Vehicles Safety Report

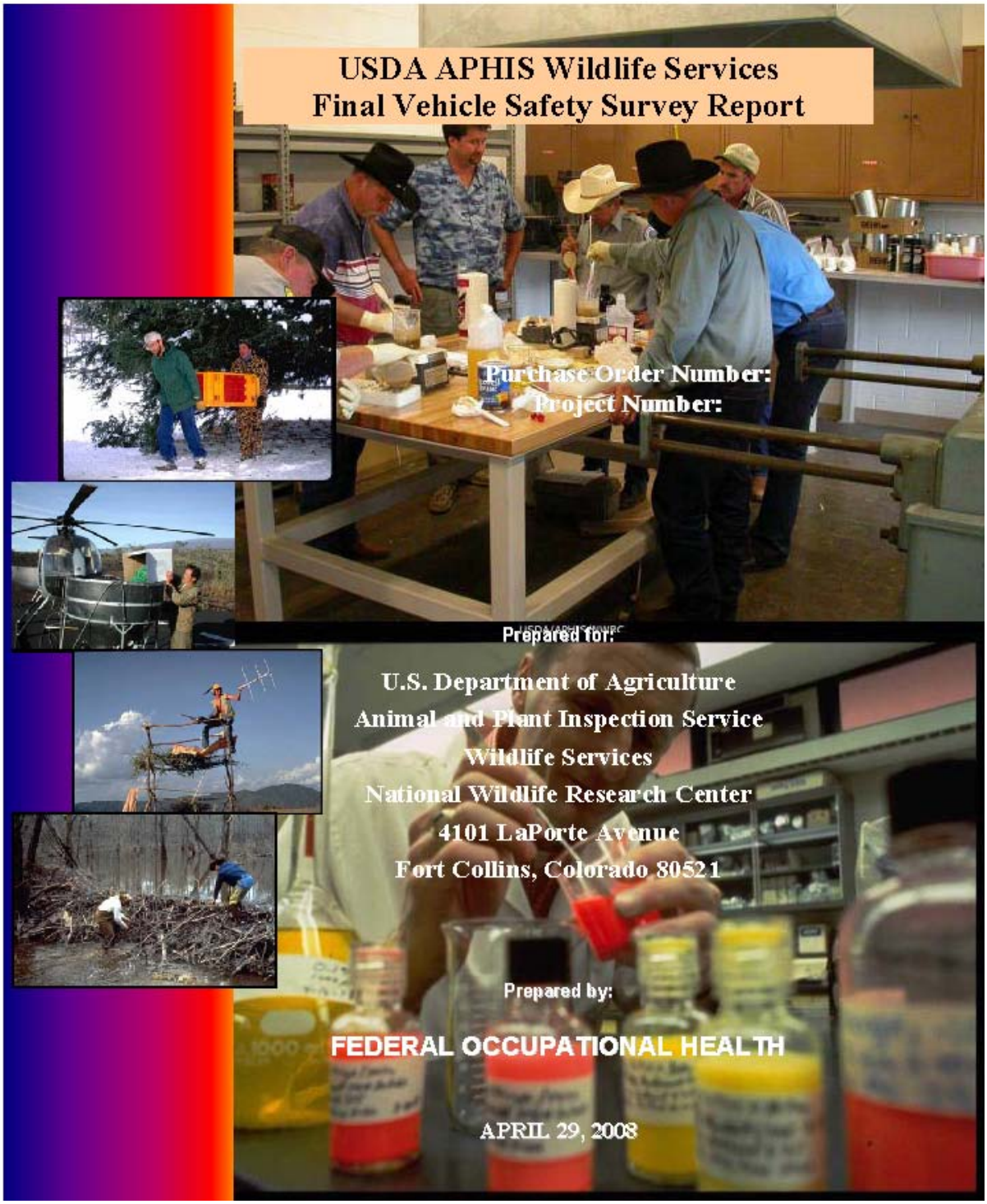

TABLE OF CONTENTS

1 INTRODUCTION 1
1.1 Personnel 1
1.2 Report Organization 1
2 SCOPE OF WORK 2
3 EVALUATION OF PROGRAM 3
4 RECOMMENDATIONS 4
5 LIMITATIONS 4
ATTACHMENT 1—REVIEW OF MANUALS AND POLICY 5
Marketing and Regulatory Programs (MRP) Motor Vehicle Manual 5
WS Directives 6
ATTACHMENT 2—REVIEW OF ACCIDENT REPORTS AND QUESTIONNAIRE RESULTS 7
Accident Reports 7
Questionnaire results 12
State Results 12
District Results 15
Appendices 20
ATTACHMENT 3—SOURCES 28

1 INTRODUCTION

The U.S. Department of Agriculture's APHIS Wildlife Services (WS) requested Federal Occupational Health (FOH) to perform an in-depth review of their motor vehicle use program through an Interagency Agreement between FOH and APHIS. This review was part of an overall safety review that consisted of the following components:

- Aviation/Aerial Operations
- Explosives and Pyrotechnics
- Firearms
- Hazardous Material (Manufacturing and Laboratory)
- Immobilization and Euthanasia Drugs
- Motor Vehicles
- Pesticides
- Watercraft and Water Safety
- Wildlife Disease

The intent of this top-down safety review is to improve safety for WS employees. In the course of doing this, the review will highlight the exceptional programs WS already has in place. In an effort to obtain the most candid discussion of W programs, the review is not intended to be punitive.

1.1 PERSONNEL

The WS facilitator of the vehicle use survey was Stephen J. Greiner, OHST, a Safety and Health Specialist at the National Wildlife Research Center in Fort Collins, Colorado. The principal investigator for the survey was Kenneth E. Fischer, CSP, CIH, PE; Christopher Owens performed the background review of WS directives; and Samuel C. Colwell, PhD, conducted the statistical analysis and review. The last three are FOH consultants.

