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U.S. Department
of Transportation
National Highway
Traffic Safety
Administration



Development

of a

**Standardized
Field Sobriety Test**

training management system

DOT HS 809 400

November 2001

**Development of a
Standardized Field Sobriety Test (SFST)
Training Management System**

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16. Abstract This report presents the results of a study conducted for the National Highway Traffic Safety Administration (NHTSA) to develop a model system to help law enforcement agencies manage Standardized Field Sobriety Test (SFST) training requirements. A further objective is to explore the feasibility of establishing and operating a statewide SFST training-records system. Beginning in 1975, the National Highway Traffic Safety Administration (NHTSA) sponsored research that led to the development of standardized methods for law enforcement officers to use when evaluating motorists who are suspected of Driving While Impaired (DWI). Since 1981, law enforcement officers have used NHTSA's Standardized Field Sobriety Test (SFST) battery to help determine whether motorists who are suspected of DWI have blood alcohol concentrations (BACs) greater than 0.10 percent; the SFST battery was further validated for use at the 0.08 BAC level in 1998. NHTSA's SFSTs largely have replaced the unvalidated performance tests of unknown merit that once were the officer's only tools in helping to make post-stop DWI arrest		

decisions. NHTSA's SFSTs presently are used in all 50 states and have become the standard pre-arrest procedures for evaluating DWI in most law enforcement agencies.

Colorado is the first state to require periodic refresher training for SFST practitioners and instructors. Interviews were conducted with representatives from a sample of Colorado law enforcement agencies to learn how officers and supervisors determine who requires refresher training, and when it is required, to maintain practitioner and instructor certifications. The data elements and design features of a model, computer-based SFST training-records management system were identified based on a review of current methods and procedures. The specifications of the model system are described.

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Introduction

This report presents the results of a study conducted for the National Highway Traffic Safety Administration to develop a model system for managing Standardized Field Sobriety Test (SFST) training within a state. The report is presented in three sections. This brief Introduction discusses the historical context of the study and presents the objectives of the research. The second section of the report describes the tasks that were performed and presents study results. The third section discusses the specifications of a computerized model system for tracking SFST training.

Development and Validation of the SFST Battery

During the late 1960s and early 1970s more than 50,000 people lost their lives each year on our nation's public roads; more than half of the fatalities involved an alcohol-impaired driver. Traffic safety has improved considerably since that time: the annual death toll has declined to about 40,000, even though the numbers of drivers, vehicles, and miles driven all have greatly increased. When miles traveled are considered, the likelihood of being killed in traffic in 1966 was more than three times what it is today.

Research sponsored by the National Highway Traffic Safety Administration (NHTSA) has contributed to the improved condition, in part, by providing law enforcement officers with useful and scientifically valid information and training materials to assist in the enforcement of drinking and driving laws. Beginning in 1975, NHTSA sponsored research that led to the development of a Driving While Impaired (DWI)¹ detection guide that listed 20 driving cues and the probabilities that a driver exhibiting a cue would have a BAC of at least 0.10 percent (Harris et al., 1980; Harris, 1980). A similar study was conducted more recently that identified 24 driving cues that are predictive of DWI at the 0.08 level (Stuster, 1997); the latter study also identified ten post-stop cues with probabilities of DWI of at least 90 percent. NHTSA previously sponsored research that led to the development of a motorcycle DWI detection guide and training program (Stuster, 1993). NHTSA's DWI training materials, based on the results of these studies, have exposed the current generation of law enforcement officers in the U.S. to information critical to DWI enforcement by providing a systematic, scientifically valid, and defensible approach to on-the-road DWI detection.

At the same time NHTSA was providing officers with information concerning the driving behaviors that are the most predictive of impairment, the agency also sponsored research that led to the development of a standardized battery of tests for officers to administer to assess driver impairment after an enforcement stop has been made. Marcelline Burns and Herbert Moskowitz conducted laboratory evaluations of several of the tests that were most frequently-used by law enforcement officers at the time (Burns and Moskowitz, 1977). In addition to a variety of customary roadside tests (e.g., finger-to-nose, maze tracing, backward counting), the researchers evaluated measures of an autonomic reaction to central nervous system depressants, known as Horizontal Gaze Nystagmus. Horizontal Gaze Nystagmus (HGN) is an involuntary jerking of the eye that occurs naturally as the

eyes gaze to the side. Aschan (1958) described studies that linked various forms of nystagmus to BAC, and Wilkinson, Kime, and Purnell (1974) reported consistent changes in Horizontal Gaze Nystagmus with increasing doses of alcohol. At the time Burns and Moskowitz were conducting their seminal research for NHTSA, Horizontal Gaze Nystagmus recently had been found to reliably predict BACs in a study conducted in Finland (Pentilla, Tenhu, and Kataja, 1974). Further, Lehti (1976) had just calculated a strong correlation between BAC and the onset of nystagmus.

All of the field sobriety tests evaluated by Burns and Moskowitz were found to be sensitive to BAC in varying degrees, at least under laboratory conditions. In addition, all of the tests showed a consistent increase in correlations with increasing BACs. Statistical analyses found the Horizontal Gaze Nystagmus test to be the most predictive of the individual measures. However, the combined scores of two of the tests provided a slightly higher correlation than the Horizontal Gaze Nystagmus test by itself (Burns and Moskowitz, 1977); three tests were recommended to become the components of the SFST battery.

NHTSA immediately sponsored a subsequent study to standardize the test administration and scoring procedures and conduct further laboratory and field evaluations of the new battery of three tests. The researchers found that law enforcement officers tended to increase their arrest rates and were more effective in estimating the BACs of stopped drivers after they had been trained in the administration and scoring of the Standardized Field Sobriety Test battery. The results of the study were documented in the technical report, *Development and Field Test of Psychophysical Tests for DWI Arrest* (Tharp, Burns, and Moskowitz, 1981). That report was cited throughout the U.S. to establish the scientific validity of the SFST battery and to support officers' testimony in court.

