; Certified Member
- Former Editor, AFTE Journal
- Regular Member
- Member at Large (Nov 2005)
- NWAFS Program Chair Fall Conference (Oct 2000)
- Vice President (Nov 2006)
- President (Nov 2007)

### CERTIFICATIONS

*Certification in Firearms, Toolmarks, and Gunshot Residue Examination* Association of Firearm and Toolmark Examiners (AFTE)

### **EMPLOYMENT**

Nov. 7, 2005 - Present

Forensic Consultant

Noedel Scientific Consultation, Reconstruction, Training, Testimony, Analysis

Noedel Scientific provides expert forensic analysis in a variety of areas including crime scene reconstruction, firearms examination, bloodstain pattern analysis, and case review. Examinations conducted are prepared with an emphasis on scientific detail for future court presentation.



### EMPLOYMENT CONT.

Apr. 9, 1990 - Nov. 4, 2005

Washington State Patrol Crime Lab

Forensic Scientist III

*Crime Scene Response, Firearm and Tool Mark Exam, Bloodstain Pattern Analysis, Chemistry, Trace Evidence* 

The Washington State Patrol Crime Laboratory provided forensic examinations for all of the police, sheriff, and prosecuting attorneys in the state of Washington. Of the services offered by the Tacoma Crime Lab, I worked in Chemistry, Drug Analysis, Fire Debris, Trace Evidence, Crime Scene Response, Bloodstain Pattern Interpretation, Firearms and Toolmarks Analysis.

### **OTHER RESPONSIBILITIES**

- Former Chemical Hygiene and Safety Officer-Tacoma Laboratory
- Former Leaf Marihuana identification Instructor
- Instruct various Crime Scene Training—Firearms
- Certified IBIS and Drugfire computerized database operator
- Washington State Patrol Firearms Review Committee
- Primary Responder and Crime Scene Consultant—Washington State Patrol Crime Lab Crime Scene Response Team

#### TOURS

- Nosler bullet Factory, Bend Oregon
- CCI/Speer Ammunition Factory, Lewiston, Idaho
- Arnold |Arms Specialty Rifle Manufacturer, Arlington, WA
- Olympic Arms Pistol and Rifle Manufacturing, Olympia WA
- Alchemy Arms Pistol Manufacturing, Auburn, WA
- Ruger Firearms & Investment Casting
- Marlin Rifle Factory
- Savage Arms Factory
- Wilson Arms barrel making facility
- Barnes Bullet Manufacturing
- North American Arms Manufacturing

#### SPECIALIZED TRAINING

• Factory Authorized Armory Certification from the following firearm manufacturers:

	Colt	Smith & Wesson	Ruger
	Sig Sauer	Glock	Remington
	Beretta	Heckler & Koch (MP-5)	-
•	Beeman Air Rifle Workshop		

- Lassen College Law Enforcement School
- ATF Arson and Accelerant Detection
- California Department of Justice Basic Forensic Hair examination
- Restek Capillary Chromatography Seminar
- Tire Footprint Workshop
- McCrone's Advanced Microscopy