1.2 REPORT ORGANIZATION

The report is divided into the following sections:

- Section 1: Introduction
- Section 2: Scope of Work
- Section 3: Evaluation of Program
- Section 4: Recommendations
- Section 5: Limitations
- Attachment 1: Review of Manuals and Policy
- Attachment 2: Review of Accident Reports and Questionnaire Results
- Attachment 3: Sources

2 SCOPE OF WORK

The scope of FOH's work was to:

- Review the following applicable WS Directives, identify weaknesses, and make recommendations as appropriate:
  - 2.210, "Compliance with Federal, State, and Local Laws and Regulations"
  - 2.601, "Safety"
  - 2.605, "Wildlife Service Safety and Health Programs"
  - 4.150, "Vehicle Use"
  - MRP 5400, "Motor Vehicle Manual," dated June 20, 2007
  - APHIS 4790.4, "Directive on Defensive Driving Training Requirements"
  - All-Terrain Vehicles (ATVs) and Snowmobiles. In particular, evaluate completeness of WS Directive 4.150, "Vehicle Use," and 4.155, "All-Terrain Vehicles and Snowmobiles," from a safety perspective.
- Evaluate the APHIS Motor Vehicle Fleet Management Manual and the APHIS Safety and Health Manual for coverage of applicable safety standards. Identify weaknesses in training materials and standard operating procedures, and make recommendations.
- Review defensive driver training/certification programs (highway vehicles, ATVs, and snowmobiles). Identify weaknesses and make recommendations.
- Conduct a site review of one Western Region and one Eastern Region State Office program where vehicles and ATVs are used. Inspect training records and compliance with WS and APHIS requirements, employee adherence to policy and safety procedures, personal protective equipment (PPE), and other applicable safety parameters as determined by the reviewer and/or WS. Document observations of policy/regulation noncompliance. If possible, observe field application of ATVs and snowmobiles. Make recommendations for improvement as appropriate.
- Interview (via questionnaire and/or during field visits) WS State Directors and District Supervisors to determine if they have sufficient insight into their vehicle use program to be proactive and accountable for safe operations.
- Survey each WS State Office in order to collect data, such as total numbers of employees, numbers and types of vehicles, miles driven, reportable accidents in the past three years, and training records, to determine accident rates for comparison with vehicle safety records of other Federal agencies and the public sector. The survey should also identify planned training courses and other pertinent information to determine where and what to review during the site visits.
- Provide a written draft report, including recommendations for program improvement, to WS for comments.
- Provide a final draft.

3 EVALUATION OF PROGRAM

The following observations about the WS Vehicle Safety Program are based on a review of all pertinent documentation on the WS Vehicle Safety Program, interviews with key personnel, responses to a survey sent to State and District Offices, and onsite reviews.

There is no question that the WS Vehicle Safety Program is effective. The accident rate of WS vehicles compares favorably with comparable available statistics for government or private vehicle usage. This safety record has apparently been accomplished without the cumbersome detailed requirements for the operator to document, check, and justify every activity that could be related to safe vehicle operation. The procedures are published and it is assumed that WS vehicle operators will abide by the requirements, which they apparently have done to this point. However, the significant accident increase of the last three years, even though it is still below comparable GOV and private vehicle rates, underscores a need for a more structured component to the WS Vehicle Safety Program.

Based upon site visits, WS Wildlife Specialists, their supervisors, and upper level managers in WS are to be congratulated on their level of corporate safety culture, at least as it relates to the vehicle safety program. However, this vehicle safety survey was commissioned to identify improvements that can be made, not just to identify elements that deserve commendation, which could actually become detrimental to the program by lessening vigilance. Safety depends significantly on awareness at all times, and becoming complacent can be disastrous.

Four generally acknowledged requirements for creating a positive safety culture are leadership, employee involvement, measurement, and continuous improvement. In order to bring the WS vehicle safety program to the next level, we see a need for improvement in each of these areas.

With respect to leadership, managers and supervisors at all levels need to support and implement changes identified below in Section 4, "Recommendations" of this report. A common misconception is that it is the duty of the safety person to make changes. Although the safety person has many responsibilities relating to employee occupational safety, it is the responsibility of managers to implement changes and keep attention on the program. This can be costly because managers and supervisors are burdened with many responsibilities, and this requires diverting more attention to employee safety.

The communication between supervisor and Wildlife Specialists is regarded as a high priority. This contact can sometimes be infrequent. A manager admitted that he may not see a Specialist from one end of the year to the next. Too much reliance can be placed on employee integrity. While the vast majority of Wildlife Specialists are highly responsible, if a Specialist has a life crisis, he or she could begin to behave erratically and the supervisor might not find out until some damage is done.

Regarding employee involvement, supervisors should use the existing awards program and nominate more employees for vehicle safety awards.

With respect to measurement, a number of improvements can be made to obtain better data on the number and types of motor vehicle incidents actually encountered. The intent of measuring is not to enforce punitive measures, which can actually reduce reporting and affect morale in a negative way, but to identify trends and implement corrective measures.

With respect to continuous improvement, a requirement of this vehicle study, (e.g., establishing systems to monitor safety compliance) suggests that data collection will result in continuous improvement. However, unless the will exists to take action based upon this data and to commit the resources to do so, data can lie unused. A strong commitment to continuous review plus follow-up action can ensure that continual improvement will occur.

4 RECOMMENDATIONS

Many detailed recommendations could be made based upon the study and analysis of the detailed operation and procedures of the WS Vehicle Safety Program; however, the purpose of this review is to determine causes and make recommendations to address root problems, not discuss specific issues. To that end, the following recommendations are offered:

1. Investigate the use of newer technologies to enhance communications. Given the critical nature of communications in case of an accident and in the supervisor-employee relationship, cell phone boosters, "bag phones" (these are higher-power cell phones such as the Motorola M800), and Personal Locator Beacons (PLBs) should be investigated for those Wildlife Specialists who frequently drop out of normal cell phone range during daily activities. (PLBs are similar to Emergency Locator Transmitters (ELTs) for downed aircraft.)
2. During interviews it was learned that Regional safety persons served on a collateral duty basis. Given the number of personnel in the field within the Eastern and Western Regions who have direct, daily exposure to safety hazards, these persons should be assigned on a full-time basis.
3. Improve roadside safety by the use of a magnetic strobe light that can be placed on the roof of a vehicle, marker cones placed behind and at a distance from the vehicle to warn approaching traffic, and the use of high-visibility vests. Collapsible cones are now available that can be locked inside tool boxes or elsewhere in pickup trucks to minimize the possibility of theft. Such cones are also available with LED blinker lights to improve visibility, especially in dark or semi-dark conditions. These cones can take the place of warning triangles that more commonly warn of roadside breakdown conditions.
4. Establish a separate safety budget, independent from other operating budget(s). This will allow items to be identified and prioritized separately. It will also allow the scope and complexity of safety needs to be more visible. Such needs include not only equipment, but also training, communication, and travel needs.
5. Make information on solutions to common problems available to field personnel by newsletter or possibly a website. Connectivity is limited for many field personnel, and a simple FTP site or website section that does not take a long time to open will make the information more accessible.
6. Establish and implement a more systematic way to ensure compliance with policies and procedures, (e.g., WS Directives, Safety Manual).

5 LIMITATIONS

FOH has employed certain investigative and research procedures during the course of this survey. It should be understood that such procedures indicate actual conditions only at the locations investigated and for the data received. As is customary, FOH has made certain inferences based on the results of this assignment.

Data and information regarding current operations have been provided FOH in part by the client and other sources. As is customary, FOH has assumed these data and information to be complete and factually correct. The conclusions rendered from these data and information is subject to professional opinion and thus could result in differing interpretations. Additionally, the conclusions rendered from this work are based on qualitative and quantitative information gathered on or near the date of this report.

