TRACS SYSTEM STUDY

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Florida Department of Transportation State Safety Office

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INTRODUCTION

The Florida Department of Transportation's (FDOT) State Safety Office (SSO) contracted with Cambridge Systematics, Inc. to study and document how other states are currently implementing the Traffic and Criminal Software (TraCS) to electronically collect motor vehicle crash reports and citations. The findings of the study will provide the FDOT SSO with considerations on how to provide TraCS Florida the amount of support needed to maintain the system in a consistent and reliable method, as well as sustain the future growth of the software. Being able to support this electronic data capture and reporting software can improve the following data systems across the state: Crash, Citation/Adjudication, Driver, Vehicle, Emergency Medical Services. Data performance areas to be improved are timeliness, accuracy, completeness, uniformity, integration and accessibility.

OVERVIEW OF TRACS

TraCS is an electronic data collection and reporting software utilized by public safety agencies throughout the country. TraCS began in Iowa in 1994 and is currently implemented in 15 states for electronic crash and citation reporting. The Iowa Department of Transportation in partnership with the Iowa Department of Public Safety provides public safety professionals the tools and functionality to record, retrieve, and manage incident information wherever and whenever needed. Law enforcement agencies (LEAs) can electronically submit motor vehicle crash reports, citations, arrest and incident reports through a variety of compatible devices.

Electronic reporting through TraCS allows officers to report from the field instead of waiting to fill out forms back at the office from memory. Forms include electronic crash (e-crash), electronic citations (e-citations) electronic driving under the influence citations (e-DUI), traffic warning/ ticket, parking citation, towing and impound, and arrest forms. Additionally, TraCS provides a variety of tools, such as a Location Tool that automatically records accurate latitude and longitude information for every form. TraCS also allows for automatic transferring of data to state and federal agencies, as well as data validation and integration with other databases and software.

FDOT currently funds TraCS Florida through the Traffic Records Coordinating Committee (TRCC) federal grant funding through the National Highway Traffic Safety Administration (NHTSA). Florida's TRCC was created to bring together agencies that are interested in reducing traffic injuries and fatalities by improving the timeliness, accuracy, completeness, uniformity, integration, and accessibility of traffic records data. The TRCC facilitates the planning, coordinating, and implementation of projects to improve the quality and accessibility of traffic safety data throughout the state so Florida can continue to make evidence-based and data-driven decisions to reduce roadway fatalities and serious injuries.

To ensure availability of TraCS is consistent and reliable, Florida hosts a primary and secondary data hosting site. The primary data hosting site is located at Panama City Police Department and recently went under a network architecture rebuild to mitigate impacts of hardware failures. The secondary hosting site is located at Clermont Police Department and acts as a disaster recovery site in the event the primary data hosting site experiences an interruption.

While the number of law enforcement agencies across the state of Florida seeking to use TraCS is increasing, the availability of federal funding is not. The FDOT SSO provides TraCS at no cost to over 190 law enforcement agencies and over 19,000 users, which is approximately fifty-eight percent of Florida's LEAs. FDOT SSO is interested in finding solutions to provide the continued support needed to sustain the growth of TraCS implementation and utilization.

METHODOLOGY/PROCESS

The research conducted for this study included a review of the TraCS National Model and state websites to compare TraCS utilization across the country. Information available online from the 15 states currently using TraCS was used to gain an understanding of TraCS usage nationwide, as well as to develop a survey and interview questions to obtain additional and updated information from state TraCS programs.

The FDOT SSO contacted state TraCS managers in each of the states utilizing TraCS to inform them of the study, as well as request that they participate in the survey and interview process. The survey (Appendix B) was distributed to collect basic information for each state, including appropriate state personnel for additional follow-up discussions. Survey questions encompassed topics including agency responsibilities, costs and funding sources, the number of agencies and users, electronic reporting volumes, types of users, types of forms, and integration with other tools and software. TraCS implementation surveys were distributed to the 15 states currently deploying TraCS software and responses were received from 11 states, which provided updated information on the their TraCS usage and added details to the study's data repository (Appendix A).

Concentrating on programs with similar reporting volumes and challenges, in-depth information that was not available online or through the survey results was requested in the follow-up phone interviews and discussions. Interviews were scheduled with nine of the states that were surveyed. Topics listed in the phone interview guide (Appendix C) include utilization, training and support, costs, and hosting. Responses and findings from the interview discussions are summarized within this report, and recommendations are drawn from the best practices in the states' information from similar TraCS programs.

SUMMARY OF RESULTS

A summary of the website review and state survey results are sorted by the following themes:

- Utilization
- Training
- Hosting
- Best Practices

TRACS UTILIZATION

	FL	AZ	IL	IA	NE	NM	NY	NC	ND	WI
TraCS Users	20,000	2,000	1,800	N/A	1,000	1,200	15,000	1,200	2,300	10,000
Agencies Using TraCS	190	12	1	366	35	42	503	117	110	500
State Patrol Using TraCS	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Years Using TraCS	10	13	4	23	14	12	20	16	6	18
For Crash, Citation, or Both	Both	Both	Both	Both	Both	Both	Both	Crash	Both	Both
Crashes Reported Annually	757,777	176,000	N/A	60,000	44,000	76,000	402,000	375,311	200,000	144,168
Percent via Electronic Crash Reporting	95%	75%	70%	99.5%	87%	62%	94%	78%	100%	100%
Citations Reported Annually	2.9 million	N/A	N/A	368,275	N/A	17,000	370,000	N/A	97,000	861,625
Percent via Electronic Citation Reporting	91.4%	N/A	N/A	89%	N/A	5%	67%	90%	100%	99%
Integrated w/NCIC[1]	Yes	No	Yes	Yes	Yes	No	No	No	Yes	Yes
Using MACH[2]	No	No	Yes	Yes	Yes	No	No	No	No	Yes
Geo-Location Tool	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Integrated w/Diagram Tool	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

[1] NCIC is the National Crime Information Center

[2] MACH is the Mobile Architecture for Communications Handling

FLORIDA

Florida has been using TraCS for electronic crash reporting since 2009, and for electronic citations since 2011. The state administers TraCS through TraCS Florida a non-profit organization funded by the Florida Department of Transportation (FDOT) using NHTSA funds that is housed at and administered by Florida State University. TraCS Florida has approximately 20,000 users across more than 190 law enforcement agencies. TraCS is not mandated for use in Florida, but it is the only crash/citation software offered to LEAs for free. Currently, 95 percent of all crash reports are submitted electronically in Florida, with approximately 39 percent of those being submitted through TraCS. In addition, 91.4 percent of all the state's traffic citations are being reported electronically. The state's largest LEA, the Florida Highway Patrol (FHP), uses a private electronic reporting vendor and has no current plans to adopt TraCS, citing the lack of a consistent and guaranteed funding source as a primary concern. Many sheriff's offices are not currently using TraCS because they do not respond to crashes and because TraCS is often, mistakenly, perceived as a "crash-only" program.

TraCS Florida is integrated with over 20 NCIC/CAD vendors including the Signal Four Analytics Geolocation tool, mandated for use by 91 percent of TraCS users for submitting crash reports, as well as the Electronic License and Vehicle Information System (ELVIS), a database query tool used by 71 percent of TraCS users and 169 LEAs state-wide to run searches through both the Florida and National Crime Information Centers (CICs).

TraCS Florida also offers several common forms beyond crash and citation including, but not limited to, electronic DUI; Traffic Warning/Ticket; Parking Citation; Towing and Impound; and Arrest. All available forms are developed by TraCS Florida to align with standards set by the Florida Department of Highway Safety and Motor Vehicles (FLHSMV) and made available to all agencies using TraCS. TraCS is used by some Florida agencies as a records management system as traffic forms are often included in cases that require other forms found in an RMS (e.g. arrest form) and agencies are required to have an inclusive system. Florida has not implemented MACH yet due to lack of funding for the license fee.

ARIZONA

Arizona has been using TraCS for approximately 14 years, with deployment through the Arizona Department of Transportation (ADOT). The state started with both crash and citation at the same time. TraCS is not mandated for use in Arizona, but it is the only crash/citation software that is offered to LEAs for free through ADOT. TraCS Arizona provides an electronic citations form but ADOT only collects the crash data while electronic citations go directly to the courts. The state is currently at 75 percent electronic crash reporting, with an estimated 50 percent of all electronic crash reporting submitted through TraCS. This equates to approximately 132,000 annual crash reports but the number of citations processed by TraCS is underdetermined at this time. Arizona has previously used a geolocation tool that was developed in-house, but as of July 2019 they will be utilizing the TraCS geolocation tool. ADOT does not provide an integrated NCIC solution, so LEAs must source their own vendors for NCIC queries.

