New Mexico
Sentencing Commission

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New Mexico Motor Transportation Police Division Safety Staffing Study: *Report in Brief*

Specific & Findings

In this brief: A review of the New Mexico Motor Transportation Division Staffing Study: Final Report, focus on a description of the full study including the methodology, results, and conclusion.

The full report titled *New Mexico Department of Public Safety Motor Transportation Division Staffing Study: Final Report* can be found at: http://nmsc.unm.edu.

Study Highlights

- The study used a nationally accepted method to estimate the number of MTPD patrol officers and sergeants.
- A modified workload method was used to estimate the number of Transportation Inspectors needed in the Ports of Entry.
- In CY2014 the number of MTPD patrol officers and sergeants was 98 or 76% of the authorized level of 129.
- An estimated 243 patrol officers and sergeants are required to perform MTPD duties on the interstates, US routes, NM Highways, county roads, and handle the daily workload.
- The patrol officers and sergeant estimate is 114 staff above the current authorized level.
- We estimated 81 Transportation Inspectors are needed to accomplish all the work, including inspect 2% of trucks passing through the Ports of Entry.

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Introduction

In November 2013 the New Mexico Department of Public Safety (DPS) contracted with the New Mexico Sentencing Commission (NMSC) to complete a staffing study involving the work of the New Mexico Motor Transport Police Division (MTPD). The main effort of the study involves a staffing study of the uniformed patrol officers and the non-patrol civilian transport inspectors of MTPD. The report contains three sections: 1) the staffing study, 2) an estimate of the number of commercial vehicles bypassing the New Mexico Ports of Entry, and 3) a review of the fee structure used by New Mexico compared to other states.

PAM Method

To begin, we completed a review of the literature describing existing police allocation methods. We decided to use the Police Allocation Model (PAM) developed by the Northwestern University Center for Public Safety to evaluate the MTPD. The strength of the PAM method is its consistency with the previous DPS reports, it is an established method, it is a quality method, the software is free, and it is commonly used by state law enforcement agencies. PAM is used for determining the allocation of patrol operations. It is not designed to determine shift and scheduling patterns. PAM does not assess the efficiency of current patrol operations, (e.g., whether the average response time to some calls is too long or comparatively too short, or whether patrol officers process calls efficiently).

Our aim was to determine the staffing level at the officer and sergeant level. Therefore we selected officer and sergeant level data for each MTPD district. Data for the study was provided by MTPD administrative staff and DPS Information Technology Office staff. MTPD Transportation Inspectors provided data for their portion of the study and the NM Department of Transportation provided roadway mileage, district sizes, and estimates of heavy vehicle traffic counts. MTPD Administration staff decided policy data issues and objectives necessary to complete certain sections of the PAM model.

Modified Workload Method

In conjunction with using the PAM method, we modified a workload measurement process to calculate the staffing needs of the non-patrol Transportation Inspectors (TI) of the Department.

The modified non-patrol workload study uses the work tasks of the TIs, the average amount of time to perform each work task, counts the number of tasks opened during the year, summarizes the time available to perform the work, and divides the amount of work by the time available. The result is the estimate of the number of TI staff necessary to meet the current volume of work. This method is similar to the method that has been used for a number of years by the NM Judiciary and the same method we used to determine the resource needs of the Special Investigations Division and Investigative Bureau of the New Mexico State Police in 2012.

Staffing Study Results

New Mexico Motor Transportion Police

Our study of MTPD included uniform patrol officers and sergeants. During the study, MTPD had 98 actual sworn personnel assigned to 8 districts. The authorized strength for CY2014 in all districts was 129. The difference in actual and authorized was 31 or 76% of the authorized level.