Beginning in 1981, law enforcement officers used NHTSA's Standardized Field Sobriety Test (SFST) battery at roadside to help determine whether motorists who are suspected of DWI have blood alcohol concentrations (BACs) greater than 0.10 percent. Since 1981, however, many states have implemented laws that define DWI at BACs *below* 0.10. For this reason, NHTSA sponsored additional research to systematically evaluate the accuracy of the SFST battery to discriminate above or below 0.08 percent and above or below 0.04 percent BAC. In that study, Jack Stuster and Marcelline Burns (Stuster and Burns, 1998) found the SFSTs to be extremely accurate. Decision analyses revealed that officers' estimates of whether a motorist's BAC was above or below 0.08 were accurate in 91 percent of the cases, and estimates of whether a motorist's BAC was above 0.04 but under 0.08 were accurate in 94 percent of the decisions to arrest and in 80 percent of the relevant cases, overall.²

The SFST battery is composed of three tests: Horizontal Gaze Nystagmus (HGN), Walk-and-Turn (WAT), and One-Leg Stand (OLS); the tests and scoring procedures are described in Appendix A. Table 1 compares the accuracy of the SFSTs during the 1981 and 1998 validation studies. In the 1998 study, HGN was again found to be the most accurate of the component tests in discriminating above and below the criterion BAC, and the results of the three SFSTs combined provided slightly greater accuracy than the

HGN test alone. The most salient difference between the results of the 1981 and the 1998 validation studies is the substantial increase in the accuracy of officers' decisions, despite the lower criterion BAC in the 1998 study (0.10 percent BAC in 1981; 0.08 percent BAC in 1998). The greater accuracies of the SFST battery and component tests during the 1998 study are attributable to the differential experience of the officers who participated in the two studies. That is, the officers who participated in the original research had learned the procedures as part of the 1981 laboratory study; in contrast, the officers who participated in the 1998 study had been using the SFSTs for several years to help make arrest decisions under operational conditions. Thus, the levels of accuracy observed during the 1998 study reflect current conditions and should be considered the validated measures of SFST accuracy.

SFST(s)	% Correct Decisions 1981	% Correct Decisions 1998
SFST(s) 1981 1998 SFST Battery (the 3 tests combined)	81	91
Horizontal Gaze Nystagmus (HGN)	77	88
Walk-and-Turn (WAT)	68	79
One-Leg Stand (OLS)	65	83

Other studies have confirmed the considerable accuracy of the SFSTs to assist officers in making arrest decisions for DWI (Arend, et. al., 1999; Anderson and Burns, 1997; Burns and Anderson, 1995). Officers have found the SFSTs to be fully-acceptable for field use and they appreciate the diagnostic value of test results. Further, many prosecutors prefer officers to administer only the SFSTs to help make arrest decisions for DWI because the tests have been scientifically validated and are defensible in court.

NHTSA's SFSTs largely have replaced the unvalidated performance tests of unknown merit that once were the patrol officer's only tools in helping to make post-stop DWI arrest decisions. Regional and local preferences for other performance tests still exist, even though some of the tests have not been validated. Despite regional differences in what tests are used to assist officers in making DWI arrest decisions, NHTSA's SFSTs presently are used in all 50 states. NHTSA's SFSTs have become the standard pre-arrest procedures for evaluating DWI in most law enforcement agencies.³

The Horizontal Gaze Nystagmus (HGN) test is considered by many law enforcement officers to be the most effective technique to provide evidence of alcohol in a motorist's system. The normal variation in human physical and cognitive capabilities, and the effects of alcohol tolerance, can result in uncertainties when arrest decisions are made exclusively on the basis of physical and/or cognitive performance tests. These uncertainties have resulted in many DWI suspects being released rather than detained and transported to another location for evidentiary chemical testing. This is because some experienced drinkers can perform physical and cognitive tests acceptably, even with a BAC greater than 0.10 percent. However, experienced drinkers cannot conceal the physiological effects of alcohol from an officer who is skilled in HGN administration, because Horizontal Gaze Nystagmus is an involuntary reaction over which an individual has absolutely no control.

The Importance of Standardization

The validity of SFST results is dependent upon practitioners following the established, standardized procedures for test administration and scoring. NHTSA's *SFST Student Manual* states that the procedures demonstrated in the training program describe how SFSTs should be administered under ideal conditions, but that ideal conditions do not always exist in the field. Variations from ideal conditions, and deviations from the standardized procedures, might affect the evidentiary weight that should be given to test results.

Courts in several states have reviewed the admissibility of field sobriety tests that assess physical coordination and have held that deviations in the administration of the tests should not result in the suppression of test results. These courts have found that field sobriety tests, including the Walk-and-Turn and the One-Leg-Stand of the SFST battery, are simple physical dexterity exercises that can be interpreted by an officer in the field, and by others in a court of law. However, courts have ruled that the admissibility of the HGN test may be treated differently due to its "scientific nature." For this reason, HGN results are vulnerable to challenge, and likely to be excluded by the court, if the test was not administered in strict compliance with established protocols.

Other states have been even less accommodating to deviations from the standardized procedures. In particular, the Ohio State Supreme Court ruled that law enforcement officers have no discretion in the administration of SFSTs. In a four-to-two decision, the Ohio State Supreme Court held in *Ohio v. Homan*, 732 N.E.2d 952 (Ohio 2000), that Standardized Field Sobriety Tests conducted in a manner that departs from the methods established by NHTSA "are inherently unreliable" and thus inadmissible.⁴

The SFST battery is composed of three separate tests with three independent predictive validities that range from 79 to 88 percent. Depending on the physical characteristics of the subject and roadside conditions, an officer might choose to refrain from administering the entire SFST battery, as directed by the training materials (e.g., a leg injury that might affect a person's ability to perform the OLS test). Because an officer is permitted the discretion to withhold a test, it is reasonable to question why a deviation in the administration of one of the three tests would disqualify the entire battery. Although it is not recommended to do so under ideal conditions, the data show that accurate arrest decisions reliably can be made on the basis of two of the SFSTs, or on the basis of HGN test results, alone.

The International Association of Chiefs of Police (IACP) adopted uniform procedures in 1992 to guide the training of SFST instructors and practitioners. Those standards include 24-hours of NHTSA-approved SFST instruction. The procedures for administering and interpreting SFST results can be readily learned and, generally, proficiency increases with experience. However, it is possible for SFST skills to degrade if they are not exercised regularly (e.g., during a prolonged absence from patrol work). Also, the SFST procedures have evolved since they were first developed in 1981. Modifications to the standardized procedures could result in an officer administering SFSTs according to outdated protocols.⁵ For these reasons, NHTSA recommends that law enforcement agencies conduct refresher training for SFST instructors and practitioners.

Project Objectives

The primary objective of this study is to develop a model system to help law enforcement agencies manage Standardized Field Sobriety Test (SFST) training requirements. A further objective is to explore the feasibility of establishing and operating a statewide SFST training records system.

General Approach

Judges in the State of Colorado became concerned with inconsistencies in the testimony of law enforcement officers concerning SFST administration and scoring procedures. In response to those concerns, representatives of law enforcement agencies, the Rocky Mountain Institute for Transportation Safety, and the Colorado Department of Transportation developed standards for SFST instructors and practitioners, based on the NHTSA standards, which include requirements for refresher training. In this regard, the Colorado SFST standards require that practitioners receive at least two hours of refresher training every two years and instructors receive at least eight hours of refresher training every two years, to maintain their SFST practitioner and instructor certifications. The statewide regulation took effect in 1999, with a two-year grandfather clause expiring in November of 2001.