Arizona has 5 other active electronic crash software vendors– out of 115 total law-enforcement agencies, 90 are reporting crashes electronically. There are currently 12 agencies using TraCS, the Arizona State Patrol being the largest, as well as several Sherriff's Departments and several local agencies. The total number of TraCS users, statewide, is estimated at around 2,000. In order to improve their access to crash data ADOT is expanding the use of TraCS with an estimated 20-30 additional agencies currently in various stages of pre-implementation. The state plans to have 50 agencies using TraCS in the next couple of years, including over half of Arizona's Native American tribal LEAs.

ADOT provides all LEAs with eight basic forms: Electronic Crash Report; Electronic Uniform Traffic Citation; Electronic DUI; Traffic Warning Ticket; Parking Citation; Towing and Impound; Arrest; and Incident Report. Some agencies opt to build their own forms and the IT department will assist with form-building in cases that could benefit the state's data collection process. The state receives monthly updates from TraCS, but not all updates are distributed to the implementing agencies; IT determines which updates they want to send out for download.

Arizona is not implementing MACH. LEAs have expressed interest in using MACH, however, ADOT does not currently have the funding to provide it. Arizona does not provide field equipment but are currently seeking grant funding opportunities to assist those with equipment needs. Some individual agencies are using TraCS as a records management system (RMS), but the system is not designed to tie directly into the state database(s).

ILLINOIS

Illinois has been using TraCS for crash reporting and vehicle inspection forms since 2015 and began using TraCS for electronic citations in 2017. The Illinois State Police (ISP) holds the TraCS license and is the only agency using TraCS in the state. The ISP reports approximately 1,800 TraCS users statewide. Seventy percent of crashes are reported electronically in Illinois using three to five electronic crash and citation vendors, including TraCS. Many of the counties in Illinois were not approved for electronic citation reporting until 2018, so most of the state's citations are still processed by paper.

The ISP has a team of developers that creates custom forms for the agency, as needed and has received approval to implement MACH. Over the next year, ISP plans to provide both TraCS and MACH to LEAs statewide once an implementation model is finalized. The Illinois State Police will be the oversight agency, and they plan to charge other agencies a usage fee for MACH usage.

Though currently using an in-house geolocation solution, the ISP is planning on implementing the TraCS geolocation tool in their statewide deployment model. Currently, the TraCS system interfaces with NCIC vendors through an outside program but when MACH is implemented, NCIC data will be available through MACH.

IOWA

The Iowa Department of Transportation and Iowa Department of Public Safety started developing TraCS in 1994 and began statewide system usage in 1996 for both crash and citation. Iowa currently has 365 of the state's 395 LEAs using TraCS but did not provide an estimate of total users. TraCS is the only crash and citation vendor in Iowa. Currently, 99.5 percent of all crashes are reported electronically to the state. Iowa is working on manually getting the last 0.5 percent of paper crash reports submitted electronically. Electronic citation reporting is at 89 percent.

In Iowa, NCIC data is accessible through MACH which is also offered for free to LEAs. The TraCS location tool is required for all Iowa LEAs using TraCS to provide an accurate geo-location of crashes. The Iowa Department of Transportation manages all crash data and is responsible for establishing crash report standards.

NEBRASKA

The Nebraska State Patrol Carrier Division began using TraCS in 2005, with the rest of the Nebraska State Patrol following suit in 2006. The two largest LEAs in the state, Lincoln Police Department and Omaha Police Department, do not use TraCS but approximately 35 of the state's smaller LEAs do. Approximately 87 percent of Nebraska's

crashes were reported electronically, but only about 10 percent of those were processed through TraCS. Nebraska did not provide information on citation reporting or tracking.

Those agencies implementing TraCS in Nebraska use the TraCS geolocation tool. Nebraska hosts an eDoc Committee comprised of the Clerk of Courts, the Department of Motor Vehicles, the Nebraska Department of Transportation, and the Nebraska State Patrol. The eDoc Committee meets monthly to draft and update electronic forms to provide to TraCS users. TraCS users are encouraged to use the standard forms developed by the eDoc Committee but can add customization to the standard forms in TraCS. In Nebraska, the TraCS software is provided for free but LEAs using TraCS are required to pay an annual fee of $60 per officer to support data storage and infrastructure. MACH is being implemented and the Nebraska State Patrol covers costs associated with the MACH license. NCIC data is accessible through MACH, and the Nebraska State Patrol charges a $25 fee for each officer to use.

NEW MEXICO

New Mexico began using TraCS in 2007 with the primary TraCS user being the New Mexico State Police. Between 2016 and 2019, New Mexico went from having 9 LEAs using TraCS to 42 agencies and approximately 1,200 users. New Mexico is at 62 percent electronic crash reporting (76,184 reports) with only a five percent usage for electronic citation reporting (17,000 citations), but all electronic submissions are processed through TraCS.

New Mexico's standard forms include the Electronic Crash Report; Electronic Uniform Traffic Citation (UTC); Electronic DUI; Traffic Warning Ticket; Towing and Impound; Arrest; and Incident Report, with the Crash and UTC being standardized by state statute. All crash reports and citations are submitted to the New Mexico Department of Transportation, which is only capable of accepting electronic crash reports or electronic citations from TraCS. While there are other electronic crash (2) and citation (4) vendors in New Mexico, the LEAs using them must submit crash and citation forms as pdf file/paper forms because the New Mexico Department of Transportation is not integrated with any other electronic crash and citation vendor.

The New Mexico TraCS model does integrate with NCIC, but they do not currently implement the MACH system. The TraCS geolocation tool is provided to all agencies, but they are not required to use it. New Mexico reports that many LEAs provide their own geolocation solution.

NEW YORK

New York began using TraCS in 2003 for citations and in 2005 for crash reports, and it is currently used by the New York State Police (NYSP) and 503 LEAs for a total of approximately 15,000 users statewide. The NYSP is the largest implementing agency and is also responsible for TraCS deployment and oversight throughout the state. New York has 95 percent electronic crash reporting (380,000 reports), and 67 percent electronic citation reporting (2,500,000 citations) throughout the state. Out of 3 vendors within the state, TraCS is the main vendor in New York being utilized for crash and citation reporting.

New York City has developed their own system for managing crash forms and citations and does not use TraCS. In New York, each LEA is responsible for managing and hosting their own data. The New York State Police is responsible for developing standard forms in TraCS and all TraCS users are required to use those standard forms. The New York TraCS model does not deploy MACH, nor does it integrate with the NCIC or any other outside software, but they are focused on integration in the future. Local LEAs use their own NCIC tools. The TraCS geolocation tool is mandated for use by the NYSP and provided to all other LEAs free of charge.

NORTH CAROLINA

North Carolina began using TraCS in 2003 and statewide usage peaked with approximately 60 percent of LEAs using TraCS in 2009. TraCS is provided for free to LEAs that request it, although there are currently four other electronic crash vendors operating in the state. North Carolina currently has 117 agencies using TraCS for a total of approximately 1,700 users statewide. North Carolina is at 80 percent for electronic crash reporting (375,311) with 20 percent of those being processed through TraCS. Ninety percent of the citations in the state are reported electronically but none of these are submitted with TraCS. Electronic citations are supported by one vendor, Interplat, under the North Carolina Judicial Branch Administrative Office of the Courts.

TraCS and other electronic crash and citation vendors in the state use an interface called Electronic Crash Reporting System (ECRS) supported by the North Carolina Department of Transportation (NCDOT) to provide crashes to the NCDOT Central repository.

NORTH DAKOTA

North Dakota began using TraCS in 2013 for crash reporting and started using TraCS for citations in 2014. The state statutorily requires all LEAs to submit crash reports electronically using TraCS, which means there are no other active vendors. Currently, TraCS North Dakota has 110 state law enforcement agencies with just over 2,300 users reporting crashes electronically. Highway Patrol is not using TraCS for citations, but some local LEAs are using TraCS, while others use paper. The North Dakota Department of Transportation's State Safety Office is the oversight agency. North Dakota is at 100 percent electronic crash reporting (20,000). All electronic crashes and citations are processed through TraCS.