ATTACHMENT 1—REVIEW OF MANUALS AND POLICY

MARKETING AND REGULATORY PROGRAMS (MRP) MOTOR VEHICLE MANUAL

A review of the Marketing and Regulatory Programs (MRP) Motor Vehicle Manual indicates that the document is thorough and complete overall; however, a few areas could be enhanced. The following recommendations are presented for WS consideration:

- Definitions
  - Provide a definition for defensive driving and high risk driver. (See 3c. below)
- Chapter 3
  - 2a.1–In addition, have Human Resources obtain a copy of the person's state Motor Vehicle Record (MVR). This should occur at initial assignment to a position requiring driving and on a random basis afterwards. Also, ensure that drivers do not have a valid driver's license in more than one state.
  - 2b.5–Describe how operator driving ability, compliance with safety regulations, and defensive driving habits are evaluated. List and describe the additional training.
  - 3c.–Change "…must be completed within 90 calendar days of employment…" to "…within 14 calendar days…."

    Also, develop policies to identify high risk operators. The following language is suggested:

    HIGH-RISK DRIVERS

    A driver will be classified as a high-risk driver if the MVR check indicates, or if it is otherwise determined, that the driver has one or more of the following violations within the last three years:

    - a conviction for an alcohol and/or drug related driving offense;
    - refusal to submit to a blood-alcohol content test;
    - conviction for reckless driving;
    - any combination of three or more moving violations, at fault accidents, or preventable accidents;
    - suspension, revocation or administrative restriction;
    - leaving the scene of an accident as defined by State laws;
    - at fault in a fatal accident;
    - a felony conviction involving a vehicle; or
    - three or more Government vehicle physical damage claims.

    MANAGEMENT CONTROLS FOR A HIGH RISK DRIVER

    If an employee is identified as a high-risk driver, either Option One or Option Two below will be exercised:

    Option One: Probation

    - The high-risk driver will be placed on probation (ending two years from the date of the most recent violation).

- HR will conduct an MVR check every six months for the duration of the probationary period.
- The Safety Manager will be notified of any additional violations while the employee is on probation.
- Employee driving privileges will be immediately suspended if any single repeat violation or any additional violation occurs while on probation or if any terms of probation are violated.

Option Two: Suspension of Driving Privileges

The high-risk driver will not be authorized to drive a motor vehicle at any time on Government business. This action may result in the supervisor either transferring the employee to a non-driving position, if a position exists, or the employee may be subject to termination. The employee may reapply for company driving privileges after one year of suspension.

- Chapter 4
  - 6a.(5)(d)–Require mandatory drug testing for all accidents where negligence or misconduct of an employee is suspected.
- Exhibit 1
  - Require a demonstration of operator skills to the supervisor before being permitted to tow.
  - 1b–Add a comment about allowance for increased braking distances when carrying a load.
- Chapter 4
  - 2–Provide a vehicle orientation, or add it to the defensive driver training, to ensure all operators are able to perform safety checks.

WS DIRECTIVES

The review of WS Directives 4.150, "Vehicle Use"; 2.601, "Safety"; 2.605, "Wildlife Service Safety and Health Program"; and 4.155, "All-Terrain Vehicles and Snowmobiles," generated the following recommendations:

- ATVs (4.155)
  - 3(b)(vii) contains extensive requirements for required equipment in snowmobiles. Although ATVs do not break down as often as snowmobiles, include a few of these items as required equipment in ATVs, such as a First Aid Kit.
- Snowmobiles
  - Add a vehicle maintenance section.

ATTACHMENT 2—REVIEW OF ACCIDENT REPORTS AND QUESTIONNAIRE RESULTS

ACCIDENT REPORTS

WS Motor Vehicle Accident Reports for the past four years (4th Quarter 2003–3rd Quarter 2007) were obtained from the vehicle use survey and analyzed (see Table 1 for a summary of the results). The reports showed that despite a very low overall accident rate, a rapid increase in motor vehicle accidents occurred from 2005–2007 for no apparent reason. For the 63 total accidents in the four-year period, 10 occurred in the five quarters (4th Quarter 03–4th Quarter 04) inclusive for an average of two accidents per quarter. The remaining 53 accidents occurred in the 11 quarters (1st quarter 05–3rd Quarter 07) for an average of 4.9 accidents per quarter, a rate increase of over 100 percent. Exhibits 1–4 show these trends. In discussions with officials and during site visits no reason was discovered for this increase.

The data were analyzed to determine the reasons for this significant increase in accidents, including an examination of possible contributing factors, such as:

- weather conditions
- time of year
- time of day
- geographical location
- type of travel
- driver at-fault

Analysis of weather conditions revealed that insufficient data exist to draw any conclusions since 38 of the 63 accident reports did not include weather condition data.

Accident rates were consistently highest in the third quarters, followed by second and first quarters, and lowest in the fourth quarters. The months from April through September accounted for 64 percent of the accidents. Possible causes for the increase during the second and third quarters could include the nature of the WS work, which could be more intense during the spring-summer seasons, and an increase in general vehicle travel during those same months.

Analysis of the time of day of accidents revealed that accident occurrences were evenly distributed throughout the day, so no conclusions could be associated with time-of-day of the accidents.

Accidents were not evenly distributed throughout all WS districts. For the approximately 100 districts, 39 percent reported accidents with 8 percent of the districts accounting for 33 percent of the accidents (see Table 2). Safety programs in high accident areas should be examined to ensure that a "culture of safety" is being fostered.

Only one accident occurred during non-official travel, so non-official use of vehicles does not appear to be a factor.

WS employees were at fault for approximately 58 percent of the accidents (i.e., 37 of the 63 accidents with responsibility for 3 accidents either unclear or not given in the report). Possible causes include lack of sufficient training in defensive driving and/or unfamiliarity with vehicle or terrain.