The implementation of SFST refresher training requirements by the State of Colorado offers an opportunity to study how law enforcement agencies maintain records of training experience to comply with the requirement. The question of particular interest is, how do

agencies identify when individual SFST instructors and practitioners must receive their periodic refresher training? Interviews were conducted with personnel from a sample of Colorado law enforcement agencies to obtain the information necessary to answer the research questions.

1. Various terms are used throughout the United States for offenses involving drinking and driving. In this report, Driving While Impaired (DWI) is used to refer to all occurrences of driving at or above the illegal blood alcohol concentration (BAC) limit of a jurisdiction.
2. In addition to the results of the decision analysis, the study found statistically significant correlations between SFST results and measured BACs ($p=.005$); also, the difference between the mean estimated and measured BACs of the 297 motorists tested at roadside during the field study was very small and operationally irrelevant (i.e., 0.117 vs. 0.122 percent BAC, respectively).
3. The Advisory Committee on Highway Safety of the International Association of Chiefs of Police (IACP) recommended in 1986 that law enforcement agencies adopt and implement NHTSA's SFSTs and the associated training program.
4. Officers always should fully comply with NHTSA's guidelines when administering the SFSTs. However, if deviations occur, officers and the courts should understand that any deviation from established procedures relates to the *weight* of the evidence, not its *admissibility*.
5. For example, the original SFST procedures specified that the HGN test not be administered to individuals who were wearing hard contact lenses. The stipulation was made to avoid the possibility of losing a lens as a consequence of the required eye movements. The stipulation eventually was removed when it was recognized that the possibility of dislodging a contact lens was minimal.

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The Research

Project staff met with representatives of the Colorado Department of Transportation and NHTSA's Region 8 Office to discuss project objectives and methods before beginning the series of open-ended interviews with law enforcement personnel. During those meetings we learned of Colorado's Law Enforcement Assistance Fund (LEAF), an effective and uniquely appropriate means for supporting efforts to counter drinking and driving. Approximately 90 dollars from each DWI/DUI fine paid in Colorado is allocated to LEAF for disbursement to municipal and county law enforcement agencies in the form of grants to help support DWI enforcement activities. More than 20 million dollars in LEAF grants have been awarded since the program began in 1984. Two of the criteria for receiving LEAF grants are that an agency must have at least 80 percent of its officers trained in SFST administration, and the agency must conduct SFST refresher training according to the state standard.

Law enforcement agencies that have been particularly active in the LEAF grant program were identified and the names of contact personnel at those agencies were obtained from the Colorado Department of Transportation and the Rocky Mountain Institute for Transportation Safety. A protocol was developed to guide the discussions and to ensure that all relevant information would be collected.

Discussions were held with representatives of 16 Colorado law enforcement agencies. The agencies included municipal police departments, sheriffs' departments, and the Colorado State Patrol. Agencies ranged in size from the seven-officer Buena Vista Police Department to the 1,400-officer, consolidated Denver City and County Police Department. The agencies included in the sample represent nine percent of Colorado's law enforcement agencies, but account for approximately 40 percent of all law enforcement personnel in the state.⁶ Some of the discussions were conducted during site visits to the agency headquarters, others were conducted during the Rocky Mountain Crash and DUI Conference, and others were conducted by telephone.

Results

Results of the discussions with law enforcement personnel are presented in the following categories: SFST Initial Training, SFST Refresher Training, Training Management Methods, and Utility and Feasibility of a Statewide SFST Records System.

SFST Initial Training

The strong emphasis placed on DWI enforcement by Colorado law enforcement agencies is evident in agencies' policies regarding initial training. In particular, all of the agencies included in the sample provide initial SFST training to all new recruits. Four methods are used by the agencies to provide SFST initial training. 1) The larger agencies, such as the Denver Police Department (1,400 sworn officers), include NHTSA's DWI detection and SFST training in the curriculum that is taught at their departmental academies. 2) Smaller

agencies, such as the Montrose Police Department (30 sworn officers) use the services of regional police academies, which also include SFST training modules in their curricula.

3) ♦ Many agencies, such as the Adams County Sheriff's Office (80 sworn deputies) and the Pueblo Police Department (200 sworn officers), conduct their initial SFST training internally, often opening their classes to neighboring agencies. 4) ♦ Agencies of all sizes send recruits to initial SFST courses offered by the Rocky Mountain Institute for Transportation Safety (RMITS). In addition, nearly all SFST instructors in Colorado receive their initial training from RMITS.⁷

Further evidence of the emphasis placed on DWI by Colorado law enforcement agencies is found in policies regarding officers who transfer from one agency to another. Many of the agencies in the sample require transferring officers to take the full 24-hour NHTSA DWI detection and SFST course upon entering the department, even if they have received initial training elsewhere. Similarly, many agencies require officers who have not had patrol assignments for more than two years to take the SFST course again. And, several agencies, including the Littleton Police Department (70 sworn personnel), require that officers be certified in SFST administration before they are eligible for overtime assignments.⁸ Policies such as these encourage officers to become certified in SFST administration and to maintain their proficiency through regular refresher training.

SFST Refresher Training

The proponents of Colorado's SFST standards experienced resistance from some law enforcement agencies concerning the plan to require refresher training. The original proposal suggested eight hours for practitioners and 16 hours for instructors, every two years, to maintain certification. The original proposal was considered to be too costly by many law enforcement managers, both in terms of training costs and officers' absence from the field. A minimum of two hours of refresher training every two years for SFST practitioners, and eight hours every two years for instructors, was an acceptable compromise for nearly all Colorado law enforcement agencies. Among the agencies in our sample, only the Aurora Police Department has yet to establish an SFST refresher training policy for practitioners in response to the state standards.⁹

The high level of commitment to DWI enforcement exhibited by Colorado law enforcement agencies is further illustrated by the SFST refresher training policies adopted by agencies throughout the state. Nine of the 16 agencies in the sample have adopted refresher training policies that exceed the state standard for practitioners. The policies of five of the agencies are twice the minimum requirement, and four of the agencies adopted policies that are four times the minimum. Table 2 presents the distribution of refresher training requirements for SFST practitioners of the sample of 16 Colorado law enforcement agencies. All of the agencies provide the refresher training as part of their on-going, in-service training programs.

Table 2
SFST Refresher Training Requirements For Practitioners:
16-Agency Sample

- Refresher Training Requirement: 2 hours every 2 years ♦ Number of Agencies = 6
- Refresher Training Requirement: 2 hours per year ♦ Number of Agencies = 1
- Refresher Training Requirement: 4 hours every 2 years ♦ Number of Agencies = 4
- Refresher Training Requirement: 4 hours per year ♦ Number of Agencies = 3
- Refresher Training Requirement: 8 hours every 2 years ♦ Number of Agencies = 1
- Refresher Training Requirement: No policy ♦ Number of Agencies = 1

All but two of the agencies contacted during this study have adopted the state refresher training standard for SFST instructors (i.e., eight hours of refresher training every two years). The two agencies in the sample that are not following the state guidelines have adopted policies that involve twice the state's minimum requirement (i.e., eight hours of refresher training each year, rather than every other year). Further, instructors from several of the agencies that adopted the state standard also plan to attend eight-hour, refresher training courses every year, rather than every other year. All of the SFST instructors who were interviewed described the refresher training courses as essential to their professional development and effectiveness as trainers. Officers reported that attending the courses ensures that an instructor is aware of the latest developments in SFST procedures and relevant legal issues.