North Dakota is not implementing MACH and has no current plans to do so. The North Dakota TraCS model is integrated with two separate NCIC systems, Odyssey for court/citations data and a state-developed model for crashes (Premier One). The North Dakota State Safety Office is responsible for developing standard crash and citation forms for TraCS users. North Dakota uses the TraCS web geolocation tool, which is preferred by users. They also developed their own web-based geolocation tool that is integrated with TraCS.

WISCONSIN

Wisconsin first adopted TraCS in 2001, using the system for internal data processing, in which staff entered information from paper reports then the data was uploaded to the Wisconsin Department of Transportation. In 2004, a pilot program was initiated to provide TraCS to LEAs directly. TraCS was made available to all Wisconsin LEAs in 2005 and was housed within the Wisconsin Department of Motor Vehicles until 2018 at which point it was transferred to the Wisconsin State Patrol within the Wisconsin Department of Transportation. Like North Dakota, Wisconsin LEAs are statutorily required to report crashes electronically free of charge using TraCS. Wisconsin is at 100 percent electronic crash reporting (144,168) and 99 percent electronic citation reporting (859,355). All electronic reporting is processed through TRACS for 540 LEAs.

The Wisconsin state model, termed Badger TraCS, deploys MACH and provides integrated NCIC query tools to LEAs throughout the state. Crash and citation forms are developed by a Forms Advisory Committee which consists of tribal, county, local, and state representation, and all Wisconsin TraCS users are required to use these forms. The state also uses the TraCS geolocation tool.

TRAINING

Training is an important factor in providing and managing TraCS across different platforms of customization tailored to each State's needs. LEAs around the nation are transitioning from reporting crashes and citations on paper to electronic crash and citation reporting for the first time, which will require training to familiarize LEAs with electronic capabilities and processes and the importance of the quality of traffic records data. Others may be familiar with electronic crash and citation reporting because they are utilizing vendors other than TraCS. Those that transition from a vendor to TraCS will need training for this new platform. Each of the states interviewed approaches training slightly differently and offer different training programs depending on their own unique circumstances.

FLORIDA

TraCS Florida has developed a series of training resources available to LEAs using TraCS, including a Florida TraCS wiki page, a Florida TraCS YouTube channel, and a series of online documents (PDFs) addressing common questions. TraCS Florida provides training and support to new LEAs using the software for the first time and regularly provides remote training sessions at the request of LEAs. Training resources and training sessions are designed in two formats, one being for officers using the TraCS software and a second which focuses on administrative trainings for LEA IT staff that manage TraCS at the agency level. The four staff supporting TraCS provide trainings as needed but there is no dedicated staff to support training activities due to the limited availability of federal funds.

ARIZONA

The Arizona Department of Transportation (ADOT) provides training and support to new LEAs using TraCS for the first time. TraCS system training is provided in various formats including PowerPoint presentations; and hands-on software demonstrations; and train the trainer sessions, where officers and IT professionals are trained in order to train their peers. Four ADOT staff are dedicated to supporting TraCS and providing TraCS training. Training costs are covered by ADOT, including time and travel, as well as funding for all maintenance costs. ADOT receives monthly updates from TraCS and ADOT's IT Division determines when updates are applied to TraCS agencies.

ILLINOIS

The Illinois State Police Operations staff provide TraCS training to LEAs new to using the software. Typically, the Illinois State Police will host train the trainer courses where officers and IT professionals are trained and learn how to train their peers. Illinois is working on developing a more robust TraCS training program and is in the process of integrating TraCS training into the Illinois law enforcement academy training program.

IOWA

The Iowa Department of Transportation provides TraCS training for officers using the TraCS software as well as LEA IT staff that manage TraCS at the agency level. The TraCS staff of 6 at IDOT are responsible for maintenance and support for the software as well as provide trainings. Separate training modules have been developed for officers submitting forms and the IT staff managing TraCS at the agency level. TraCS is automatically updated across all agencies when new updates are released, creating a seamless update process and promoting consistency in crash and citation reporting.

NEBRASKA

The Nebraska State Patrol uses a combination of business analysts, IT staff, and state troopers to conduct regular trainings throughout the state. Typically, three to four staff train agencies using TraCS for the first time and install hardware and software necessary for using TraCS. New TraCS agencies are offered the opportunity to run TraCS in a test/training mode to get comfortable with the software before going live. The Nebraska State Patrol also provides refresher training videos to all Nebraska TraCS users. Some of the smaller LEAs in Nebraska cannot afford computers in officers' cars so the Nebraska State Patrol will help those LEAs to coordinate with the Nebraska Crime Commission to secure grant funding for the equipment necessary to use TraCS.

NEW MEXICO

The New Mexico State Police developed a TraCS training curriculum and provides standardized training to all new TraCS LEAs. They currently have two dedicated support staff for TraCS both responsible for a region of the state. Training is provided to the administrative and IT staff at LEAs using TraCS for the first time. For larger LEAs, the New Mexico State Police also provides train the trainer sessions where officers are trained and learn how to train their peers. The LEA IT staff typically handle "Tier 1" issues, such as resetting passwords or missing forms, while more complicated issues are escalated to the New Mexico State Police IT staff.

NEW YORK

In New York, TraCS training is included in the academy for all New York State Police officers. Other New York LEAs are also incorporating TraCS in the academy and field training is offered by staff within each agency. With most LEAs incorporating TraCS training in the academy, there is little other training that takes place. However, New York has TraCS refresher training resources, including a library of PDFs and videos, available to any New York TraCS LEA and the LEA academies all have access to a curriculum for TraCS training.

NORTH CAROLINA

North Carolina has developed computer-based trainings (approximately 3-4 hours in length), training manuals, and hosts train the trainer sessions for TraCS. The North Carolina Department of Transportation provides staff and consultant support for TraCS training and offers between six and twelve trainings per year.

NORTH DAKOTA

In North Dakota, primary training for TraCS is conducted at law enforcement training academy every three months as new recruits cycle through. The North Dakota Highway State Safety Office offers re-training opportunities to any agency that requests them and sends representatives to each LEA new to TraCS to train their new TraCS users. A TraCS user manual is available but there is currently no formal curriculum for TraCS training outside of the law enforcement training academy. IT staff at LEAs using TraCS are trained remotely by the North Dakota State Safety Office staff.

WISCONSIN

Wisconsin provides in-person training and information sharing sessions at an annual TraCS User Conference, hosting around 350 attendees from approximately 200 agencies each year. When TraCS was first implemented in Wisconsin, federal grant funding was used to provide a mandatory two-day train the trainer session for all LEAs using TraCS. The first day of the training was focused on training LEA IT staff on installation and maintenance of TraCS software and the second day of the training was to train officers on using the TraCS software.

HOSTING

TraCS is licensed by a variety of different agencies throughout the nation and each have a slightly different approach to managing data, reporting, and support services. Most of the states interviewed offer TraCS completely free of charge, although some charge data hosting and hardware fees. Each state interviewed takes a different approach to staffing for TraCS and requires different financial commitments to supporting TraCS staff depending on how staffing is approached.

State	Implementing Agency	Total Employees	Total Personnel Costs	Funding Sources
FL	TraCS Florida	5 Full-Time 1 Part-Time	$563,000	NHTSA/TRCC
AZ	Arizona Department of Transportation	2 Full-Time 2 Part-Time	n/a	NHTSA Grant/ ADOT State Funds/HSIP
IL	Illinois State Police (ISP)	4-5 Full-Time 5-6 Part-Time	$800,000	ISP General Revenues
IA	Iowa State Police	6 Full-Time	$500-700,000	Iowa Department of Public Safety/ NHTSA Grant
NE	Nebraska State Patrol	5 Full-Time	$250-374,995	NE Crime Commission/NHTSA Grant/Motor Carrier Safety Grants
NM	New Mexico Department of Transportation/Department of Public Safety	3 Full-Time	$350,000	NHTSA/TRCC
NY	New York State Police	8 Full-Time-not completely dedicated to TraCS	$1,400,000	NHTSA/TRCC
NC	North Carolina Division of Motor Vehicles	8 Full-Time	$450-624,996	NC DOT State Funds/NHTSA/TRCC
ND	North Dakota Department of Transportation	3 Full-Time 5 Contractors	$455,000	NHTSA/TRCC
WI	Wisconsin Department of Transportation	6 Full-Time	$362,000	WI DOT Operating Funds

FLORIDA

Florida administers TraCS through TraCS Florida, a non-profit organization funded by the Florida Department of Transportation that is housed at and administered by Florida State University. TraCS Florida is funded completely through a federal grant provided by NHTSA through the FDOT SSO's Traffic Records Coordinating Committee. Users are not required to pay a fee to use TraCS. Florida provides data hosting at no cost to about two-thirds of TraCS agencies in Florida through a primary hosting site housed at the Panama City Police Department and a secondary backup hosting site at the Clermont Police Department. The equipment, software and network infrastructure required to run TraCS costs approximately $400,000, which include costs of $30,000 annually for data hosting (including on-site IT staff to monitor the servers, database, and network). Personnel costs to support TraCS are approximately $563,000 annually for five full time staff members and one part-time Other Personnel Services (OPS) Business Analyst. In total, Florida TraCS currently costs $900,400 annually to administer.