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- Our calculation showed that 81 FTEs are necessary to perform all the TI's work, 40 FTEs to complete the 'Safety and Inspections' work and 41 FTEs to complete the 'Tax and Revenue' work.
- Our calculation is predicated on inspecting approximately 2% of the estimated 6 million commercial vehicles passing through the Ports of Entry. Currently, 1.37% are inspected.
- From a convenience sample of three sites, observing each site for six hours, we found large numbers of vehicles bypassing the Ports (i.e., from 68% to 24%).
- The total percentage of non-permitted vehicles we observed cannot be generalized statewide. The bypass problem appears to vary by location.
- An increase in personnel at the Ports of Entry would allow more ports to be open longer hours, thus observing more commercial carriers and identifying more permit/fee violators. More personnel patrolling the highways and observing more of the bypass routes will also result in identifying more WDT violators.
- We recommend permanently assigning some FTEs to collect TRD revenue at the POEs and increase the numbers of auditors investigating state trucking firms.

Target Audience

New Mexico legislators and legislative staff; the New Mexico Department of Public Safety, State government officials; other law enforcement agencies, and criminal justice practitioners and researchers.

After entering the data variables into the PAM application the system produced a separate estimate for the number of uniformed officers and field sergeants required within each of the 8 MTPD districts. These district totals were summed to provide the estimate for the MTPD. Table 1 shows the results of the PAM calculations for officers and sergeants for each district and compares the PAM estimates to the CY2014 actual and authorized number of staff in each district.

The PAM estimate of 243 total required staff is an increase of 145 officers above the number of 98 actual staff and 114 above the number of 129 authorized officers. The PAM estimate of officers is an 88% increase over the authorized number of staff.

The PAM calculations are based on the data provided by the agency in four main categories, (i.e., reactive time, proactive time, administrative time, and uncommitted or patrol time). The estimate of officers is driven by several variables, (e.g., the number of roadway miles, the size of districts, the number and time spent handling self-initiated contacts, and the "select" number of self-initiated contacts). Leave time and overtime are also strongly associated with the PAM staffing requirements. We discovered, MTPD officers spent on average approximately 2 minutes every hour handling reactive tasks, (i.e., dispatched calls for service, dispatched traffic accidents), approximately 8 minutes handling administrative duties, and approximately 14 minutes of each hour performing proactive traffic stops and commercial vehicle inspections. This left an average of approximately 36 minutes for routine patrol each hour.

Transportation Inspectors

TIs work predominantly at the 12 New Mexico Ports of Entry (POE). Their work is split into two tasks 'Safety and Inspections' and 'Tax and Revenue collection.' We performed a Time Study of the TIs at each of the 12 Ports. We collected work time and activity types for the TI staff over a two-week period. We used the types of work activities the TIs performed during the Time Study period, the number of activity events, and the time it took to accomplish each event to calculate the proportion of TI time required to perform their workload.

We adapted the workload method by splitting the TIs duties into two groups 'Safety and Inspections' and 'Tax and Revenue.' We found 81 FTEs are necessary to perform all the TI's work, 40 FTEs to complete the 'Safety and Inspections' work and 41 FTEs to complete the 'Tax and Revenue' work. In addition to splitting the work into two groups, the analysis is predicated on inspecting approximately 2% of the estimated 6 million commercial vehicles passing through the POEs during the

Table 1. PAM Estimate for Officers and Sergeants by District Compared to Actual and Authorized

RESULTS TYPE	MTPD DISTRICTS								
	Dist 1	**Dist 2**	**Dist 3**	**Dist 4**	**Dist 5**	**Dist 6**	**Dist 7**	**Dist 8**	**TOTAL**
PAM Number of Officers	23	29	15	18	45	23	13	37	203
PAM Number of Sergeants	4	6	3	4	9	4	3	7	40
PAM Total Staff	27	35	18	22	54	27	16	44	243
Actual Number of Officers	10	10	2	11	11	23	10	2	79
Actual Number of Sergeants	2	3	1	3	2	4	2	2	19
Actual Total Staff	12	13	3	14	13	27	12	4	98
Difference (PAM Estimate - Actual)	15	22	15	8	41	0	4	40	145
Authorized Number of Officers	14	14	7	11	16	29	10	5	106
Authorized Number of Sergeants	3	3	3	3	3	4	2	2	23
Authorized Total Staff	17	17	10	14	19	33	12	7	129
Difference (PAM Estimate - Authorized)	10	18	8	8	35	-6	4	37	114

year. Currently, 1.37% of the approximately 6 million commercial vehicles are inspected. During the study period there were 74 TIs working the POEs. The difference in the estimate to the actual is 7 TIs or an increase of 9.5% in the current number of FTEs.