#### SPECIALIZED TRAINING cont.

- Crime Scene Photography
- Hewlett Packard Gas Chromatography Inlet Systems
- Infra-red Technology--Bio Rad
- Advanced Crime Scene Response
- Crime Scene response In Service Training
- Exterior Ballistics and Reloading
- Crime Scene Response-Criminal Justice Training Center
- Characterization of Projectile Performance-Yuma proving Grounds
- ATF Serial Number Restoration
- Basic Bloodstain Pattern Analysis—TBI
- FBI Gunshot and Primer Residue School-Dillon/Rosati—August 1997
- Exterior Ballistics and Long Range Trajectory Workshop—July 2001
- Washington State Patrol Firearms Instructor—June 2001
- Investigation of Occult Crime Scenes—Lt. Randy Johnson; April 18<sup>th</sup> 2001
- Explosion and Bombing Crime Scenes—James Crippen; April 19<sup>th</sup> 2001
- Advanced Bloodstain Pattern Analysis Workshop—Toby Wolson, Metropolitan Police Institute, Miami, FL –May 7-11, 2001
- Marshall's Reagent and GSR Workshop-April 22, 2002
- Examination of the Taser non lethal weapon character-April 22, 2002
- Consecutive Manufactured Knife Blade Study- April 22, 2002
- Black Powder and Black Powder Substitute Analysis-April 23, 2002
- Ricochet Workshop—April 7, 2003 Instructed by Lucian Haag at the CAC/NWAFS joint meeting in Reno, NV
- Colt 1911 Style Pistol Armorer's Course—April 8<sup>th</sup>, 2003 Instructed by Vancouver PD Rob Caunt at the CAC/NWAFS joint meeting in Reno, NV
- Crime Zone Software Tools-October 14, 2003 NWAFS meeting Portland, OR
- Utilization of Crime Zone 7.0-October 24, 2003 ACSR Annual Conference Oklahoma City, OK
- Adobe Photoshop Techniques-October 24, 2003 ACSR Annual Conference Oklahoma City, OK
- Fluorescein Techniques-April 19-21, 2004 NWAFS Spring Meeting Missoula, Montana
- Putting Power in your Point-February 11, 2005 ACSR Annual Conference 2005
- LED/UV macro Photography-February 11, 2005 ACSR Annual Conference 2005
- Investigation of Lethal Force Encounters-June 10, 2005 CJTC--Dr. Lewinski of the Force Science Research Center, Mankato, MN
- Investigation of Firearms Misadventures-June 2005 AFTE Annual Conference, Indianapolis, Indiana
- Innovative Forensic Techniques-August 31, 2005. Oregon State Police Crime Lab sponsored training from Kjell Carlson, the inventor of the casting material Mikrosil
- Math, Physics and Computers in Advanced Bloodstain Pattern Analysis, October 24-28, 2005; Alberta Justice Staff College, Edmonton, Alberta
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### PUBLICATIONS/PRESENTATIONS

Technical notes published in Microgram-An International U.S. Department of Justice, Drug Enforcement Administration publication dedicated to reporting trends and topics related to current controlled substance analysis.

"Separation of Isomers of (d/l) Amphetamine and (d/l) Methamphetamine from Urine by GC and GC/MS". Presented at the 29<sup>th</sup> annual meeting of the American Academy of Forensic Scientists; Las Vegas, NV. February 1988

"Solid Phase Extraction of Morphine and Codeine". Presented at the Fall meeting of the California Association of Toxicologists, San Diego, Ca. 1989

"<u>Variations on Charcoal Strip Exposure for Absorption/Elution Recovery of Flammable Liquids</u>". Presented at the Fall meeting of the Northwest Association of Forensic Scientists; Portland Oregon, October 1992

"<u>Understanding Your Mass Spectrometer</u>" Crime Scene—A Quarterly Newsletter of the Northwest Association of Forensic Scientists; Volume 21--#3 p. 9 1995

"<u>Uses and Implementation of the Caswell Indoor Firing Range for Forensic Purposes</u>". Presented at the Firearms Round Table during the Northwest Association of Forensic Scientists Spring Conference, Spokane Wa. April 1996

"Drop Testing a .45 Auto Colt 1911". Association of Firearm and Toolmark Examiners Journal Volume 29 #2 Spring 1997 p. 183

"<u>Persistence of Gunshot Residue on Clothing</u>". Presented at the Spring Northwest Association of Forensic Scientists meeting Missoula, MT. April, 1997

"<u>Velocity Drop During the Depletion of CO2 Cartridges in a Pellet Pistol"</u>. Association of Firearm and Tool Mark Examiners Journal Volume 30, Number 3; Summer 1998 p. 435; Presented at the Northwest Association of Forensic Scientists Fall Meeting Las Vegas, NV Fall 1997

"<u>Slam Firing Calico M-100/M-100P Firearms</u>". Association of Firearm and Tool Mark Examiners Journal Volume 30, Number 3; Summer 1998 p. 527

"<u>Lead Patterns Observed in Ricochets</u>". Presented at the Spring Northwest Association of Forensic Scientists meeting Anchorage, AK. April, 1999

"<u>An Unusual Jennings By Bryco Model 59</u>". Association of Firearm and Tool Mark Examiners Journal Volume 31, Number 2; Summer 1999 p. 147

"<u>Tap Rack No Bang</u>". Presentation at the Spring Northwest Association of Forensic Scientists meeting Sacramento CA May, 2000

"Full Auto Armory and Workshop" Instructor...Fall 2000 NWAFS Conference...Seattle, WA



### PUBLICATIONS/PRESENTATIONS cont.

"Examination of Unusual .22 Caliber Ammunition". Presentation at the Association of Firearm and Tool Mark Examiners Annual Conference St. Louis, MO; June, 2000.