ARIZONA

The Arizona Department of Transportation is responsible for TraCS deployment and management. Currently, each individual TraCS LEA is responsible for hosting their own data and setting their own price for crash report sales, but ADOT is working toward developing a centralized hosting solution. TRCC funding provided by NHTSA through ADOT has been used to bring LEAs new to TraCS online while ADOT state funds cover maintenance and other costs related to TraCS. Arizona utilizes four personnel for TraCS, two of which also have other IT duties.

ILLINOIS

The Illinois State Police is the agency responsible for TraCS deployment and management. TraCS data is hosted by the Illinois State Police. Many Illinois State Police staff work on TraCS including five to six supervisors and four to five staff focused on TraCS full-time. Total personnel costs for supporting TraCS are approximately $800,000 annually. TraCS is completely funded through the general revenue fund of the Illinois State Police, which crash report sales (five dollars per request) contribute to.

IOWA

The Iowa State Police is responsible for TraCS deployment and management. In Iowa, TraCS support and maintenance receives $300,000 of State funding and $100,000 from TRCC. TraCS is funded in a limited capacity through the sales of conviction records, which cost $15 per request. Iowa DOT is responsible for crash data and sells repots for four dollars. The Iowa Department of Public Safety offers a central database for data hosting, but some LEAs choose to host their own data.

TraCS is supported by six employees and has a personnel cost between $500,000 and $700,000 through the Iowa DMV. The Iowa State Police also contracts with Technology Enterprise Group, Inc, the parent company for TraCS software, to develop all forms that are integrated into TraCS. They also use remaining funds to support the National Model.

NEBRASKA

The Nebraska State Patrol, in partnership with the Nebraska Crime Commission, provides and manages TraCS for the state. Data hosting is provided by the Nebraska Office of the Chief Information Officer, which pays for servers, data storage, and data hosting. LEAs using TraCS are charged a fee of approximately $60 per officer per year for

these data hosting services. TraCS is supported by five Nebraska State Patrol employees and personnel costs range from $250,000 to $374,995. Employees supporting TraCS have other responsibilities and are funded using multiple grant sources.

NEW MEXICO

The New Mexico Department of Transportation (NMDOT) provides TraCS to LEAs in New Mexico and partners with the New Mexico Department of Public Safety (DPS) for training, installation, and maintenance. NMDOT uses federal funding provided by NHTSA to fund TraCS, and the three personnel are covered through the TRCC. TraCS costs about $350,000 annually to administer. The New Mexico DPS offers free data hosting, but some LEAs choose to host their own data at their own expense. LEAs are also responsible for creating their own forms to use in TraCS.

NEW YORK

In New York, the New York State Police provides TraCS through federal funds provided by NHTSA. TraCS is available for free to all LEAs in New York and costs approximately $1.4 million annually to implement and maintain. Each LEA is responsible for their own hosting, but forms are submitted through a central repository. Four full-time New York State Police employees and four contractors support TraCS in some capacity but each of them has other responsibilities beyond TraCS. Personnel costs for contractor support is support by NHTSA 402 and TRCC funding.

NORTH CAROLINA

In North Carolina, TraCS is provided to LEAs for free through the North Carolina Division of Motor Vehicles. Operations and maintenance costs for TraCS are fully funded through the North Carolina Division of Motor Vehicles budget while funding provided by NHTSA through TRCC are used to support major updates to TraCS as needed. Eight employees support TraCS and crash form issues with total costs ranging from $450,000 to $624,996 annually. North Carolina's Electronic Crash Reporting System (ECRS) provides an interface which enables LEAs using vendor solutions to submit reports electronically to the State's crash report database.

NORTH DAKOTA

In North Dakota, TraCS is fully funded by NHTSA Section 402 and the TRCC through the North Dakota Department of Transportation. Currently, data hosting for TraCS is provided through an external data hosting service but state statutes require that TraCS data hosting be transferred to the State IT Department by 2021. In total, labor costs for TraCS implementation costs approximately $350,000 annually and is supported by eight employees. Additional funding is required for hosting fees at $2,500 a month and the $75,000 for the TraCS license.

WISCONSIN

In Wisconsin, TraCS is provided and funded by the Wisconsin Department of Transportation at $441,000 annually. NHTSA funding supplements state funding for projects and activities including; providing equipment needed to use TraCS to LEAs; improvements to the TraCS functionality; TraCS user conference hosting; LEA training; and costs to travel to the National Model Steering Committee meetings. TraCS is supported by six employees with approximately $362,000 in personnel costs from DOT Operations funds. Wisconsin DOT owns the database and covers hosting costs through general revenue, but the university maintains and houses the database.

BEST PRACTICES

The best practices identified below are based on a review of the National Model Program, state websites, and the results of the surveys and interviews for the purpose of addressing the increasing demand for TraCS in Florida.

The best practice findings include:

- Emphasizing 100 percent electronic crash and citation reporting
- Statutorily requiring one vendor statewide
- Statutorily requiring all LEAs to submit crash reports electronically using TraCS
- Providing TraCS services to LEAs for free or at as low of a cost as possible
- Creating consistent forms for all LEAs, beyond crash and citation forms alone
- Identifying stable and consistent funding source
- Providing incentives for timeliness and accuracy
- Including users in the updating of forms

Additional best practices were also collected from the following states for implementing TraCS.

FLORIDA

TraCS Florida works closely with Florida's data system owners to further integrate the state's crash data systems. TraCS is integrated with more than 20 NCIC/CAD vendors including the Signal Four Analytics' Geolocation tool, mandated for use by 90% of TraCS users for submitting crash reports, as well as the Electronic License and Vehicle Information System (ELVIS), a database query tool used by 71% of TraCS users to run searches through both the Florida and National Crime Information Centers (CICs). These integrations help to improve crash and citation data reporting by means of accuracy, timeliness, completeness and uniformity.

ARIZONA

Arizona continually coordinates with agencies that are not using TraCS, promoting TraCS as a free service and emphasizing the number of other available forms to help to bring new agencies on board.

IOWA

Iowa makes all reports/forms available in TraCS attracting the interest of agencies which are then required to use TraCS for crash reporting in exchange for use of the software. Iowa uses the same approach to encourage agencies to use MACH.

Approximately five to six years ago smaller agencies with less than 100 crash reports could not get TraCS or MACH, so the Sheriffs of these smaller counties launched a campaign to increase state DOT funding to support smaller agencies. The effort was successful and now all the state's LEAs have access to TraCS and MACH software.

NORTH CAROLINA

North Carolina strives to make changes at the state level and has been fortunate to work with their law enforcement agencies and the software vendors to implement needed system changes via state mandated legislation. North Carolina was successful in getting a one vendor solution for their state e-Citation system (through Interplat software).

WISCONSIN

Wisconsin continues to add any form that LEAs are required to complete and submit to the state or federal government. It is challenging to create one form that all 550+ agencies agree on for use, thus some may use it and others will not.

Wisconsin recommends seeking to actively involve users in TraCS form development and system implementation. In 2005, Wisconsin created a TraCS Forms Advisory Committee that provides feedback for improving or changing forms and for making recommendations on how TraCS is administered. This committee reviews all the suggestions and requests made by law enforcement agencies and decides whether they should be implemented.

Every year Wisconsin also distributes a TraCS user survey to seek law enforcement feedback. That information is collected as part of the state's input to the National Model Steering Committee. For example, when Wisconsin was transitioning LEAs off Windows XP, the survey responses identified specific issues and helped to direct the state's Traffic Record Coordinating Committee (TRCC) NHTSA funding to assist where the identified needs were greatest.