Exceeding the minimum requirements for practitioner and instructor refresher training is a strong indication of law enforcement support for NHTSA's SFSTs and reflects the dedication of Colorado law enforcement personnel to improving traffic safety. It is significant that officers reported during interviews that the new state SFST standards already have elevated the level of professionalism among SFST practitioners and instructors, and contributed to improvements in the consistency and quality of officers' expert testimony in court.

Training Management Methods

Nine of the law enforcement agencies contacted during the study, including the largest agency in the sample, currently use paper records to keep track of practitioner SFST refresher training requirements. The paper records usually are maintained at agency headquarters, as part of each officer's personnel file, and as lists of officers or course rosters by either the agency's DUI supervisor or the designated SFST instructor.

Three agencies in the sample use computerized spreadsheets to track the SFST training experience of individual officers. In each case, the spreadsheet was developed by a DUI supervisor or SFST instructor to help determine when officers need refresher training to maintain their certification. The DUI supervisors of two of the agencies that use paper records mentioned that they also intend to develop spreadsheets to help with the task, as soon as they find the time to do so.

Two of the agencies contacted use unique computer-based programs to identify SFST training requirements. The programs were developed by agency personnel to manage all training-related matters for their departments, including the many special topics for which recurrent training or skills-demonstration are required at various intervals (e.g., CPR, First Aid, Pressure Point Control Tactics, Intoxilizer, SFSTs). Administrative personnel in the training divisions of these agencies update the databases when an officer reports that training has been completed, and provide individual training histories to each officer annually. Supervisors also receive the training histories and may use the information during performance reviews.

The SFST instructors in one of the agencies contacted use a computer program that was developed originally to track Intoxilizer certification requirements. The program was developed under contract to the Colorado Department of Transportation (CDOT) for use by CDOT grant recipients and has been modified to also track SFST refresher training requirements.¹⁰

Instructors in all 16 of the agencies contacted are expected to keep track of their own SFST refresher training requirements and to attend the necessary eight-hour courses to maintain their instructor certifications. Some of the instructors reported that notices issued by the LEAF Grant Program and course schedules included in the RMITS newsletter serve as reminders.¹¹

All of the methods for managing SFST refresher training described in the preceding paragraphs, whether paper-based or computerized, share one important requirement: someone must review the records to identify who needs refresher training and by what date they need it to maintain their practitioner certification. The central question remains: How do officers know when they are due for refresher training?

Although instructors are expected to keep track of their own certification requirements, two separate philosophies concerning refresher training for practitioners emerged from the interviews; one approach favors notification while the other stresses personal responsibility.

In this regard, nine of the agencies in the sample inform officers of pending SFST training requirements. Agency personnel review paper or computerized records, then inform the officers, either personally or by posting lists of names. The officers in these agencies may be assigned to a specific class or permitted to choose from among a few options, for convenience, but in all nine agencies the officers are informed of the commitment and required to attend a training session.

In contrast, the policies in six of the agencies place the responsibility for maintaining SFST practitioner certifications on the officer. Officers in these agencies may inspect their departmental training records or maintain a personal log of certification dates for their own use, but they are not specifically informed by their agencies that they must attend an SFST refresher training course. Schedules of courses usually are posted, but in these agencies it is the officer's responsibility to determine when a course must be taken for the officer to remain certified.

Methods are needed for keeping track of officers' most-recent SFST training dates because the state standard for practitioners requires that refresher training be completed at a maximum interval of two years, and officers receive(d) their initial SFST training and/or subsequent refresher training on different dates. Four of the agencies contacted during this study have avoided much of the administrative work associated with SFST refresher training by requiring that *all* officers attend a class *each year*, rather than every other year. Three agencies require four-hour classes and one agency requires a two-hour class. The classes are provided as part of an annual in-service program, as in the other agencies; the difference is that all officers must attend the refresher course each year.¹²

Utility and Feasibility of a Statewide SFST Records System

The final question in each open-ended interview conducted during the current study asked whether a centralized, statewide database of SFST practitioners and instructors would be useful. Representatives of nine of the 16 agencies in the sample responded that they did not believe that a statewide database of SFST practitioners would be useful to them, nor would it be practical to implement. These officers and managers commented that their existing methods for tracking training requirements were adequate for their purposes. Three of the four agencies that conduct annual refresher training are in this category because an annual training policy largely eliminates the need for a tracking and scheduling system to satisfy the state requirement for training at two-year intervals. Further, some of the officers did not believe that CDOT would be willing or capable of administering the central database; others commented that it would be impossible to obtain the cooperation of all law enforcement agencies in the state.

Officers from six of the agencies contacted responded that they believed a central SFST database would be useful, especially for smaller agencies that lack administrative personnel to perform the necessary record-keeping tasks. However, officers from four of the six agencies that favor a centralized system commented that it would be impractical, for the same reasons offered by their colleagues who did not believe that a centralized records system would be useful.

The officers and managers were asked if a statewide system might facilitate the confirmation of credentials when an officer transfers from one agency to another. Only two of the officers considered this to be a potential benefit of a central SFST practitioner database. Most of the officers reported that their agencies obtain the complete training histories of transferring officers from the officers' previous agencies, eliminating the need for further confirmation of credentials or certifications. Also, several of the agencies in

the sample require transferring officers to attend initial SFST training, along with new recruits, regardless of a transferring officer's previous training experience. This policy is designed to ensure that all officers in the agency are properly trained and administer the SFSTs in a consistent manner.

Despite the apparent lack of support for a statewide records system for SFST practitioners, officers and managers from nine of the agencies contacted responded that a central database for SFST instructors might be both useful and practical. A centralized SFST instructor database would help smaller agencies to identify instructors in their area, and might contribute to the growing sense of professionalism among SFST instructors. Further, a centralized database would facilitate the timely dissemination of updated SFST information and materials. Officers commented that an instructor database would be more feasible than a practitioner database because there are only about 300 SFST instructors in the state, compared to several thousand practitioners.