"Examination of 12 Gauge Flare Guns". Presentation at the Association of Firearm and Tool Mark Examiners Annual Conference Newport Beach CA; July 11th, 2001

"Detection of Gunshot Residues on Secondary Surfaces". Presentation at the NWAFS Spring Conference, Spokane, WA; April 25th, 2002.

"Forensic Black Powder Workshop". Instructor at the NWAFS Spring Conference, Spokane, WA; April 23rd, 2002

"Firearms in the Forensic Environment" Instructor at the IAI Spring Conference, Tacoma, WA; May 7, 2003.

"Semiautomatic Firearm Ejection Patterns" Instructor at the NWAFS Fall Conference, Portland, OR; October 15, 2003

"An Interesting Shotgun Pattern Reconstruction" Presentation at the ACSR annual conference (Last Piece Society) Oklahoma City, OK; October 23, 2003

"Tool Marks in Bone—Evaluation of a "Sawzall" Presentation at the NWAFS Spring Conference, Missoula, Montana April, 2004

"Evaluation of Non-Replenishing Blood Drip Trails" Presentation at the IABPA Annual Conference October 2004; Tucson Arizona (Second presentation at the request of the Scientific Working Group for Bloodstain Pattern Analysis April 4, 2005)

"Trajectory Documentation Using a 360 Degree Scale" Instructor for the Washington State Patrol Crime Laboratory—presented to the Washington State Patrol Crime Scene Response Team, July 27, 2005

"Special Topics for Crime Scene Examination" Instructor for the Joint IAI/NWAFS Conference May 18, 2005

"Shabazz v Shabazz-An Interesting Shooting Reconstruction" Presentation at the ACSR annual conference (Last Piece Society) Albuquerque, NM; February, 2006

"The Influence of Intermediate Objects Positioned Close to the Muzzle of a Firearm" Presented at the Association of Firearm and Tool Mark Examiners Annual Conference Springfield, Massachusetts-- June, 2006.

"Processing and Reconstructing Shooting Crime Scenes"—A 40 hour course on crime scene processing in shooting incidents. Instructor July 24-28, 2006—Olympia Police Department, Olympia, WA

"Processing and Reconstructing Shooting Crime Scenes"—A 40 hour course on crime scene processing in shooting incidents. Instructor December 19-23, 2006—Seattle Police Department, Seattle, WA



### **PUBLICATIONS/PRESENTATIONS cont.**

"<u>Understanding and Exploring Gunshot Residue</u>"--Lecture and Practical examinations pertaining to GSR. Instructor-January 23, 2007--Association for Crime Scene Reconstruction

"<u>Microscopic Examination of Hair Damaged by the Passage of a Fired Bullet</u>" Hamburg\*, Chris & Noedel, Matthew. A technical presentation presented January 22, 2007--Association for Crime Scene Reconstruction

"<u>Using Adobe Photoshop Tools for Bloodstain Documentation</u>" A technical presentation at the International Association for Bloodstain Pattern Analysts. San Antonio, Texas, October 4, 2007

"<u>Processing and Reconstructing Shooting Crime Scenes</u>"—A 40 hour course on crime scene processing in shooting incidents. Instructor November 26-30, 2007—Olympia Police Department, Olympia, WA

"<u>Processing and Reconstructing Shooting Crime Scenes</u>"—A 40 hour course on crime scene processing in shooting incidents. Instructor December 5-9, 2008, Norman Police Department, Norman OK

"Exploring the CSI Effect" A presentation for the "Inn at the Court" February 9<sup>th</sup>, 2009 Tacoma, WA

"<u>Using Lasers to Document Bullet Trajectories</u>" Instructor--Presented in two sessions at the Association for Crime Scene Reconstruction Conference Feb 10-14, 2009, Denver, CO

"<u>Preparing Reports for Shooting Crime Scenes</u>" Instructor--Presented in two sessions at the Association for Crime Scene Reconstruction Conference Feb 10-14, 2009, Denver, CO



## SELECT RECENT TESTIMONY

Testimony related activity has involved serving as an expert witness in firearms, crime scene examination and crime scene reconstruction for the last ten years. An average year involves providing approximately 12-15 testimonies from events ranging from simple firearm function testing to complete crime scene reconstruction. A select list of recent, complicated casework during which I was accepted as an expert are summarized below:

#### June 2007 State of Washington v Belz Thurston County Juvenile Court—Olympia, WA

Testimony involved the examination of a pistol for accidental versus unintentional discharge and the reconstruction of a single gunshot that occurred in a confined space. Specialized testing involved generating a test drop pendulum device and the characteristics of a dropped versus fired semiautomatic pistol.