RECOMMENDATIONS AND NEXT STEPS

Some of the main challenges of Florida TraCS involve inconsistent funding and insufficient staff availability due to the rapid growth in the number of TraCS users in Florida. Securing funding from a more stable and consistent funding source will help TraCS use continue to grow in Florida and allow TraCS personnel to provide quality service to LEAs across the state.

As a result of the discussion with the various state programs and best practices, a variety of solutions are recommended to sustain TraCS use in Florida. Recommended strategies and actions for the Florida TraCS Program include:

- Explore legislative options for state funding, which would allow a state agency to adopt the TraCS system
- Identify potential supplemental funding sources, such as user fees, data hosting fees, and/or TraCS customizations/features fees, to assist in providing the standard TraCS platform for free to most LEAs across the state
    - Add records management components, such as impaired driving forms (DUI Packet, DRE Form, etc.)
    - Offer MACH (TRACS CAD System), which would allow additional data including incident time and case numbers to pre-populate traffic and non-traffic forms to help improve accuracy and timeliness of data
    - Utilize TraCS Web Mobile to address the lack of mobile programs that are cost effective and allow for agencies to perform reporting on a mobile device
- Continue to promote TraCS features and benefits to agencies not reporting electronically

Program sustainability requires a proactive approach and progressive changes for long-term success. The FDOT SSO should continue their efforts in researching best practices and available resources from other states and utilizing the National Model Program. The following next steps for the FDOT SSO are recommended:

- Outreach to identify, collect, and customize useful training materials from states, such as Iowa
- Work with FLHSMV to update standards for vendor approval and electronic crash report and citation submission requirements that increase performance in timeliness, completeness, accuracy, and uniformity
- Coordinate with NHTSA on the feasibility of charging a user fee to support offset the costs of data hosting or additional TraCS customizations/features requested by specific agencies

APPENDICES

This section includes the following appendices:

APPENDIX A: DATA REPOSITORY MATRIX/TABLE SUMMARIZING THE COMPARISONS ACROSS STATES

	Alaska	Arizona	Florida	Illinois	Iowa	Minnesota	Nebraska	New Mexico
Lead Agency	Alaska Department of Public Safety	Arizona Department of Transportation (ADOT)	FAMU/FSU College Of Engineering	Illinois State Police	Iowa Department of Transportation	Minnesota State Patrol	Nebraska Crime Commision and Nebraska State Patrol	New Mexico Department of Transportation
Support Staffing Provided by	Alaska Department of Public Safety	Arizona Department of Transportation	Internal Staff and Contractor	Illinois State Police, Information Services Bureau	Internal Staff and Contractor	Minnesota State Patrol	Internal Staff	NMDOT Internal Staff, in Partnership with New Mexico Department of Public Safety (NMDPS)
TraCS Program Contact and Phone #	Ronald Frazier/TraCS Program Coordinator 907-269-5780	Tim Jordan/Program Manager 602-712-7487	Amy Pontillo/Project Manager 850-410-6237	Lieutenant Colonel Mike Gillock/Program Sponsor	Josh Halterman/Program Manager 515-237-3042	Steven Bluml/Director Of Information Services 651-201-7119	Mike Fargen/TraCS Program Manager 402-471-3992	Sonya Abeyta/TraCS IT Project Manager NMDPS 505-660-9594
TraCS Program Contact Email	ronald.frazier@alaska.gov	tjordan@azdot.gov	amyc@tracsflorida.org	mike.gillock@isp.state.il.us	josh.halterman@iowadot.us	steven.bluml@state.mn.us	mike.fargen@nebraska.gov	sonia.abeyta@state.nm.us
State TraCS Program Website	http://www.dot.state.ak.us/highwaysafety/trafficrecords_tracs.shtml	n/a	https://www.tracsflorida.org/	n/a	https://iowadot.gov/tracs	n/a	n/a	http://nmtrafficrecords.com/traffic-and-criminal-software-tracs/
Traffic Records Committee Contact and Phone #	Miles Brookes/State FARS Analyst 907-465-8532	Same	Melissa Gonzalez/Florida TRCC Coordinator	Mehdi Nassirpour/ITRCC Coordinator	Joanne Tinker/Traffic Records Coordinator 515-725-6134	Michael Hanson, Director/Office of Traffic Safety 651-201-7060	Bill Kovarik/Coordinator 402-471-2515	Jimmy Montoya/Cooridnator
Traffic Records Contact Email	desiree.downey@alaska.gov	Same	melissa.gonzalez@dot.state.fl.us	Mehdi.Nassirpour@illinois.gov	jtinker@dps.state.ia.us	michael.hanson@state.mn	william.kovarik@nebraska.gov	Santiago.Montoya@state.nm.us
TRCC Website	http://dot.alaska.gov/stwdplng/hwysafety/trafficrecords.shtml	https://www.azdot.gov/CrashReporting	http://www.fltrafficrecords.com/about.html	http://www.idot.illinois.gov/transportation-system/safety/illinois-traffic-records-coordinating-committee	https://iowadot.gov/tsda/statewide-traffic-records-coordinating-committee-strcc/who-we-are	https://dps.mn.gov/divisions/ots/reports-statistics/Pages/default.aspx	https://dot.nebraska.gov/safety/	http://nmtrafficrecords.com/traffic-records-overview-2/coordinating-committee-strcc/
When did TraCS implementation begin?	Did not particiapte in survey or phone interview	13 years	2009 - began E-crash reports 2011 - began E-citations	Began in March 2015 with crash and vehicle inspection forms Began using TraCS for citation in 2017	1994 - Began PC-based crash reporting system 1995 - Added traffic citations and vehicle inspections 1996 - Asked by FHWA to share e-system with other states	Did not particiapte in survey or phone interview	April 2005 - NSP Carrier Enforcement Division January 2006 - NSP Patrol Units 2013: Tracs MACH NSP systemwide integration	Began using TraCS in 2007
Annual Implementation Costs (Licensing, Maintenance, etc.)	Did not particiapte in survey or phone interview	Respondent(s) not certain of total cost Just received $140,000 from TRCC for equipment purchase	FY '20 - $817,000	Staff costs reported at $800,000 per year Respondent had no way of determining infrastructure costs	Implementation: $79,000 Maintenance: $300,000 (Incl. contract w/TEG for approx. $20,000 per month)	Did not particiapte in survey or phone interview	Respondent(s) did not provide an estimate	$70,000 in maintenance (only estimate given)
Funding Provided	Alaska Highway Safety Office: $150,000 licensing fee	Arizona Department of Transportation	Florida Department of Transportation - $817,000 (402 and 405)	Funding is sourced from the Illinois State Police operations budget	State funding (line item) for $300,000 per year NHTSA 405 C Grant for $100,000 per year	Did not particiapte in survey or phone interview	Nebraska State Police charges an annual hosting fee for ouside agencies at $60 per user/officer for TraCS and $24 per user/officer for MACH	New Mexico DOT $385,000 for TraCS Maintenance, Support and Expansion (FY 18)*
Current Deployment	Used by 28 police agenices and over 750 TraCS users in Alaska	Used by 8 state agenices and local police departments	200 Local Agencies	Illinois State Police - Patrol Districts and Investigative Zones	State: Iowa State Patrol, Iowa DOT Commercial Motor Vehicle Enforcement,Iowa Deaprtment of Natural Resources Local Agencies: 350	Did not particiapte in survey or phone interview	State: 2 Agencies and 461 Total Users Local: 34 Agencies and 527 Total Users	State: 1 (All New Mexico State Police Districts) Local: 41 Agencies
Future Deployment Plans	5 more agencies will deploy TraCS in the next year	20-30 additional police departments in planning stages to deploy TraCS	Plans to exapnd to additional agenices/departments pending funding availability	Pending deployment to other law enforcement agencies	Plans to deploy TraCS and MACH throughout the state	Did not particiapte in survey or phone interview	Will be expanding	The goal is to have the majority of NM agencies using TraCS
Performance Measures	Did not particiapte in survey or phone inteview	75% of crashes reported electroincally and 50% of that is through TraCS	95% of crashes reported electronically and 30% of that is through TraCS	70% of crashes within the Illinois State Police department are reported electroncially	99.5% of crashes are reported electronically - all through TraCS 88% of citations are reported electronically - all through TraCS	Did not particiapte in survey or phone interview	Respondent(s) did not provide an estimate	62% of crash reports submitted electronically (all through TraCS)
Number of TraCS Crash Reports Processed Annually	Did not particiapte in survey or phone inteview	132,000	213,514	Respondent(s) did not have a total estimate	59,995 (59,544 through TraCS)	Did not particiapte in survey or phone interview	38,091	76,184
Number of TraCS Citations Processed Annually	Did not particiapte in survey or phone inteview	Arizona does not track electronic citations	Florida does not have a centralized repository tracking system in place for citations	Respondent(s) did not have a total estimate	368,275 (324,558 through TraCS)	Did not particiapte in survey or phone interview	Respondent(s) did not provide an estimate	16,674
Interagency Protocols	Crash report are filed to Alaska DMV who in turn forwards crah data to Alaska DOT State and municipal agencies file citations with the Alaska court system	ADOT and the Arizona Department of Public Safety split administrative duties for training and deployment.	TraCS Florida currently has over one-hundred and forty agencies that submit electronic crash and/or citation reports electronically to DHSMV and/or local clerks of courts.	Illinois State Police sends all crash data to Illinois DOT and all citations go directly to the court system	Iowa State Patrol uses the MACH CAD module to dispatch 911 and other emergency calls throughout the state. The MACH software is also provided and supported by the Iowa DOT to qualifying public safety agencies at no charge	Did not particiapte in survey or phone interview	Nebraska has a centrally hosted sever environment for all agencies allowing users access through web services. There are currently 12 forms available with three forms being transmitted to the statewide court system or Nebraska DOT	Department of Public Safety is the repository for crash data - DPS sends crash data to NMDOT
Forms Currently Used	Alaska Uniform Citation form Alaska Motor Vehicle Collision form	ADOT Supported forms: Crash; e-Citations; e-DUI Affidavit; e-Drivers Behavior Additional Forms Being Used by Law Enforcement – DPS Contact Form; Tow Form; 30 Day Impound Removal and Hearing Form; Supplemental Report Form; Consent to Search Form; SIA Form; Warning; Repair Order; Field Interview Card; Field Training Officer Form; Vehicle Removal Form, Impound Form; Vehicle Contact Form; Warning Form; Incidental Contact Form; Property Receipt; Deputy Assist Body Camera Log Form	Crash (Long, Short, Driver Exchange of Information, Update); Uniform Traffic Citation; DUI Uniform Traffic Citation; Warning Ticket; DUIPak (Electronic Alcohol Influence Report); Refusal To Submit (Documents an individual's refusal to submit to alcohol tests); Implied Consent (Documents that an officer has informed an individual regarding the requirements to submit to an alcohol tests); Property Receipt; Court Information; Attachments; Tow; Field Interrogation; Trespass Warning; Parking Citation; Boating Citation/Warning; Incident Report; Arrest Affidavit/Probable Cause/Notice to Appear; Radar and Laser Log; Daily Observation Log	Illinois Department of Transportation SR-1050 Crash; Commercial Motor Vehicle Inspection - VSIS (Aspen replacement); Tow In; Pedestrian Stop Card; Traffic Stop Card; Written Warning; Citation; Civil Law Citation; Field Report; Domestic Violence; Alcohol/Drug Influence; Post Pursuit; Universal Addendum; Non-Consensual Blood Draw; Arrest Synopsis; Gang Card/Field Interview Card (Pilot only); Investigative: Case Initiation; Investigative: Evidence Expenditure; Investigative: Lead Sheet	MV Crash Report; Traffic Citation; Traffic Warning Ticket; Criminal Incident Report (NIBRS/UCR); Commercial Motor Vehicle Inspection; DWI/OWI/MOWI Implied Consent; Complaint and Affidavit; Towing and Impound; Time and Activity; Field Interview; Deer Tag; Arrest; Jail Booking; Evidence Collection and Tracking; Re-Exam; Drug Recognition Expert (DRE)	Did not particiapte in survey or phone interview	Traffic Citation (2019); Traffic Warning; NDOT Crash Form; Use of Force; Pursuit Critique; Non-Enforcement Contact; Field Interview Card; DMV Re-exam; Trailer Seal Issuance; Carrier Enforcement Activities; Livestock Out of Service; Animal Destruction	Uniform Crash Report; Supplemental Narrative for UCR; Supplemental Diagram for UCR; Uniform Traffic Citation; Incident/Offense Report; Narrative for Incident/Offense Report; DWI Citation; Notice of Revocation; Criminal Complaint/Probable Cause Statement; Tow Report; DWI Incident/Offense Report Supplemental
Additional Form Development Plans	DUI Form Statewide Impound form Quick contact sheet for verbal wanings and initial crash particimant information	None at this time	The TraCS Florida team develops forms on a yearly basis	Implementation of Intelligence forms; Interface with courts to transmit citation data; Overweight Citation; Statistical summary, strategic planning and operational reporting; Migration of legacy system data; Integration with Evidence Management System; Expanded vehicle and driver import capabilities	Iowa's Criminal Justice Information System (CJIS) Advisory Committee identified TraCS as the lead data collection tool for all Iowa Law Enforcement. RMS capabilities will be turned on in TraCS next	Did not particiapte in survey or phone interview	Crash Form (MMUCC5); Arrest; Incident Report; NIBRS; Evidence; Supplemental-Attachment; Civil Service; Title Inspection; Tow Form; Dyed Fuel; License Revocation; Commercial Vehicle Inspection	New forms are considered for development as the user community requests them
Mobile Architecture for Communications Handling (MACH) Implementation	Alaska hasn't implemented MACH yet	No current implementation; Arizona Department of Public Safety is currently evaluating use within their agency	Florida hasn't implemented MACH yet	Illinois plans to implement MACH soon	Currently using MACH and MACH CAD. MACH BOT interfaces are in production for state snowplow locations, state highway cameras, 511 information sharing, and state switch queries (NCIC/NLETS)	Minnesota hasn't implemented MACH yet	State: 2 agencies (495 total users) Local: 34 agencies (940 total users)	New Mexico hasn't implemented MACH yet
Training/Support Provided to Law Enforcement Agencies	Did not particiapte in survey or phone inteview	Currently using Train-the-Trainer format Developing a uniform PowerPoint training curriculum	Offer both administrative and user training Provide in person training for onboarding agenices Additional remote training available on request Resources include Wiki, YouTube and online documents	State Police is the only deploying agency and they have developed a TraCS module as part of their law enforcement academy curriculum	Have separate training for those managing forms and those using them in the field. Typical moudule is 4 hours in-person for new agency onboarding	Did not particiapte in survey or phone interview	TraCS is deployed to agencies through a test-phase period, ramping up to full-scale roll-out	2 Day Train-the-Trainer sessions for larger agencies Have created a standardized curriculum for all agencies
Additional Resources	http://dot.alaska.gov/stwdplng/hwysafety/assets/pdf/FFY2018_ATRCC_Strategic_Plan.pdf	http://www.aztribaltransportation.com/sca/pdf/012715-Arizona-TraCS.pdf https://www.azdot.gov/mobile/media/news/2017/11/20/governor-s-office-of-highway-safety-grant-boosts-adot-crash-data-gathering	n/a	n/a	https://www.legis.iowa.gov/docs/publications/FT/918522.pdf	Did not particiapte in survey or phone interview	https://dot.nebraska.gov/media/10928/nebraska-traffic-records-system-plan.pdf	* https://nmtrafficrecords.com/wp-content/uploads/NM-TRCC-Strategic-Plan-2017_2019-final.pdf
Link to State HSP	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/ak_fy19_hsp.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/az_fy19_hsp.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/fl_fy19_hsp.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/il_fy19_hsp.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/ia_fy19_hsp_0.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/mn_fy19_hsp.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/ne_fy19_hsp.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/nm_fy19_hsp.pdf