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6. More than half of the law enforcement agencies in Colorado have fewer than 40 sworn officers; 76 of the agencies have ten or fewer officers.
 7. The Rocky Mountain Institute for Transportation Safety (RMITS) is part of the Division of Educational Outreach of the Colorado State University.
 8. For example, the Pueblo Police Department does not require detectives to maintain their SFST certification, but detectives must recertify if they wish to participate in special, overtime, patrols.
 9. All new recruits to the Aurora Police Department receive the 24-hour NHTSA SFST course at the department's academy, and all Aurora Police Department patrol officers have been trained in SFST administration. However, there are many older officers on the force who joined the department before SFST training was included in the curriculum. Police managers believe it would be too expensive to provide all of those officers with the 24-hour SFST initial training courses.
 10. The *Intoxilyzer Certification Records* program was developed by Brad Wiesley & Associates. Intoxilyzer operators must be recertified every six months. The process involves only a brief demonstration of proficiency, compared to the less frequent, two-hour refresher training course that is required to maintain SFST certification. However, Intoxilyzer instructors spend a great deal of time maintaining the equipment and providing individual refresher training to operators.
 11. Instructors' course fees for RMITS refresher training are paid by CDOT for all SFST instructors who received their initial instructor training from RMITS; that is, instructors' agencies are responsible only for paying travel costs associated with SFST instructors' refresher training.
 12. For example, the chief of the Buena Vista Police Department devotes a two-hour team meeting each year to SFST refresher training; all seven full-time and five part-time officers are required to attend. Similarly, the 30 SFST instructors of the Colorado State Patrol provide four-hours of SFST training to each of the agencies 600 officers every year, also during regularly-scheduled team meetings. In both agencies, the sessions help satisfy officers' annual in-service training requirements.

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A Model System for Managing SFST Refresher Training

Examples of paper records that are used to determine SFST refresher training requirements were reviewed, along with the three computerized spreadsheets, mentioned previously, that were developed by DUI supervisors to help track SFST and other recurrent training. This review of documents, combined with procedural information obtained during the discussions, led to the identification of a preliminary list of data elements for the model SFST training management system.

Next, a computerized spreadsheet was configured, using the preliminary list of data elements as header titles, to evaluate the concepts and the appropriateness of candidate field names. Concepts and field names were modified in an iterative process to accommodate the desired system capabilities and incorporate human factors design principles. The results of this effort are, 1) the list of data elements, presented below, and 2) the system features described in the following paragraphs.

- **Agency Name** (for agency identification when databases are combined)
- **Officer's Name**
- **Officer's Social Security or Employee Identification Number**
- **Officer's Badge or Star Number**
- **Officer's Email Address**
- **Initial Training Course Title**
- **Initial Training Course Date**
- **Initial Training Notes** (e.g., instructor's name, description/version of course, location of training)
- **Certificate Number** (if applicable)
- **Refresher Course/Review Title**
- **Refresher Course/Review Interval to Maintain Certification**
- **Date of Most Recent Refresher Training/Review**
- **Refresher Training/Review Notes** (e.g., instructor's name, description of training, wet lab/practical)
- **Deadline for Next Refresher Training/Review**
- **Additional Notes** (e.g., expert testimony experience, date notified of refresher requirement)

Because the primary purpose of the system is to alert officers and managers to SFST refresher training requirements, the key data element in the list is the **Deadline for Next Refresher Training/Review**.¹³ An optimum records management system would calculate this date automatically from the values entered in **Refresher Course/Review Interval to Maintain Certification** and either **Initial Training Course Date** or **Date of Most Recent Refresher Training/Review**, whichever date is more recent.

The system also should be capable of generating reports in response to queries, such as, "**List of Officers Whose Deadline for Next Refresher Training Occurs in (specified) Month.**" This capability would permit systems administrators to periodically identify the pending refresher training requirements of individual officers, and if performed quarterly, would facilitate the scheduling of inservice courses for an agency. Further, the system could be designed to generate notifications automatically and send them to the **Officer's Email Address.**

The model system should be capable of generating reports of individual officer's training histories, for example, to be used to confirm credentials in court or assist in performance reviews. The system also should be capable of producing reports that are statistical summaries, for example, the numbers of officers who have received SFST initial training, or refresher training during a specified period. These and other prepared reports should be accessible from the system administrator's interface.

To be optimally useful, the system should include a relational database of modular design that would permit a law enforcement agency to track other periodic or recurrent training or certification requirements, in addition to those associated with SFSTs. That is, the system administrator's interface should include the capability to create additional modules devoted to other training requirements. The data element, or field, names listed previously appear to be sufficiently generic and comprehensive for this purpose. In this regard, the optimum design would permit the system administrator to select **Create New Module** from an administration menu, enter the name of the new module (e.g., First Aid, Tactical Driving), define the recurrent periodicity for training or certification, then populate the database with officer training information. The names of the training modules should be added automatically to the system's main menu as they are created.

Finally, the system should permit the importing of data from legacy systems, to facilitate initial data entry, and in other ways incorporate established human factors design principles. The system should permit the exporting of data so that agencies could periodically submit their SFST training information to a centralized, master database of practitioners and/or instructors. That is, the system must be scalable to permit use by individual agencies, as well as to serve as the central database by importing all agencies' SFST training information.

During the design process, it was found that a properly-configured spreadsheet could accommodate most of the capabilities and features defined for an optimum system. However, even skillfully-designed spreadsheets cannot provide the automatic reports and notifications identified as important system specifications. For this reason, a prototype system is being developed using Microsoft Access to create the relational database and administrator's interface. The prototype system is currently under development.

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- Boulder County SD: Detective Mark George
- Buena Vista Police Department: Chief Jimmy Tidwell
- Colorado State Patrol: Trooper Dan Overturf
- Commerce City Police Department: Sergeant Wayne Granger
- Denver Police Department: Sergeant Brian Kramer
- Douglas County Sheriff's Office: Investigator Steve Krebs
- Douglas County Sheriff's Office: Deputy Steve Macy
- Grand Junction Police Department: Officer John Casteel
- Lakewood Police Department: Sergeant Mike Greenwell
- Littleton Police Department: Lieutenant James Williamson
- Longmont Police Department: Sergeant Mike Bell
- Mesa County Sheriff's Office: Corporal Josh Warner
- Montrose Police Department: Officer Roger Cross
- Pueblo Police Department: Sergeant Richard Harsh
- Thornton Police Department: Officer Mark Ashby
- Rocky Mountain Institute for Transportation Safety: Ms Shari Thorson

13. None of the methods used by the agencies contacted during this study included the deadline date as a specific data element. Some of the methods did not include the date of most recent training, making it impossible to calculate refresher training requirements without reviewing actual certificates.

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APPENDIX A

Standardized Field Sobriety Testing

The Standardized Field Sobriety Test (SFST) is a battery of three tests administered and evaluated in a standardized manner to obtain validated indicators of impairment and establish probable cause for arrest. These tests were developed as a result of research sponsored by the National Highway Traffic Safety Administration (NHTSA) and conducted by the Southern California Research Institute. A formal program of training was developed and is available through NHTSA to help law enforcement officers become more skillful at detecting DWI suspects, describing the behavior of these suspects, and presenting effective testimony in court. Formal administration and accreditation of the program is provided through the International Association of Chiefs of Police (IACP). The three tests of the SFST are:

- Horizontal Gaze Nystagmus (HGN),
- Walk-and-Turn (WAT),
- and One-Leg Stand (OLS).