Table 1. WS Accidents for the Period from 3rd Quarter 2003–3rd Quarter 2007

Date	State Office	Time	Weather Conditions	At Fault Driver	Serious Injury	Seatbelt Worn?	Official Travel?	Complete Report?
10/22/03	Roswell, NM	8:56 a.m.	Not Given	Driver 2	N	Unk	Y	Y
11/17/03	Mississippi	1:30 p.m.	Not Given	Driver 2	N	Y	Y	Y
11/17/03	Ft. Collins, CO	2:47 p.m.	Not Given	WS	N	Y	Y	Y
11/18/03	Sacramento, CA	8:00 a.m.	Not Given	WS	N	Y	Y	Y
01/08/04	Guam	1:25 p.m.	Not Given	WS	N	Y	Y	Y
01/29/04	Guam	9:40 a.m.	Not Given	Driver 2	Y (driver?)	Y	Y	Y
06/30/04	Amherst, MA	11:51a.m.	Not Given	Driver 2	Y (driver?)	Y	Y	Y
07/07/04	San Diego, CA	4:30 p.m.	Sunny/Dry	Driver 2	N	Y	Y	N (Sup. Sig.)
09/29/04	Mississippi	10:50 a.m.	Not Given	Unclear	N	Y	Y	Y (more detail)
10/20/04	Springfield, IL	12:37 p.m.	Sunny/Wet	Driver 2	N	Y	Y	Y
02/10/05	Concord, NH	9:00 a.m.	Snow/Slush	WS	N	Y	Y	N (Sup. Sig.)
04/29/05	El Cajon, CA	3:30 p.m.	Not Given	Driver 2	Y (Fed. Driver)	Y	Y	Y
05/03/05	Mississippi	4:00 p.m.	Sunny/Clear	WS	Y (Fed. Driver)	Y	Y	N (Sup. Sig.)
05/12/05	**Carolina, PR**	**7:45 a.m.**	**Sunny**	**WS**	**Y**	**Y**	**Y**	**Y**
05/16/05	Las Vegas, NV	4:00 p.m.	Not Given	WS	N	Y	Y	N (Sup. Sig.)
05/28/05	San Antonio, TX	7:45 p.m.	Sunny/Dry	Driver 2	N	Y	Y	Y
06/28/05	Harrisburg, PA	7:00 a.m.	Cloudy/Wet	WS	N	Y	Y	Y
07/22/05	Lincoln, NE	4:00 p.m.	Not Given	WS	N	Y	Y	Y
07/26/05	Las Cruces, NM	10:30 a.m.	Not Given	WS	N	Y	Y	Y
08/01/05	Fair Oaks, CA	2:00 p.m.	Sunny/Clear	WS	N	Y	Y	N (Sup. Sig.)
08/03/05	Mississippi	9:15 a.m.	Good	WS	N	N	Y	N (Sup. Sig.)
08/12/05	Augusta, ME	4:30 p.m.	Sunny/Dry	Driver 2	N	Y	Y	Y
08/17/05	Las Cruces, NM	11:00 a.m.	Sunny/Clear	Driver 2	N	Y	Y	Y
09/23/05	Guam	10:11 a.m.	Not Given	WS	N	Y	Y	N (Sup. Sig.)
09/29/05	Las Cruces, NM	5:30 p.m.	Not Given	WS	N	Y	N	Y
12/02/05	Poland, OH	9:15 a.m.	Snow/Ice	Driver 2	N	Y	Y	Y
12/13/05	Columbia, MO	2:00 p.m.	Cloudy/Dry	Driver 2	N	Y	Y	Y
01/06/06	Castleton, NY	6:25 a.m.	Not Given	Driver 2	N	Y	Y	N (Sup. Sig.)
01/30/06	**Carolina, PR**	**10:05 a.m.**	**Sunny/Clear**	**WS**	**N**	**Y**	**Y**	**N (Sup. Sig.)**
02/10/06	Greensboro, AL	10:00 a.m.	Not Given	Driver 2	N	Y	Y	Y

02/10/06	Moseley, VA	3:25 p.m.	Not Given	WS	N	Y	Y	Y
03/21/06	West Valley City, UT	9:30 a.m.	Not Given	WS	N	Y	Y	Y
04/21/06	Lakeland, FL	7:45 a.m.	Not Given	WS	N	Y	Y	N (Sup. Sig.)
05/10/06	Mississippi	4:30 p.m.	Good	Driver 2	Y (driver 2)	Y	Y	Y
05/15/06	Phoenix, AZ	4:24 a.m.	Sunny/Clear	Driver 2	N	Y	Y	Y
05/16/06	San Antonio, TX	3:00 p.m.	Sunny/Clear	WS	N	Y	Y	Y
05/19/06	Harrisburg, PA	3:20 p.m.	Good	Driver 2	N	Y	Y	Y
06/09/06	Lincoln, NE	11:30 a.m.	Not Given	Driver 2	N	N	Y	Y
07/03/06	West Valley City, UT	8:48 a.m.	Not Given	WS	N	Y	Y	Y
07/20/06	Cola, SC	4:11 p.m.	Not Given	Driver 2	N	Y	Y	Y
07/22/06	Logan, UT	7:00 p.m.	Not Given	WS	N	Y	Y	N (Sup. Sig.)
07/24/06	Guam	8:00 a.m.	Not Given	WS	N	Y	Y	Y
08/18/06	Guam	6:05 p.m.	Dusk/Clear	WS	N	Y	Y	Y
08/23/06	California	2:00 p.m.	Not Given	WS	N	Y	Y	Y
08/31/06	Knoxville, TN	12:50 p.m.	Not Given	Not given	N	Y	Y	Y
10/21/06	Alabama	11:50 a.m.	Not Given	WS	N	Y	Y	Y
11/15/06	Texas	12:41 p.m.	Not Given	WS	N	Y	Y	Y
01/04/07	Kahului, HI	10:55 a.m.	Sunny/Clear	Unclear	N	Y	Y	N (Sup. Sig.)
01/05/07	Guam	1:25 p.m.	Not Given	Driver 2	N	Y	Y	Y
01/29/07	Louisiana	3:18 p.m.	Sunny/Clear	WS	N	Y	Y	N (Sup. Sig.)
03/07/07	Raleigh, NC	1:10 p.m.	Not Given	WS	N	Y	Y	N (Sup. Sig.)
03/12/07	El Cajon, CA	7:30 a.m.	Clear	WS	N	Y	Y	N (Sup. Sig.)
03/22/07	Langley AFB, VA	8:00 a.m.	Not Given	WS	N	Y	Y	Y
04/05/07	Annapolis, MD	7:40 a.m.	Sunny/Clear	WS	N	Y	Y	Y
04/19/07	Sweetwater, TX	1:28 p.m.	Not Given	WS	N	Y	Y	Y
05/09/07	Oregon	1:10 p.m.	Clear	WS	N	Y	Y	Y
06/11/07	Columbia, SC	2:00 p.m.	Not Given	Driver 2	N	Y	Y	Y
06/25/07	Casper, WY	9:00 a.m.	Not Given	WS	N	Y	Y	Y
07/03/07	San Antonio, TX	2:40 p.m.	Not Given	WS	Y (driver 2)	Y	Y	Y
07/16/07	Guam	11:00 a.m.	Not Given	WS	N	Y	Y	Y
07/25/07	San Antonio, TX	12:50 p.m.	Sunny/Wet	WS	N	Y	Y	Y
08/04/07	Florida	11:00 a.m.	Not Given	Driver 2	N	Unk	Y	Y
08/17/07	Sacramento, CA	11:00 a.m.	Not Given	Driver 2	N	Y	Y	N (Sup. Sig.)

Red (**bold**) = Same Driver. 63 total accidents, 58.73% (37) fault of WS, 9.52% (6) injuries, 26.98% (17) insufficient reports.