	New York	North Carolina	North Dakota	Pennsylvania	South Dakota	Vermont	Wisconsin
Lead Agency	New York State Police (NYSP)	North Carolina Division of Motor Vehicles (NCDMV)	North Dakota Department of Transportation	Pennsylvania State Police (PSP)	South Dakota Department of Public Safety (DPS)	Vermont Department of Public Saftety	Wisconsin Department of Transportation/Division of Motor Vehicles/Citations and Withdrawals Section
Support Staffing Provided by	Internal Staff and Contractor	NCDMV Internal Staff and NC DOT IT Staff	Internal Staff and Contractor	PSP Implementation - Internal Staff Local Agency Implementation/TraCS to Locals (TTL): PSP, PennDOT, North Central Highway Safety Network (NCHSM) and TEG	Internal Staff and Contractor	Internal Staff and Contractor	Inernal Staff
TraCS Program Contact and Phone #	Sgt. James Daily/Program Manager 518-485-9968	Ericka Amerson/Traffic Records Manager 919-861-3290	Karen Mongeon/Safety Division Director 701-328-4434	Sgt. Craig Polen/Program Manger 717-772-1572	Lee Axdahl/Director - Office of Highway Safety and Accident Records 605-773-4949	Dean Hamel/Director - Office of Technology Management 802-242-5484	Darlene Schwarz/TraCS Program Manager 608-440-7627
TraCS Program Contact Email	james.daily@troopers.ny.gov	egamerson@ncdot.gov	kamongeon@nd.gov	cpolen@pa.gov	lee.axdahl@state.sd.us	dean.hamel@vermont.gov	darlene.schwartz@dot.wi.gov
State TraCS Program Website	https://tracs.troopers.ny.gov/	DMVCRASHWEB.DOT.STATE.NC.US/TRCS/	n/a	n/a	n/a	n/a	https://wisconsindot.gov/Pages/safety/enforcement/agencies/tracs/default.aspx
Traffic Records Committee Contact and Phone #	Chuck DeWeese/Coordinator	Eric Rodgman/Senior Database Analyst 919-962-8709	Lynn Heinert/Traffic Records Manager	Robert Ranieri/Coordinator 717-705-1470	same	James Baraw/Coordinator	Larry Corsi/Coordinator
Traffic Records Contact Email	chuck.deweese@dmv.ny.gov	https://connect.ncdot.gov/groups/NCTRCC/Pages/default.aspx	lheinert@nd.gov	rranieri@pa.gov	same	james.baraw@vermont.gov	larry.corsi@dot.wi.gov
TRCC Website	https://www.itsmr.org/about-itsmr/	https://connect.ncdot.gov/groups/NCTRCC/Pages/default.aspx	https://www.dot.nd.gov/divisions/driver-vehicle-services.htm#safety	https://www.penndot.gov/TravelInPA/Safety/Pages/default.aspx	https://dps.sd.gov/records/accident-records	http://factbook.vtrans.vermont.gov/highway-safety/	https://wisconsindot.gov/Pages/safety/crsh-rpt/default.aspx
When did TraCS implementation begin?	1999 - TraCS platform first adopted 2005 - E-Crash report made mandatory 2009 - Started TraCS for e-citations	2003 -First started using TraCS FY 2006 - TraCS was delpoyed to LEAs statewide	2013 - TraCS for Crash reporting 2014 TraCS for e-Citations	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	March 2016 - Began pilot program	2001 - Began using TraCS June 2005 - Began using "Badger" TraCS - state customized TraCS system
Annual Implementation Costs (Licensing, Maintenance, etc.)	Estimated Costs FY 18: $1,300,000	$80,000 for TraCS license	$350,000	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	Implementation: $62,000 Maintenance: $379,000
Funding Provided	$1,300,000 by NYSP via 405c	TraCS is state funded (Amount not specified)	NDDOT - $400,000 FY 18 - 405M3DA	Did not particiapte in survey or phone interview	Office of Highway Safety (SubGrantee) $351,375 (405c funds)	Did not particiapte in survey or phone interview	WSP and Dept. of Natural Resources jointly fund
Current Deployment	State: NYSP (1,500 cars/4,000 Officers) Local: 491 Agencies	TraCS: 117 Local Agencies (2772 Users) ECRS: 25 Agencies (6032 Users)	82 Agencies (1800 users)	PSP 227 Local Agencies	101 Agencies (1,695 users)	Piloting to several agencies	Badger TraCS deployed 500 + state, county, local and tribal LEAs (10,000+ users)
Future Deployment Plans	Implement Web Services and the TraCS Update Server	Plans to expand throughout state	No current plans	Over 140 municipal agencies signed up for TraCS To Locals (TTL) program	South Dakota plans to expand TraCS use throughout the state	Plans to expand throughout the state	Complete the implementation of the TraCS RMS functionality
Performance Measures	90% of all crashes are reported electronically - all through TraCS	79% of crashes are reported electronically TraCS accounts for only 15% of all e-crash reports	100% electronic crash reporting statewide - all through TraCS	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	100% of crashes reported electronically through TraCS 98% of citation ssubmitted electronically through TraCS
Number of TraCS Crash Reports Processed Annually	380,000	44,430	20,000	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	144,168
Number of TraCS Citations Processed Annually	370,000	No citations processed through TraCS	97,000	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	850,000
Interagency Protocols	Each agency maintains their own data and transmits crash and citation reports to state repository	Agencies hos their own data and forward crash reports to centralized repository housed an NCDMV	All agencies are required by state to submit crash reports through TraCS	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	Wisconsin State Patrol (WSP) is the lead agency for MACH with joint funding coming from the Wisconsin Department of Natural Resources. WSP coordinates with TraCS program run by the Wisconsin DMV to assure integration between two programs.
Forms Currently Used	UTT – Universal Traffic Ticket; Crash Reporting Form (MV104A, MV104S, MV104L, MV104D); Incident – RMS front end; Forms package: Appearance Ticket, Deposition, Information's, Complaints, Statements; Field Intelligence Cards; Vehicle Inventory; Vehicle Search Form; Traffic Depositions; Enforcement Detail Reporting; MV78B; RAD; DWI: Lab 23, Supporting Deposition/Bill of Particulars, Refusal, Long Form Information; Commercial Vehicle: Weights forms, Inspection form; NYDMV DS5 – Police Request for Driver Review	DMV-349 (NCCRF) NORTH CAROLINA Crash Reporting Form	Crash Report (long form); Crash Report (short form); Electronic Citation; Electronic Warning Ticket; Report and Notice Form (DUI); Driver Insurance Exchange Form; Request for Re-exam Form; Insurance Verification Form NDMVR Reports: Crashes by Date; Crashes by Frequent Days ; Fatal Contributing Factors; Fatal Crash Date Time Day ; Fatal Crash Locations; Incapacitating Contributing Factors; Incapacitating Crash Date Time Day; Incapacitating Crash Locations; Most Frequent Contributing Factors; Most Frequent Dates; Most Frequent Locations Most Frequent Times	PennDOT, AA-500 Reportable Crash Report form; Non-Reportable Crash Record; Public Information Release form; Notice of Crash form; Driver's Exchange form; Report Correction Notice; Vehicle Safety Inspection System (VSIS) (Aspen replacement); Commonwealth of Pennsylvania, Bureau of Risk and Insurance Management, Notice of Accident Report	Crash Report Long Form; Crash Report Short Form; Electronic Citation; Electronic Warning Ticket; Driver Insurance Exchange Form	Vermont traffic ticket (VCVC) with bias free policing data capture; Vermont traffic warning with bias free policing data capture	Crash (includes Car/Deer, Amended and Fatal Supplement); Uniform Traffic Citation; Non-Traffic Citation; Warning; Natural Resources Citation; Alcohol Incident; Drug and Alcohol Influence; Citizen Contact; Contact Summary; Inspection; Equipment; Task; Arrest; Case Summary; Vehicle Killed Wild Animal Permit; Driver Condition and Behavior; Call for Service; Attachment; Pursuit
Additional Form Development Plans	Currently updating the DWI package, Field Intelligence Card, and MV104S. A Parking Ticket is currently under development	New forms will be developed as decided by the Division of Motor Vehicles and other stakeholders development	No Current Plans for Future Forms	No current plans for future forms	No current plans for future forms	Once the pilot project is complete, other forms may be considered for development.	Incident Based Reporting; Motor Vehicle Inspection (VSIS - Aspen Replacement)
Mobile Architecture for Communications Handling (MACH) Implementation	New York hasn't implemented MACH yet	North Carolina hasn't implemented MACH yet	North Dakota hasn't implemented MACH yet	PSP has not implemented MACH yet Approx 80 local agencies use MACH	South Dakota hasn't implemented MACH yet	Vermont hasn't implemented MACH yet	MACH deployed by 180 agencies (4,000+ users) MACH serves as the computer aided dispatch (CAD) software for the Wisconsin State Patrol and Wisconsin Department of Natural Resources.
Training/Support Provided to Law Enforcement Agencies	NYSP includes TraCS training in academy curriclulum and encourages local agencies to do the same NYSP does not provide much training to other local agencies	Department of Motor Vehicles provides Train-the-Trainer for all deploying agencies	NDDOT Safety department provides all training in person	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	Did not particiapte in survey or phone interview	Provide in-person training for law enforcemnt agencies Have info-sharing/training session at annual BadgerTraCS conference.
Additional Resources	* https://www.itsmr.org/wp-content/uploads/2017/08/FFY-2018-Strategic-Plan-FINAL.pdf	https://www.nccourts.gov/assets/documents/publications/eCITATION_FactSheet_2018.pdf	n/a	https://www.psp.pa.gov/About%20Us/Documents/Tracs.docx	n/a	n/a	n/a
Link to State HSP	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/ny_fy19_hsp.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/nc_fy19_hsp.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/nd_fy19_hsp.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/pa_fy19_hsp.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/sd_fy19_hsp.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/vt_fy19_hsp_0.pdf	https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/wi_fy19_hsp.pdf