These tests are administered systematically and are evaluated according to measured responses of the suspect.

HGN Testing

Horizontal Gaze Nystagmus is an involuntary jerking of the eye that occurs naturally as the eyes gaze to the side. Under normal circumstances, nystagmus occurs when the eyes are rotated at high peripheral angles. However, when a person is impaired by alcohol, nystagmus is exaggerated and may occur at lesser angles. An alcohol-impaired person will also often have difficulty smoothly tracking a moving object. In the HGN test, the officer observes the eyes of a suspect as the suspect follows a slowly moving object such as a pen or small flashlight, horizontally with his or her eyes. The examiner looks for three indicators of impairment in each eye: if the eye cannot follow a moving object smoothly, if jerking is distinct when the eye is at maximum deviation, and if the angle of onset of jerking is within 45 degrees of center. If, between the two eyes, four or more clues appear, the suspect likely has a BAC of 0.08 or greater. NHTSA research found that this test allows proper classification of approximately 88 percent of suspects (Stuster and Burns, 1998). HGN may also indicate consumption of seizure medications, phencyclidine, a variety of inhalants, barbiturates, and other depressants.

Walk and Turn

The Walk-and-Turn test and One-Leg Stand test are "divided attention" tests that are easily performed by most unimpaired people. They require a suspect to listen to and follow instructions while performing simple physical movements. Impaired persons have

difficulty with tasks requiring their attention to be divided between simple mental and physical exercises.

In the Walk-and-Turn test, the subject is directed to take nine steps, heel-to-toe, along a straight line. After taking the steps, the suspect must turn on one foot and return in the same manner in the opposite direction. The examiner looks for eight indicators of impairment: if the suspect cannot keep balance while listening to the instructions, begins before the instructions are finished, stops while walking to regain balance, does not touch heel-to-toe, steps off the line, uses arms to balance, makes an improper turn, or takes an incorrect number of steps. NHTSA research indicates that 79 percent of individuals who exhibit two or more indicators in the performance of the test will have a BAC of 0.08 or greater (Stuster and Burns, 1998).

One Leg Stand

In the One-Leg Stand test, the suspect is instructed to stand with one foot approximately six inches off the ground and count aloud by thousands (One thousand-one, one thousand-two, etc.) until told to put the foot down. The officer times the subject for 30 seconds. The officer looks for four indicators of impairment, including swaying while balancing, using arms to balance, hopping to maintain balance, and putting the foot down. NHTSA research indicates that 83 percent of individuals who exhibit two or more such indicators in the performance of the test will have a BAC of 0.08 or greater (Stuster and Burns, 1998).

Combined Measures

When the component tests of the SFST battery are combined, officers are accurate in 91 percent of cases, overall, and in 94 percent of cases if explanations for some of the false positives are accepted (Stuster and Burns, 1998).

The original NHTSA research found different accuracies for the SFST Battery than reported in the more recent study. Tharp, Burns, and Moskowitz (1981) reported accuracies of 77 percent for the HGN, 68 percent for the Walk and Turn, and 65 percent for the One Leg Stand components; 81 percent of officers' arrest decisions at 0.10 BAC were correct when all three measures were combined. In contrast, Stuster and Burns (1998) found greater accuracies in making arrest decisions on the basis of SFST results in their study at 0.08 percent BAC, as described previously and summarized in the following table.

Comparison of SFST Accuracies 1981 vs. 1998

Study: Combined Tharp, Burns, & Moskowitz (1981)

- BAC: 0.10
- HGN: 77%
- WAT: 8%

- OLS: 65%
- Combined: 81%

Study: Stuster & Burns (1998)

- BAC: 0.08
- HGN: 88%
- WAT: 79%
- OLS: 83%
- Combined: 91%

The greater component and overall accuracies found during the 1998 study are attributable to 17 years of law enforcement experience with the SFSTs since the original study and a lower criterion BAC than in the original study (i.e., 0.08 vs. 0.10 percent).

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Table 1 Comparison of SFST Accuracy During the 1981 and 1998 Validation Studies		
SFST(s)	% Correct Decisions 1981	% Correct Decisions 1998
SFST(s) 1981 1998 SFST Battery (the 3 tests combined)	81	91
Horizontal Gaze Nystagmus (HGN)	77	88
Walk-and-Turn (WAT)	68	79
One-Leg Stand (OLS)	65	83

Other studies have confirmed the considerable accuracy of the SFSTs to assist officers in making arrest decisions for DWI (Arend, et. al., 1999; Anderson and Burns, 1997; Burns and Anderson, 1995). Officers have found the SFSTs to be fully-acceptable for field use and they appreciate the diagnostic value of test results. Further, many prosecutors prefer officers to administer only the SFSTs to help make arrest decisions for DWI because the tests have been scientifically validated and are defensible in court.

NHTSA's SFSTs largely have replaced the unvalidated performance tests of unknown merit that once were the patrol officer's only tools in helping to make post-stop DWI arrest decisions. Regional and local preferences for other performance tests still exist, even though some of the tests have not been validated. Despite regional differences in what tests are used to assist officers in making DWI arrest decisions, NHTSA's SFSTs presently are used in all 50 states. NHTSA's SFSTs have become the standard pre-arrest procedures for evaluating DWI in most law enforcement agencies.³

The Horizontal Gaze Nystagmus (HGN) test is considered by many law enforcement officers to be the most effective technique to provide evidence of alcohol in a motorist's system. The normal variation in human physical and cognitive capabilities, and the effects of alcohol tolerance, can result in uncertainties when arrest decisions are made exclusively on the basis of physical and/or cognitive performance tests. These uncertainties have resulted in many DWI suspects being released rather than detained and transported to another location for evidentiary chemical testing. This is because some experienced drinkers can

perform physical and cognitive tests acceptably, even with a BAC greater than 0.10 percent. However, experienced drinkers cannot conceal the physiological effects of alcohol from an officer who is skilled in HGN administration, because Horizontal Gaze Nystagmus is an involuntary reaction over which an individual has absolutely no control.

The Importance of Standardization

The validity of SFST results is dependent upon practitioners following the established, standardized procedures for test administration and scoring. NHTSA's *SFST Student Manual* states that the procedures demonstrated in the training program describe how SFSTs should be administered under ideal conditions, but that ideal conditions do not always exist in the field. Variations from ideal conditions, and deviations from the standardized procedures, might affect the evidentiary weight that should be given to test results.