Table 2 shows the total case weight in hours for TIs during CY2013. It also shows the individual needs for 'Safety and Inspections' (72,148 hrs.) and 'Tax and Revenue' (74,699 hrs.) for CY2014. The average annual available time for an officer equals 2,080 hours. This number is reduced by Leave and Training time. The result is the amount of time available to accomplish all the work in CY2014. The total workload hours were divided by the amount of time available per officer and the result shows 40 FTE are required to handle Safety and Inspection tasks, while 41 FTE are required to handle the Tax and Revenue work.

Table 2 POE FTE Needs at 2% Inspection Level

Description	CY2013 TIs at 1.3%	Safety Inspect Hrs	Tax Rev Hrs
Total Job Specific Workload (Weights X Activities)	127,753	72,148	74,699
Officer Average Annual Availability	2,080	2,080	2,080
Available Time for Work Type Workload	1,808	1,808	1,808
Total FTE Officer Resource Predicted Demand	71	40	41
Current FTE POE Officer Resource	74	74	
Difference	-3	-7	

Bypassing Ports of Entry

A review of the MTPD published in 2013, by the NM Legislative Finance Committee (LFC) suggests that a large number of commercial vehicles are evading the NM weight-distance tax by circumventing the state Ports of Entry (POE). The report noted the number of vehicles evading the tax is unknown and the situation should be reviewed. As a result of the LFCs review, the NMSC agreed to provide a preliminary estimate of the number of commercial vehicles bypassing the POEs.

A brief discussion with MTPD Administration provided background information on the size and complexity of the problem. A plan was developed with the help of MTPD Administration to sample three bypass routes and infer the size of the statewide situation. From our results, we recommend a more extensive statewide analysis to study and understand the situation.

Between April 24, 2014 and May 8, 2014, NMSC staff observed truck traffic for six hours at the three sample locations. Table 3 describes the number of trucks observed at each location and the number of trucks in the NM Tax and Revenue (TRD) database (i.e., 'Yes', the truck is in the database and has paid a Trip Tax). In total 337 trucks were observed, 175 (52%) were in the TRD, and 162 (48%) were not in the TRD, 48 trucks could not be identified sufficiently to search in the TRD data, in the table these are designated as missing.

From our observations it appears that approximately half of the heavy motor vehicles (HMV) passing these sites are not in the TRD database and have not paid the Trip Tax. When these percentages are applied to the NMDOT estimated number of HMVs passing these sites it is interesting to note the potential circumvention problem. In one year, at the Vaughn site approximately 68% of HMVs not in the TRD database would equal 137,677 vehicles.

The total percentage of non-permitted vehicles we observed cannot be generalized statewide. Our observations points out that a large number of vehicles are circumventing the POEs. However, the problem seems to vary by location, for example 68% of the vehicles we observed at Vaughn were non-compliant, while 24% of the vehicles at Shiprock were non-compliant.

The LFC noted in their 2013 review of MTPD, that since 2009, the MTPD, the LFC, and a NM Legislative Technical Committee had performed informal estimates of WDT foregone (i.e., lost) revenue. These three groups estimated between 20% to 45% of the WDT was foregone to the state.

Our goal was to estimate the number of commercial vehicles bypassing the POEs. From a convenience sample of three sites, observing each site one for six hours, we found significant numbers of vehicles bypassing the Ports (i.e., from 68% to 24%). As limited as our review was, we used a valid method to estimate the number of vehicles at the sites we observed. A larger and more systematic observation period and study using portable plate reader equipment would reduce some of the data gathering problems we experienced.