APPENDIX B: TRACS SURVEY

Traffic and Criminal Software (TraCS) System Study Survey

Overview

The Florida Department of Transportation (FDOT) State Safety Office is researching how other states are implementing and utilizing the Traffic and Criminal Software (TraCS). FDOT provides TraCS free of charge to over 190 (58 percent) of the law enforcement agencies throughout the state, and while the benefits in accuracy and timeliness have been documented, the demand for the software has increased rapidly. Survey findings will be used to develop a strategy to support efficient use and sustained growth of electronic crash and citation reporting in the state.

(Note "*" denotes a required field)

Contact Information

Name:*

State:*

Agency:*

Position or Title:*

Email:*

Phone Number:

Questions

1. Which agency is responsible for TraCS oversight in your state?*
2. Does your state use TraCS to report crash and/or citation data to the state?*

   If Q2 is answered "No" then the survey ends for the respondent.
3. How long has your state used TraCS and how long has your state used TraCS for reporting crash and/or citation data?*
   a. Using TraCS (select Years/Months)
   b. Reporting crash data electronically (select Years/Months)
   c. Reporting citation data electronically (select Years/Months)
4. Number and types of users currently reporting via TraCS:
   a. State Highway Patrol or Police
   b. Sheriffs
   c. Police Departments
   d. Other
5. Please indicate all forms TraCS provides in your state (multiple choice)

a. Electronic Crash Report
b. Electronic Uniform Traffic Citation
c. Electronic DUI
d. Traffic Warning Ticket
e. Parking Citation
f. Towing and Impound
g. Arrest
h. Incident Report
i. Other (Write-In)

6. Number of crash reports submitted annually to the State by all law enforcement agencies (approximate numbers are ok):*
    a. Total number:
    b. Total by paper:
    c. Total electronically:
    d. Total submitted in TraCS:
7. Number of citations submitted annually to the State by all law enforcement agencies (approximate numbers are ok):*
    a. Total number
    b. Total by paper:
    c. Total electronically:
    d. Total submitted in TraCS:
8. Number of employees operating TraCS (including IT and support):
    a. Total number of employees:*
    b. Position Titles* (Required field)
    c. Annual Salary ranges (optional):
        i. Below $25,000
        ii. $25,000 to $49,999
        iii. $50,000 to $74,999
        iv. $75,000 to $100,000
        v. Over $100,000
9. What are the State's costs by category below associated with implementation and maintenance of the TraCS system in your state (approximate numbers are ok):
    a. Personnel costs
    b. Data Hosting
    c. Usage Fees
    d. Equipment
    e. Please specify any additional costs and amounts
10. How is TraCS funded in your state (i.e. list agency/agencies if state funded, federal grants, etc.) (approximate numbers are ok):
    a. Amount funded by state (in $)
        i. Funding sources and amounts:
    b. Please list any additional funding sources and amounts (in $)
        i. Additional Funding sources and amounts:

11. Do you fund TraCS through crash or citation sales? If yes, please explain?
12. Does the state have any contractual service agreements to implement and maintain the software? If yes, please explain.
13. Does the state agency host its own data?
14. Do law enforcement agencies host their own data?
15. Does TraCS integrate with any other systems, tools, or software in your state, such as the National Crime Information Center? If yes, please describe these tools.
16. Does TraCS integrate with any type of Geo-Location tool to plot crashes or citations?
17. Does your state offer a diagramming solution that includes Dynamic Street technology other than the one provided with the TraCS National license?
18. Does your state plan to increase your state's TraCS use or transition to a different vendor? (Short Answer)

Thank You!

On behalf of the Florida Department of Transportation, and Cambridge Systematics, we thank you for providing this valuable information on your experience with the TraCS system.

If you have any questions or would like more information, please contact Melissa Gonzalez from FDOT by email at Melissa.Gonzalez@dot.state.fl.us or by phone at 850-414-4207, as well as Cory Hopwood from Cambridge Systematics by email at chopwood@camsys.com or by phone at 646-364-5502.

APPENDIX C: INTERVIEW GUIDE

Florida Traffic and Criminal Software (TraCS) System Study Interview Guide

Overview

On behalf of the Florida Department of Transportation (FDOT), and Cambridge Systematics, we thank you for providing valuable information on your experience with the Traffic and Criminal Software (TraCS) system through the online survey, as well as agreeing to provide additional details in a follow-up conversation.

The FDOT State Safety Office is reaching out to states with similar TraCS record usage and volume to collect additional information regarding implementation and utilization of TraCS. Survey and interview findings will be used to develop a strategy to support efficient use and sustained growth of electronic crash and citation reporting in Florida.

If you have any questions or would like more information, please contact Melissa Gonzalez from FDOT at Melissa.Gonzalez@dot.state.fl.us or at 850-414-4207, as well as Cory Hopwood from Cambridge Systematics at chopwood@camsys.com or at 646-364-5502.

Interview Questions

1. Is TraCS the primary crash/citation vendor in your state? If not, who is and how many different vendors provide these services in your state?
2. How long has your state utilized TraCS? How has usage changed over the course of its implementation?
3. How many NCIC vendor interfaces are integrated with your states TraCS? Is there a cost for LEAs to use? Please provide names of these vendors if possible.
4. What do the costs that you listed in your survey response specifically cover?
5. Were there alternative funding sources previously used before the one(s) listed in your survey response? If yes, what are they and what were they used for?
6. Training and Support:
    a. Are specific Information Technology staff assigned to support TraCS or is support for TraCS a shared effort among Information Technology staff within a state agency?
    b. Are the IT support staff used to implement training or are there separate personnel to perform training?
    c. What type/various formats (i.e. PowerPoint, YouTube videos, etc.) of training and support are provided to LEA personnel using TraCS?
    d. Are training and support provided by the state or consultants?

e. How is training and support funded? Who pays for it?

f. How quickly are new TraCS National baselines and state mandated changes deployed?

7. Does your state build your own forms or do you build forms using the TraCS National license?
    a. Do any LEAs build their own forms?

8. Is any of the information on your state's forms prepopulated?
    a. If yes, which forms are prepopulated?
    b. What information is being prepopulated?
    c. Were there any challenges faced?

9. Is TraCS set to make automatic updates in your state or are manual updates required?

10. Which of the following tools or services provided by TraCS or private vendors does your state use?
    a. TraCS MACH or other vendor's Computer Aided Dispatching service
    b. TraCS Location tool or another vendor Location Tool
    c. TraCS web services
    d. TraCS Vehicle Safety Inspection System (VSIS) or another vendor VSIS
    e. If none, why?

11. Describe your satisfaction with the tools and services mentioned.

12. Is the TraCS system and the equipment used to support it deployed uniformly? If not, how do agencies differ?

13. Are there other agencies or offices that help manage your state's TraCS system?
    a. If yes, what is their role and what is their contact information?

14. Does the state, or LEAs, host their own data?
    a. If yes, are any FTP or data transfer services provided?

15. Does your state currently offer the Mobile Architecture for Communications Handling (MACH)? If so, please provide a brief summary of your satisfaction with the software.

16. Is TraCS used as a state records management system? If yes, does it import data from local management systems?

17. Do you have any recommendations for sustaining and expanding TraCS use and volume?

18. Are there any additional documents and/or comments you can provide related to your state's use of TraCS?