

National Institute of Standards and Technology (NIST)
Bullet Black Box Background Survey
OMB Control No. 0693-0033
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NIST Generic Clearance for Program Evaluation Data Collections

FOUR STANDARD SURVEY QUESTIONS

1. Explain who will be surveyed and why the group is appropriate to survey.

The National Institute of Standards and Technology (NIST) is working to strengthen forensic science practice through research and improved standards in fields such as ballistic interpretation. Forensic ballistic interpretation involves comparing the microscopic marks left on the surfaces of the bullets and cartridge cases with the goal of helping law enforcement to link them to suspect firearms.

NIST is using its expertise in forensic science, metrology, and engineering to advance the science of firearms identification. To do this, we are working with partners in academia, law enforcement, and private industry on advancing our understanding of how firearm comparisons are done, developing methods for characterizing the microscopic surface topography of fired bullets and cartridge cases, creating new data exchange formats for sharing that data across platforms, and new algorithms that can objectively measure the degree of similarity between two surfaces.

This survey is being conducted of participants in the NIST/Noblis “Bullet Black Box” study, which is an evaluation of the accuracy and reliability of the conclusions made by forensic firearms examiners in comparing bullets. Participation will be open to US firearms examiners who have conducted operational casework in the past year.

Requests for participation in the study will be sent to individual firearms examiners and firearm examination/forensic science organizations. The individuals contacted will be those who conduct forensic investigations at a Federal, state, or local law enforcement agency, or at private companies.

The individuals targeted by the request for participation are most appropriate because they are the individuals who conduct bullet examinations in their daily work.

2. Explain how the survey was developed including consultation with interested parties, pre-testing, and responses to suggestions for improvement.

The survey was developed through collaboration with firearms examination experts and using lessons learned from the development of similar surveys used in the FBI Laboratory's latent fingerprint examination studies. Feedback on survey questions was solicited from two firearms examination experts. Experience and feedback from this process has allowed for fine tuning and enhancement to the current survey, including improvement in questioning, focus, content, and delivery.

3. Explain how the survey will be conducted, how customers will be sampled if fewer than all customers will be surveyed, expected response rate, and actions your agency plans to take to improve the response rate.

Individuals who express interest in participating in the study will be asked to register using the study's website. The survey will be included as part of the registration process, along with descriptions of the study and its purpose.

The total number of US firearms examiners is estimated at about 1500 – about 140 are US firearms examiners certified by Association of Firearm and Tool Mark Examiners (AFTE), about 800 are non-certified US firearms examiners who are AFTE members, and an estimate of several hundred who are not AFTE members. NIST will reach out to the entirety of this community and request completion of the voluntary survey. The estimated response time to complete this survey is 10 minutes; total estimated burden time is 250 hours.

NIST will reach out to the entire firearms community of 1500. The estimated response is 150 individuals (10 %).

The survey will not collect participants' name and data will not be saved within a Privacy Act System of Records. Because of this, a Privacy Act Statement and SORN are not applicable.

4. Describe how the results of the survey will be analyzed and used to generalize the results to the entire customer population.

The results of the survey will be used for two purposes:

- The survey will collect information about the forensic firearms examination community, which NIST will use to gain a better understanding of type of bullet comparisons that are routinely seen in practice. The information can be generalized because it will reflect the ranges of variation seen in practice.
- The survey will collect information on study participants' experience and training, which will be used during analysis of the results of comparisons conducted during the study; any associations between participants' experience and training and accuracy will be reported.