Exhibit 1. WS Vehicle Accidents 4th Quarter 03–3rd Quarter 07

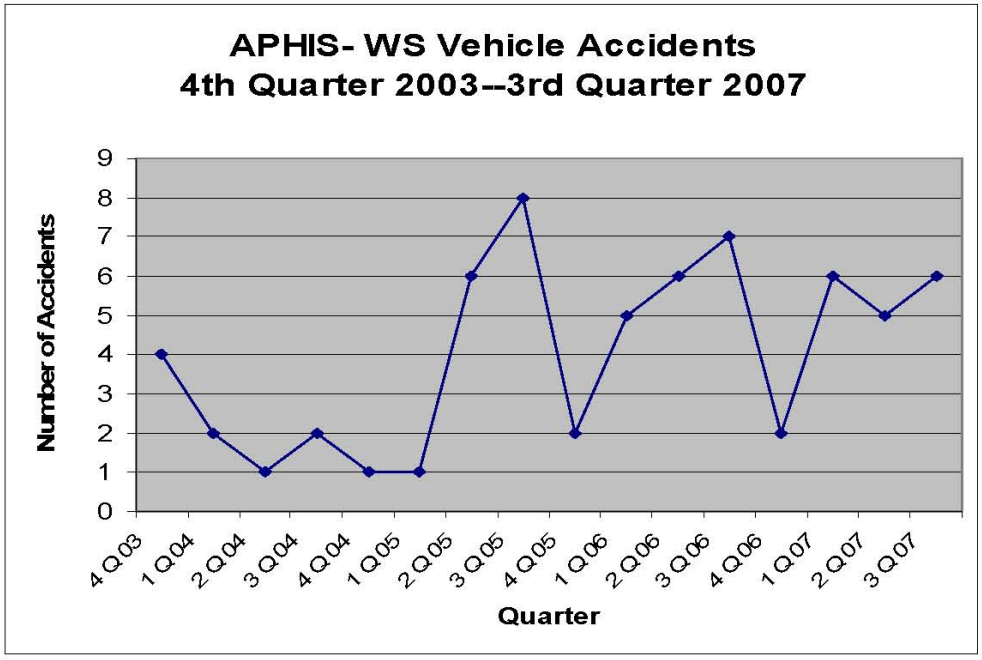

Exhibit 2. WS Cumulative Vehicle Accidents with Trend Line
4th Quarter 03–3rd Quarter 07