Courts in several states have reviewed the admissibility of field sobriety tests that assess physical coordination and have held that deviations in the administration of the tests should not result in the suppression of test results. These courts have found that field sobriety tests, including the Walk-and-Turn and the One-Leg-Stand of the SFST battery, are simple physical dexterity exercises that can be interpreted by an officer in the field, and by others in a court of law. However, courts have ruled that the admissibility of the HGN test may be treated differently due to its "scientific nature." For this reason, HGN results are vulnerable to challenge, and likely to be excluded by the court, if the test was not administered in strict compliance with established protocols.

Other states have been even less accommodating to deviations from the standardized procedures. In particular, the Ohio State Supreme Court ruled that law enforcement officers have no discretion in the administration of SFSTs. In a four-to-two decision, the Ohio State Supreme Court held in *Ohio v. Homan*, 732 N.E.2d 952 (Ohio 2000), that Standardized Field Sobriety Tests conducted in a manner that departs from the methods established by NHTSA "are inherently unreliable" and thus inadmissible.⁴

The SFST battery is composed of three separate tests with three independent predictive validities that range from 79 to 88 percent. Depending on the physical characteristics of the subject and roadside conditions, an officer might choose to refrain from administering the entire SFST battery, as directed by the training materials (e.g., a leg injury that might affect a person's ability to perform the OLS test). Because an officer is permitted the discretion to withhold a test, it is reasonable to question why a deviation in the administration of one of the three tests would disqualify the entire battery. Although it is not recommended to do so under ideal conditions, the data show that accurate arrest decisions reliably can be made on the basis of two of the SFSTs, or on the basis of HGN test results, alone.

The International Association of Chiefs of Police (IACP) adopted uniform procedures in 1992 to guide the training of SFST instructors and practitioners. Those standards include 24-hours of NHTSA-approved SFST instruction. The procedures for administering and interpreting SFST results can be readily learned and, generally, proficiency increases with experience. However, it is possible for SFST skills to degrade if they are not exercised regularly (e.g., during a prolonged absence from patrol work). Also, the SFST procedures have evolved since they were first developed in 1981. Modifications to the standardized procedures could result in an officer administering SFSTs according to outdated protocols.⁵ For these reasons, NHTSA recommends that law enforcement agencies conduct refresher training for SFST instructors and practitioners.

Project Objectives

The primary objective of this study is to develop a model system to help law enforcement agencies manage Standardized Field Sobriety Test (SFST) training requirements. A further objective is to explore the feasibility of establishing and operating a statewide SFST training records system.

General Approach

Judges in the State of Colorado became concerned with inconsistencies in the testimony of law enforcement officers concerning SFST administration and scoring procedures. In response to those concerns, representatives of law enforcement agencies, the Rocky Mountain Institute for Transportation Safety, and the Colorado Department of Transportation developed standards for SFST instructors and practitioners, based on the NHTSA standards, which include requirements for refresher training. In this regard, the Colorado SFST standards require that practitioners receive at least two hours of refresher training every two years and instructors receive at least eight hours of refresher training every two years, to maintain their SFST practitioner and instructor certifications. The statewide regulation took effect in 1999, with a two-year grandfather clause expiring in November of 2001.

The implementation of SFST refresher training requirements by the State of Colorado offers an opportunity to study how law enforcement agencies maintain records of training experience to comply with the requirement. The question of particular interest is, how do agencies identify when individual SFST instructors and practitioners must receive their periodic refresher training? Interviews were conducted with personnel from a sample of Colorado law enforcement agencies to obtain the information necessary to answer the research questions.

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1. Various terms are used throughout the United States for offenses involving drinking and driving. In this report, Driving While Impaired (DWI) is used to refer to all occurrences of driving at or above the illegal blood alcohol concentration (BAC) limit of a jurisdiction.
 2. In addition to the results of the decision analysis, the study found statistically significant correlations between SFST results and measured BACs ($p=.005$); also, the difference between the

- mean estimated and measured BACs of the 297 motorists tested at roadside during the field study was very small and operationally irrelevant (i.e., 0.117 vs. 0.122 percent BAC, respectively).
3. The Advisory Committee on Highway Safety of the International Association of Chiefs of Police (IACP) recommended in 1986 that law enforcement agencies adopt and implement NHTSA's SFSTs and the associated training program.
 4. Officers always should fully comply with NHTSA's guidelines when administering the SFSTs. However, if deviations occur, officers and the courts should understand that any deviation from established procedures relates to the *weight* of the evidence, not its *admissibility*.
 5. For example, the original SFST procedures specified that the HGN test not be administered to individuals who were wearing hard contact lenses. The stipulation was made to avoid the possibility of losing a lens as a consequence of the required eye movements. The stipulation eventually was removed when it was recognized that the possibility of dislodging a contact lens was minimal.

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Table 2
SFST Refresher Training Requirements For Practitioners:
16-Agency Sample

- Refresher Training Requirement: 2 hours every 2 years ♦ Number of Agencies = 6
- Refresher Training Requirement: 2 hours per year ♦ Number of Agencies = 1
- Refresher Training Requirement: 4 hours every 2 years ♦ Number of Agencies = 4
- Refresher Training Requirement: 4 hours per year ♦ Number of Agencies = 3
- Refresher Training Requirement: 8 hours every 2 years ♦ Number of Agencies = 1
- Refresher Training Requirement: No policy ♦ Number of Agencies = 1

All but two of the agencies contacted during this study have adopted the state refresher training standard for SFST instructors (i.e., eight hours of refresher training every two years). The two agencies in the sample that are not following the state guidelines have adopted policies that involve twice the state's minimum requirement (i.e., eight hours of refresher training each year, rather than every other year). Further, instructors from several of the agencies that adopted the state standard also plan to attend eight-hour, refresher training courses every year, rather than every other year. All of the SFST instructors who were interviewed described the refresher training courses as essential to their professional development and effectiveness as trainers. Officers reported that attending the courses ensures that an instructor is aware of the latest developments in SFST procedures and relevant legal issues.

Exceeding the minimum requirements for practitioner and instructor refresher training is a strong indication of law enforcement support for NHTSA's SFSTs and reflects the dedication of Colorado law enforcement personnel to improving traffic safety. It is significant that officers reported during interviews that the new state SFST standards already have elevated the level of professionalism among SFST practitioners and instructors, and contributed to improvements in the consistency and quality of officers' expert testimony in court.

Training Management Methods

Nine of the law enforcement agencies contacted during the study, including the largest agency in the sample, currently use paper records to keep track of practitioner SFST refresher training requirements. The paper records usually are maintained at agency headquarters, as part of each officer's personnel file, and as lists of officers or course rosters by either the agency's DUI supervisor or the designated SFST instructor.