#### July 2006 State of Washington v Benjamin Asaeli et al. Pierce County Superior Court—Tacoma, WA

Testimony involved the examination, appearance and deformation of fired bullets and gunshot residues detected on the clothing of the victim. Residues that support a close range gunshot to the side of the victim were located and processed using infra-red video techniques and fired bullets were assessed to determine which had gone through the windshield of a vehicle, versus those that did not impact a significant intermediate object.

#### May 2006 State of Minnesota v Larry Clark—Conspiracy to commit Murder Ramsey County Superior Court-St. Paul, MN

Testimony involved the examination of documents and crime scene work to reconstruct the trajectory of a single fired bullet that struck and killed a police officer in the year 1970. By examination of the old police reports, examination of the physical evidence and the current appearance of the scene, information missing from the 1970 era examination was filled in and documented with 2006 technologies. This analysis helped demonstrate the most likely trajectory of the fatal shot.

#### December 2005 State of Washington vs William Joice—Attempted Murder 1<sup>st</sup> degree King County Superior Court

Testimony involved the examination of a vehicle that had been struck by fired bullets in conjunction with a recovered semiautomatic pistol, a suppressor and fired ammunition. The reconstruction presented revealed the position a shooter would have been in to deliver the shots and the trajectory that each shot would have traveled. One fired bullet struck the victim in the back of the head and bloodstain pattern examination helped position the victim at the time he was struck by the bullet.



### SELECT RECENT TESTIMONY cont.

#### September 2005 State of Washington vs Dwight C. Feeser—Homicide Grays Harbor County Superior Court

Testimony involved the analysis of a sawed off shotgun in association with a wound pattern observed on the body of the deceased victim. Testing identified the range and orientation of the fatal shot. Distance determination based on the spread of the shot was presented and discussed during the trial.

#### May 2005 State of Washington vs Trollers Takbar Fleming —Homicide Pierce County Superior Court

Testimony involved the analysis of a pistol, fired bullets, fired cartridge cases and multiple bullet holes through a driver's window (from inside to outside). Shot sequencing and positional information was related based on trajectory examination, bloodstain patterns and shooting reconstruction. The shooting had occurred from inside the car while the car was being driven. The victim was the driver who had received multiple gunshot wounds to the head, all of which exited.

#### February 2005 State of Washington vs Jerry Bartlett Jones—Homicide Snohomish County Superior Court

Testimony involved the examination of clothing, old crime scene documentation and data and bloodstain patterns from a 17 year old stabbing homicide. Crime scene reconstruction was based on the examination and testing of original photos, suspects' statements and newly examined evidence. This case was reviewed and presented on the CBS television show 48 Hours.

# **Additional Recent Testimony**

The following testimony was presented in Western Washington and Nevada over approximately the last 2 years:

5/5/2008 State of WA-vs Tony Smith—Triple Homicide—5/5/2008 King County Superior Court

5/8/08 Las Vegas, NV Superior court: State of Nevada v Victor Anthony Ramos... LVMPD event 07 1007 0044

6/10-11/08 Event 07-0203-0334 and 07-0203-0669 State of NV vs Frank Macias



# Additional Recent Testimony cont.

10/21/08 State of WA vs Fortier, Bryce D. GSR on white coat--Snohomish County

11/7/08 State of WA vs O'Reilley Officer involved shooting reconstruction—Snohomish County, WA

2/13/2006	State of WA v Paul Nunn
3/1/2006	State of WA v Mario Sanchez
3/27/2006	State of WA v Elmore
6/12/2006	State of WA v Schreiber
8/7/2006	State of WA v Pearson
2/6/2007	State of WA v Brightman
3/15/2007	State of WA v Holloway
10/30/2007	State of WA v Moi
11/7/2007	State of WA v Hunter
12/11/2007	State of Nevada vs Hartzog—(Las Vegas NV)