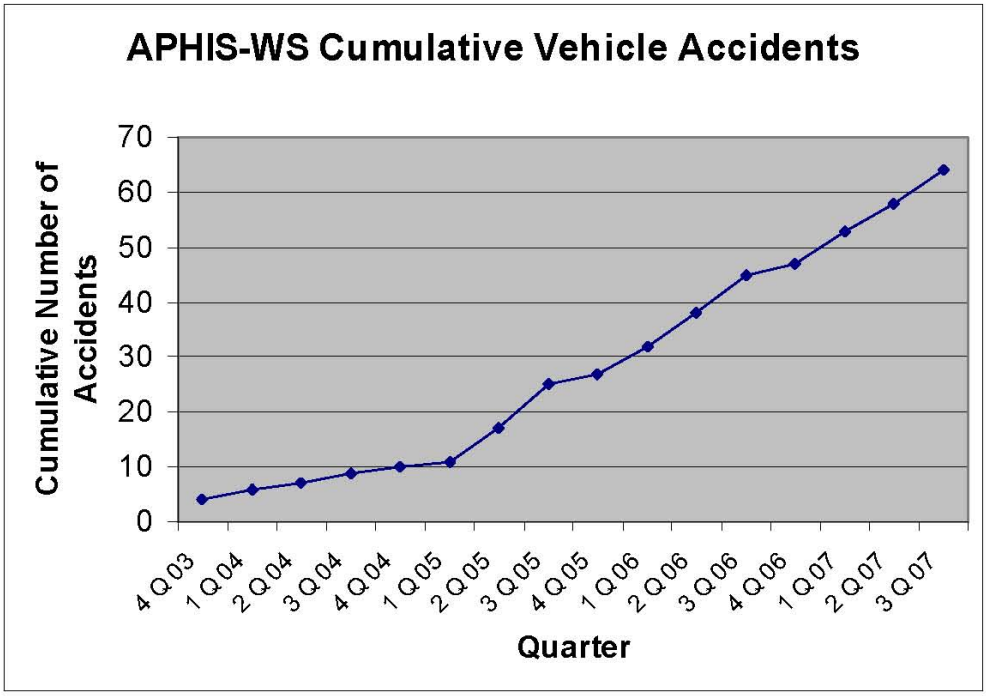

Exhibit 3. WS Vehicle Accident Trend Line (Slope = 1.4) for 4th Q 03–1st Q 05

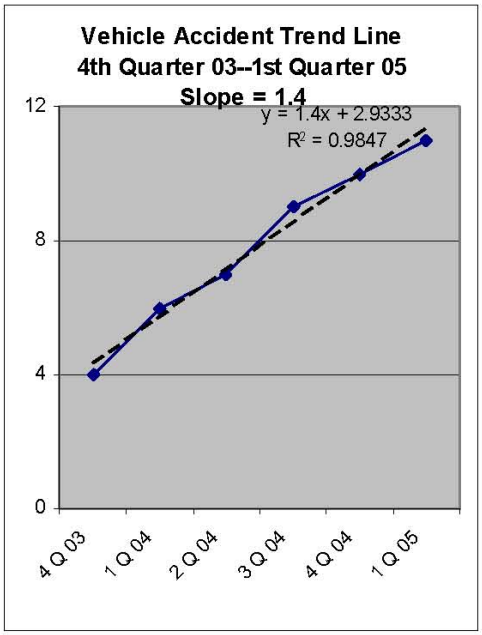

Exhibit 4. WS Vehicle Accident Trend Line (Slope = 5.1) for 1st Q 05–3rd Q 07

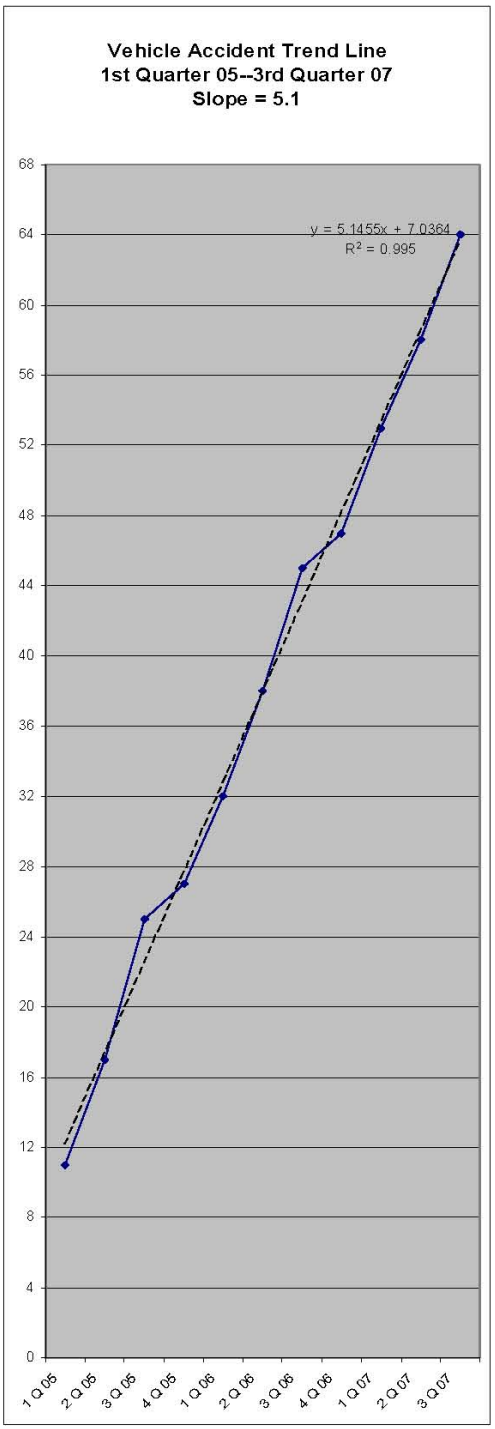

Table 2. WS Accident Information 3rd Quarter 03–3rd Quarter 07

WS District	Number of Accidents*
Guam	7
Mississippi (no districts given)	5
San Antonio, TX	3
Las Cruces, NM	3
Harrisburg, PA	3
West Valley, UT	3
Carolina, PR	3
El Cajon, CA	3
Lincoln, NE	3
* All other districts reported 1 or 0 accidents.	

QUESTIONNAIRE RESULTS

Questionnaires were sent out to all State and District Offices to determine the status of the vehicle safety program and to evaluate whether State Directors and District Supervisors have sufficient insight into their vehicle use programs to be proactive and accountable for safe operations. The State and District Questionnaires, developed in conjunction with the WS Safety and Health Specialist, are included as Appendix A and Appendix B below.

State Results

Thirty-three directors, representing 39 States and the District of Columbia, responded to the State Questionnaire (see Appendix A below) for a response rate of 76 percent. Five responses included multiple states: Maryland–Delaware–District of Columbia, Washington–Alaska, Tennessee–Kentucky, North and South Dakota, and Missouri–Iowa. In general the State Directors are highly aware of their vehicle use programs and were able to answer the questionnaire completely (see Table 3).

The responding States have a total of over 1100 employees operating over 1000 pickup trucks. System-wide, the trucks average 22,000 miles per year, which is typical for business-use vehicles in the U.S. Thirty-one SUVs, 7 sedans, and 4 vans are in operation throughout the country, averaging 12,000–15,000 miles per year, similar to the mileage for non business-use vehicles in the U.S. Additionally, WS employees operate specialized vehicles, including 405 ATVs, averaging between 1 and 2000 miles per year; 52 snowmobiles, 19 boats, and 7 motorcycles.

The predominant vehicle use involves pickup trucks and ATVs. The accident data in the State questionnaires did not specify vehicle types involved in the accidents, but what can be determined from the reports is that the total number of accidents for the three-year period from 2005–2007 is estimated at 63 for accidents involving pickup trucks backing into fixed objects or striking animals and 53 for pickup trucks involved with other vehicles.

Table 3. WS Vehicle Data from State Questionnaires

State	# Emp	Vehicle Data												Accident Data		
		Pickup	Avg Mile/ Yr	Sed	Avg Mile/ Yr	SUV	Avg Mile/ Yr	ATV	Avg Mile/ Yr	Snow	Avg Mile/ Yr	Other	Avg Mile/ Yr	2005	2006	2007
AL																
AK/WA	89	73	17,800	na		3	20,000	5	1,800	5	1,200	boat-1	3,000	?	?	5 Tot
AZ	22	23	12,000	2	12,000	2	6,000	9	2,000	na		Na			1	
AR																
CA	95	83	22,600	na		1	6,189	12	unk	7	unk			15	10	10
CO	41	25	22,640	na		1	15,000	25	6,000	8	500	Na		2	1	3
CT																
DE/DC/MD	27	24	20,000	na		na		4	unk					0	0	1
DC	See DE															
FL	6	3	15,000	na		2	12,000	na		na		na		0	1	0
GA	16	19	25,000	na		na		7	4,000	na		na		0	0	0
GU																
HI																
ID	30	23	18,900	na		2	6,750	29	unk	11	unk	Fat Cat Motorcyle-7	unk	0	0	1
IL	14	14	unk	na		na		3	unk	na		ORV-3	unk	0	2	1
IN	13	5	137,100	1	20,161	na		3	0	na		na				
IA/MO	19	17	23,530	na		1	5,000	6	150	na		na		1	0	0
KS	7	11	26,000	na		na		5	unk	na		na		1	1	0
KY/TN	37	47	12,360	na		na		13	650	na		van-1	3,501	2	2	1
LA	11+10pt	18	19,740	na		2	12,300	18	9,000	na		na		0	0	1
ME	17	13	3,850	na		2	12,500	6	2,000	1	0	boat-2	900 hr	1	1	0
MD	See DE															
MA																
MI																
MN	12+6pt	21	11,530	na		na		15	2,000	6	600	na				2

MS	30	30	2,500	1	5,000	1	10,000	25	1,000	na		2	unk	2	1	0
MO	See IA															
MT	29	25	23,680	na		1	20,000	24	unk	na		na		0	2	2
NE																
NV	25-Fed, 13-St	37	24,000	1	10,000	2	10,000	2	3,000	2	1,000	UTV-4	24,000	2	0	2
NH																
NJ	10	10	10,000	na		1	15,000	2	25	na		na		0	1	0
NM	43	35	20,000	na		na		25	unk	na		na		**3**		
NY																
NC	48	41	25,000	1	2,500	3	2,500	25	1,000	na		Kubota RTV-2, airboat-2	500, unk	1	3	3
ND/SD	18+11pt	25	30,000	na		1	10,000	12	1,000	1	1,000			0	0	1
OH	17	18	12,000	na		na		8	1,600	na		na		1	1	1
OK																
OR	51	41	20,000	na		1	3,000	22	unk	na		minivan-1	12,000			
PA																
PR																1 + **1**
RI																
SC	23	24	30,000	na		na		3	unk	na		boat-2	unk	0	**1**	2
SD	See ND															
TN	See KY															
TX	190	163-GOV, 36-ST	15,000	na		2	12,000	27-GOV, 24-ST	2,000	na		na		**1**	**2**	**3**, 10 Tot
UT																
VT																
VA	31	39	7,435	na		1	10,000	16	47	na		boat-9	unk	0	5	1
WA	See AK															
WV	13	13	25,000	na		1	5,000	14	1,100	2	250	na				1
WI	50	43	15,070	1	8,000	1	6,000	22	600	3	168	van-1, boat-3	10,000/ 200	1	1	0
WY	50+3pt	49	7,475	na		na		18	unk	14	unk	na		1	1	3

NOTE: For accident data, red (**bold**) #s indicate data from accident report file; black #s are from State questionnaires.