Three agencies in the sample use computerized spreadsheets to track the SFST training experience of individual officers. In each case, the spreadsheet was developed by a DUI supervisor or SFST instructor to help determine when officers need refresher training to maintain their certification. The DUI supervisors of two of the agencies that use paper records mentioned that they also intend to develop spreadsheets to help with the task, as soon as they find the time to do so.

Two of the agencies contacted use unique computer-based programs to identify SFST training requirements. The programs were developed by agency personnel to manage all training-related matters for their departments, including the many special topics for which recurrent training or skills-demonstration are required at various intervals (e.g., CPR, First Aid, Pressure Point Control Tactics, Intoxilizer, SFSTs). Administrative personnel in the training divisions of these agencies update the databases when an officer reports that training has been completed, and provide individual training histories to each officer annually. Supervisors also receive the training histories and may use the information during performance reviews.

The SFST instructors in one of the agencies contacted use a computer program that was developed originally to track Intoxilizer certification requirements. The program was developed under contract to the Colorado Department of Transportation (CDOT) for use by CDOT grant recipients and has been modified to also track SFST refresher training requirements.¹⁰

Instructors in all 16 of the agencies contacted are expected to keep track of their own SFST refresher training requirements and to attend the necessary eight-hour courses to maintain their instructor certifications. Some of the instructors reported that notices issued by the LEAF Grant Program and course schedules included in the RMITS newsletter serve as reminders.¹¹

All of the methods for managing SFST refresher training described in the preceding paragraphs, whether paper-based or computerized, share one important requirement: someone must review the records to identify who needs refresher training and by what date they need it to maintain their practitioner certification. The central question remains: How do officers know when they are due for refresher training?

Although instructors are expected to keep track of their own certification requirements, two separate philosophies concerning refresher training for practitioners emerged from the interviews; one approach favors notification while the other stresses personal responsibility.

In this regard, nine of the agencies in the sample inform officers of pending SFST training requirements. Agency personnel review paper or computerized records, then inform the officers, either personally or by posting lists of names. The officers in these agencies may be assigned to a specific class or permitted to choose from among a few options, for convenience, but in all nine agencies the officers are informed of the commitment and required to attend a training session.

In contrast, the policies in six of the agencies place the responsibility for maintaining SFST practitioner certifications on the officer. Officers in these agencies may inspect their departmental training records or maintain a personal log of certification dates for their own use, but they are not specifically informed by their agencies that they must attend an SFST refresher training course. Schedules of courses usually are posted, but in these agencies it is the officer's responsibility to determine when a course must be taken for the officer to remain certified.

Methods are needed for keeping track of officers' most-recent SFST training dates because the state standard for practitioners requires that refresher training be completed at a maximum interval of two years, and officers receive(d) their initial SFST training and/or subsequent refresher training on different dates. Four of the agencies contacted during this study have avoided much of the administrative work associated with SFST refresher training by requiring that *all* officers attend a class *each year*, rather than every other year. Three agencies require four-hour classes and one agency requires a two-hour class. The classes are provided as part of an annual in-service program, as in the other agencies; the difference is that all officers must attend the refresher course each year.¹²

Utility and Feasibility of a Statewide SFST Records System

The final question in each open-ended interview conducted during the current study asked whether a centralized, statewide database of SFST practitioners and instructors would be useful. Representatives of nine of the 16 agencies in the sample responded that they did not believe that a statewide database of SFST practitioners would be useful to them, nor would it be practical to implement. These officers and managers commented that their existing methods for tracking training requirements were adequate for their purposes. Three of the four agencies that conduct annual refresher training are in this category because an annual training policy largely eliminates the need for a tracking and scheduling system to satisfy the state requirement for training at two-year intervals. Further, some of the officers did not believe that CDOT would be willing or capable of administering the central database; others commented that it would be impossible to obtain the cooperation of all law enforcement agencies in the state.

Officers from six of the agencies contacted responded that they believed a central SFST database would be useful, especially for smaller agencies that lack administrative personnel to perform the necessary record-keeping tasks. However, officers from four of the six agencies that favor a centralized system commented that it would be impractical, for the same reasons offered by their colleagues who did not believe that a centralized records system would be useful.

The officers and managers were asked if a statewide system might facilitate the confirmation of credentials when an officer transfers from one agency to another. Only two of the officers considered this to be a potential benefit of a central SFST practitioner database. Most of the officers reported that their agencies obtain the complete training histories of transferring officers from the officers' previous agencies, eliminating the need for further confirmation of credentials or certifications. Also, several of the agencies in

the sample require transferring officers to attend initial SFST training, along with new recruits, regardless of a transferring officer's previous training experience. This policy is designed to ensure that all officers in the agency are properly trained and administer the SFSTs in a consistent manner.

Despite the apparent lack of support for a statewide records system for SFST practitioners, officers and managers from nine of the agencies contacted responded that a central database for SFST instructors might be both useful and practical. A centralized SFST instructor database would help smaller agencies to identify instructors in their area, and might contribute to the growing sense of professionalism among SFST instructors. Further, a centralized database would facilitate the timely dissemination of updated SFST information and materials. Officers commented that an instructor database would be more feasible than a practitioner database because there are only about 300 SFST instructors in the state, compared to several thousand practitioners.

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6. More than half of the law enforcement agencies in Colorado have fewer than 40 sworn officers; 76 of the agencies have ten or fewer officers.
 7. The Rocky Mountain Institute for Transportation Safety (RMITS) is part of the Division of Educational Outreach of the Colorado State University.
 8. For example, the Pueblo Police Department does not require detectives to maintain their SFST certification, but detectives must recertify if they wish to participate in special, overtime, patrols.
 9. All new recruits to the Aurora Police Department receive the 24-hour NHTSA SFST course at the department's academy, and all Aurora Police Department patrol officers have been trained in SFST administration. However, there are many older officers on the force who joined the department before SFST training was included in the curriculum. Police managers believe it would be too expensive to provide all of those officers with the 24-hour SFST initial training courses.
 10. The *Intoxilyzer Certification Records* program was developed by Brad Wiesley & Associates. Intoxilyzer operators must be recertified every six months. The process involves only a brief demonstration of proficiency, compared to the less frequent, two-hour refresher training course that is required to maintain SFST certification. However, Intoxilyzer instructors spend a great deal of time maintaining the equipment and providing individual refresher training to operators.
 11. Instructors' course fees for RMITS refresher training are paid by CDOT for all SFST instructors who received their initial instructor training from RMITS; that is, instructors' agencies are responsible only for paying travel costs associated with SFST instructors' refresher training.
 12. For example, the chief of the Buena Vista Police Department devotes a two-hour team meeting each year to SFST refresher training; all seven full-time and five part-time officers are required to attend. Similarly, the 30 SFST instructors of the Colorado State Patrol provide four-hours of SFST training to each of the agencies 600 officers every year, also during regularly-scheduled team meetings. In both agencies, the sessions help satisfy officers' annual in-service training requirements.

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