Fee Structure Review

This is a cursory review of the WDT used by New Mexico compared to other states, which use the International Fuel Tax Agreement (IFTA) and the

Table 3 Commercial Vehicle Observations at 3 Sites and Trip Tax Permit								
Location	Yes		No		Missing	TOTAL	NMDOT 1 Yr. Est.	% of 1 Yr. Est. not in TRD
	Count	Percent	Count	Percent				
Vaughn	42	32%	89	68%	48	131	202,466	137,677
Shiprock	54	76%	17	24%	0	71	198,056	47,533
Eunice	79	59%	56	41%	0	135	294,190	120,618
TOTAL	175	52%	162	48%	48	337	694,712	

International Registration Plan (IRP) and provides recommendations to the MTPD's revenue enforcement mission. The complete report reviews the IFTA and IRP. Only four states in the nation – Kentucky, New York, Oregon, and New Mexico – use a tax structure based on the weight of the vehicle and the distance the vehicle travelled within the state.

The WDT is a sizable amount of revenue – 4th largest amount according to LFC – allocated to New Mexico's state road fund and generating approximately $70 million in revenue each year. The WDT is not a burden on New Mexico truckers only, 80% of non-New Mexico commercial haulers are impacted by the WDT. The WDT is highly related to the need for capacity and highway improvements. The WDT is a flexible tax structure. It can be graduated based on vehicle size and weight. At least one state (Iowa) has recently considered a per-mile tax.

A challenge for states using the WDT involves the enforcement and administration of the system. Collecting tax obligations from the users is a complex effort and catching "freeloaders" abusing the system is time consuming. A large amount of revenue is foregone because of the limitation of the current enforcement efforts to catch violators.

NMSC observations in Vaughn, NM suggested approximately 22% of the non-compliant motor carriers are intrastate haulers. The LFC suggested the Taxation and Revenue Department add auditors focusing on intrastate WDT enforcement to their Audit Bureau.

The WDT is a viable tax structure for generating revenue. It is not an out-of-date structure or beyond the capability of the TRD or the MTPD to administer or enforce. Before 2003, the WDT had not been adjusted in 20 years. It's now been 10 years since the WDT rate has been adjusted and it maybe worthwhile to consider another adjustment.

Recommendations

This staffing study has concluded the sworn officer force and corps of transportation inspectors should be increased. An increase in personnel at the Ports of Entry would increase the opportunity for more inspections and better customer services. More personnel patrolling the highways and observing more of the bypass routes will also result in identifying more WDT violators.

MTPD Administration have suggested permanently assigning FTEs to collect revenue at the Ports of Entry and increase the numbers of auditors investigating state trucking firms.

The last rate adjustment to the WDT was 38% in 2003 or an average of less than 2% over the previous 20 years. The WDT rate could be adjusted again an average of 2%. The state government should review the WDT rate more routinely.

During the time of this study, the MTPD has cross-trained a few NMSP officers to perform inspections of commercial drivers. This is very similar to the method used successfully in Texas by the Department of Public Safety. This effort increases the number of officers around the state who are able to compete the most basic inspection on the roadside.

The state should also consider the use of cameras, portable license plate readers, and high speed weight-in -motion scales at selected roadways in New Mexico. This technology has been used successfully by Oregon to improve commercial trucking.

The New Mexico Sentencing Commission

The New Mexico Sentencing Commission serves as a criminal and juvenile justice policy resource to the State of New Mexico. Its mission is to provide information, analysis, recommendations, and assistance from a coordinated cross-agency perspective to the three branches of government and interested citizens so that they have the resources they need to make policy decisions that benefit the criminal and juvenile justice systems. The Commission is made up of members from diverse parts of the criminal justice system, including members of the Executive and Judicial branches, representatives of lawmakers, law enforcement officials, criminal defense attorneys, and members of citizens' interest groups.

This and other NMSC reports can be found at: http://NMSC.unm.edu/