For the three-year period from 2005–2007, the WS accident rate per one million miles driven (VMT) is a notably low 1.77. The latest available statistics on fleet accident rates per vehicle type, including government-owned vehicles (GOVs), are from 1999–2001, compiled by the National Safety Council (NSC). These representative data are based only on the members participating in the National Fleet Safety Contest and show the following accident rates per one million VMT:

- Trucks (GOV): 8.27
- Trucks (all): 3.96
- U.S. Postal Service: 12.87
- Utilities: 5.16
- Passenger cars: 6.53

The annual report "Traffic Safety Facts 2005: A Compilation of Motorized Vehicle Crash Data," published by the National Highway Traffic Safety Administration (NHTSA), presents more complete data about traffic crashes resulting in property damage as well as injuries and fatalities but does not include a category specifically for GOVs. Property-damage-only crashes in 2005 showed the following involvement rate per one million VMT:

- Passenger cars: 2.58
- Light trucks: 2.57
- Large trucks: 1.59
- Motorcycles: 1.68

The data most comparable to WS crash statistics are the light truck NHTSA data. The WS accident rate of 1.77 crashes per one million VMT compares favorably with the 2.57 light truck rate compiled by NHTSA. In addition the WS crash statistics compare very favorably with NSC GOV truck rate of 8.27. One note of caution with this analysis is the assumption that the WS information, although not complete, is representative of the entire agency crash data.

The State questionnaires also showed that all WS drivers complete defensive driver training when they are hired with updates every three years. All are licensed for the types of vehicles they drive. It is less clear whether the operators have specialized training in the use of vehicles types under WS field working conditions (e.g., if a vehicle regularly pulls a trailer, are operators given specialized training in this use?) Likewise, it is not clear whether all operators follow the NIOSH recommendations for preventing worker injuries and deaths from motorized vehicle crashes.

District Results

A complete list of all WS Districts was not available, so the following calculations are based on an estimate of 49 Districts in the Eastern Region and 50 in the Western Region. Thirty Eastern Region and 36 Western Region Districts responded to the questionnaire for a participation total of 66 and a participation rate of 67.7 percent. The District Questionnaire addressed operations and maintenance of vehicles as well as office procedures (see Appendix B below). For ease of reference, the number(s) and text of the questions from the "Questionnaire–WS State Directors or District Supervisors" are printed in bold and precede the discussion analysis. The responses to the question(s) are summarized below:

1. Does your office verify that all vehicle operators, who operate GOVs on Government business, possess a valid driver's license for the class of vehicle they operate?

Summary: All offices verify that operators have valid driver's licenses for the vehicles they operate when they are hired. After that licenses are generally not checked. It is not determined whether operators are licensed in more than one State.

Comments: Check licenses every at least two years or when supervisors do their annual Trapline Inspections. Post the MRP Safety Manual "Requirements to Operate" a GOV in a prominent place frequented by employees. Provide a copy in each vehicle's GOV self-insurance information glove-box packet.

2. Do you have a way of verifying that the vehicles are being used only for official use?

Summary: Most offices rely primarily on trust and some random checks to verify that vehicles are being used only for official business. However, some offices employ and examine vehicle usage logs that require daily mileage entries to detect any irregular trends which could indicate misuse.

Comments: Establish procedures (e.g., vehicle logs) to verify that vehicles are used only for official use or have proper approval for personal use.

3. What measures are in place to ensure that operators are complying with license restrictions (e.g. corrective lenses)?

Summary: No procedures are in place to ensure that drivers are complying with license restrictions other than discussions during check rides with supervisors.

Comments: Establish procedures for supervisors to verify compliance with license restrictions annually (e.g., during annual Trapline inspections).

4. Are methods used to evaluate operators driving abilities, compliance with safety regulations, and/or defensive driving habits? If so please describe.

Summary: All offices rely on supervisors spending time in the field with employees to evaluate driving abilities and adherence to safety regulations. Supervisors also examine the vehicle visually for signs of misuse or abuse.

Comments: Require annual evaluations to evaluate operator driving abilities, defensive driving habits, compliance with safety regulations, and compliance with license restrictions.

5. Are state Motor Vehicle Records reviewed before permitting new employees to drive GOVs?

Summary: Virtually none of the offices reviews State motor vehicle records before permitting new employees to drive GOVs. However, some States perform background checks with the Criminal Justice Data Center.

Recommendations: If possible, check State motor vehicle records to identify high risk drivers.

6. If an operator were involved in more than one accident are there policies in place to require some action, such as restricting class of permitted vehicle use, additional training, or other measures?

Summary: Only one office reported more than one accident by the same driver. Local offices have established policies to address repeated accidents by the same driver, including retaking of defensive driving classes, restricting the class of permitted vehicle use, or similar actions, depending on the situation.

Comments: Establish formal policies to ensure that drivers involved in multiple accidents are identified and counseled. Provide remedial training as needed.

7. How does management investigate accidents?

Summary: For each accident, employees are required to fill out the forms found in the vehicle accident packet in each GOV. Management ensures that the forms are immediately completed and obtains copies of police reports if applicable. In some cases, supervisors go to the scene of the accident to document and take photos of the vehicle(s) and location(s). These data are used to establish fault.

Comments: Continue to ensure that required forms for GOV usage are in the glove box and that operators are trained and understand how and when to complete them.

8. How often are GOVs taken through safety checks and routine maintenance?
9. How often do GOVs undergo routine maintenance?

Summary: Safety checks and maintenance are generally completed as recommended by the manufacturer.

Comments: Continue to complete formal safety checks at every oil change and informal checks every day of use.

10. Is an updated list of training completion for operators that operate specialized vehicles?

Summary: The State (and some District) Office(s) maintains a file of employee defensive driver training.

Comments: Document and file all completed training, not just defensive driver training.

11. What, if any, training is provided specific to hauling trailers?

Summary: Training for hauling trailers is provided through videos or supervisor observation. No formal courses are used.

Recommendations: If available, require and provide formal training for hauling trailers.

12. What percentage of the time are employees hauling trailers and what items do they haul?

Summary: The percentage of time that employees are hauling trailers varies from 19 to 30 percent. The types of trailers include horse, camp, utility (e.g., for gear, traps), boat, and ATV. Trailers are also used to haul 400-gallon sprayers.

Comments: N/A

13. How is completion of defensive driver training for operators tracked?
14. How many drivers have received defensive driver training in the past 3 years and where are those records kept?

Summary: Training logs are maintained at the State Office, and supervisors receive prompts when refresher training is needed. All operators receive defensive driver training when hired with refresher updates every three years.

Comments: N/A

***14. What is the drug testing policy for operators involved in an accident?** (*Note: error of duplicate numbering in original questionnaire)
15. If medical questions arise pursuant to the operator's ability to drive, what actions does management take?

Summary: No regular drug testing or medical examinations are performed. One office conducts random drug testing. Otherwise, if conditions warrant, the supervisor may restrict GOV use until further tests are conducted.

Recommendations: Require drug testing as a condition of employment, on a random basis, and after any accident where driver error is involved.

16. Which of the following vehicles are used by your staff to carry out their respective job descriptions?
17. What training is provided for each vehicle?

Pickup Trucks
Sedans
SUVs
ATVs
Snowmobiles
Other [please indicate type(s)

Summary: All vehicle types are in use throughout the system, but formal training is focused mainly on defensive driving. Many offices request ATV or snowmobile training if it is available.

Recommendations: Provide ATV and snowmobile safety training in addition to the manufacturer's training.

18. How soon after a new employee is hired do they receive defensive driver training? How often are they required to receive refresher training?
19. Who provides the defensive driver training? (E.g., The National Safety Council (NSC); a WS employee using approved course materials; AAA; etc.)

Summary: All new employees receive defensive driver training almost immediately with refresher training every three years thereafter. The training is typically provided online through the National Safety Council.

Comments: N/A

20. Do you have operators that work at airports? If so what type of training do they receive to ensure safe vehicle operation on airport property?

Summary: All employees required to work at airports receive specialized training for security I.D. areas and airfields provided by the appropriate airport authority, which is typically the airport rescue and firefighting department.

Comments: Document, track, and file all formal training received.

21. Must new operators be observed driving any of the following vehicles before being allowed to operate vehicles unattended?

Pickup Trucks
Sedans
SUVs
ATVs
Snowmobiles
Other [please indicate type(s)

Summary: New operators are not often observed driving the vehicles before being allowed to operate the vehicle unattended. When observation is required, a supervisor or a more experienced employee generally performs the observation.

Comments: Provide trained safety observers to instruct and observe new operators driving vehicles before allowing them to drive unattended.

22. When operators are using specialized vehicles that require use of Personal Protective Equipment (i.e. helmets, goggles, etc.), what measures are taken to ensure the equipment is being used properly?

Summary: Policy dictates that all employees use the appropriate Personal Protective Equipment (PPE) when operating specialized vehicles, (e.g., ATVs, snowmobiles, boats). Districts use manufacturer training video, unannounced site visits, and internal reports to ensure proper PPE usage.

Comments: Provide all employees with necessary PPE. Provide, document, and file all training in the proper use and maintenance of PPE.

23. What measures are taken to ensure that vehicles are maintained in safe operating condition?

Pickup Trucks
Sedans
SUVs
ATVs
Snowmobiles
Other [please indicate type(s)

Summary: Vehicles receive routine maintenance as recommended by the manufacturer. Otherwise maintenance is performed as needed.

Comments: Ensure that all maintenance is documented, made available to all operators, and filed in the District Office.

24. Does any training provided ensure that the operators can confidently perform a daily vehicle safety check before using the vehicle?

Summary: Operators perform daily vehicle safety checks. No specialized training other than a general orientation is provided.

Recommendations: Provide training and a checklist for operators to perform daily vehicle safety checks.

25. When it is necessary for an operator to drive to a remote location alone, what safety measures are in place if an accident occurs?

Summary: Since vehicle operators typically work alone at remote locations, they are provided with cell phones as well as all WS required safety equipment and PPE. Depending on the situation they may also have VHS radios or GPS personal locators.

Recommendations: Make use of newer communication technologies (see Section 4, "Recommendations," #1 above).

26. How are employees encouraged to report unsafe vehicle working conditions to management? *25. What steps are taken to foster a culture of safety awareness while on duty? (*Note: Error of duplicate numbering in original questionnaire)

Summary: All districts foster a safety culture within each of their work units through various means, such as focusing on and encouraging safety during district meetings, praising positive safety statistics, and encouraging anonymous reports of unsafe operations.

Comments: See Section 3, "Evaluation of Program" above.

26. Is any type of literature (i.e. newsletters, posters, pamphlets) used as continuous reminders of the importance of safe vehicle operations?

Summary: All Districts use various ways to make employees more aware of safe practices, such as GOV stickers reminding employees to use seat belts, e-mails from Headquarters and safety officers, fact sheets, and safety alerts.

Comments: Ensure that materials are distributed to all employees and/or posted in a prominent place.

27. Do you have an incentive program that rewards safe operators? If so, what awards have been given in the past three years?

Summary: Generally, no safety incentive programs have been used. However, several safety award programs are available in the MRP Safety Manual.

Recommendations: Enhance the safety incentive program and publicize it well among employees.

Appendices

Appendix A–State Questionnaire

Appendix B–Questionnaire WS State Directors or District Supervisors

APPENDIX A

Questionnaire for WS State Program

_____
State Program

1. Who is the state program's Vehicle Accounting Officer?
   _____

2. How many employees does your state program employ?
   _____
   _____
   _____

3. How many employees are operators of GOVs and official use POVs?
   GOVs_____POVs_____
   _____

4. How many GOVs are used for Home to Work travel?
   _____
   _____
   _____
   _____

5. What types of vehicles are used by these employees?

Pickup Trucks	
Sedans	
SUVs	
ATVs	
Snowmobiles	
Other [please indicate type(s)]	

6. How many of each vehicle type do you have?

Pickup Trucks	
Sedans	
SUVs	
ATVs	
Snowmobiles	
Other [please indicate type(s)]	

7. What is the total mileage annually for each vehicle type?

Pickup Trucks	
Sedans	
SUVs	
ATVs	
Snowmobiles	
Other [please indicate type(s)]	

8. Please describe briefly any reportable accidents the State Program has had in the past three years. (Please list per calendar year.)

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

9. What upcoming training courses or events do you have planned? (Please list the type of training along with the location and date.)

_____
_____
_____
_____
_____
_____

_____ _____
Name of Person Completing Questionnaire Date

_____ _____
Email Address Phone

APPENDIX B

Questionnaire
WS State Directors or District Supervisors

_____
Office Name

1. Does your office verify that all vehicle operators, who operate GOVs on Government business, possess a valid driver's license for the class of vehicle they operate?

2. Do you have a way of verifying that the vehicles are being used only for official use?

3. What measures are in place to ensure that operators are complying with license restrictions (e.g. Corrective lenses)?

4. Are methods are used to evaluate operators driving abilities, compliance with safety regulations, and/or defensive driving habits? If so please describe.

5. Are state Motor Vehicle Records reviewed before permitting new employees to drive GOVs?

6. If an operator were involved in more than one accident are there policies in place to require some action, such as restricting class of permitted vehicle use, additional training, or other measures?

7. How does management investigate accidents?

8. How often are GOVs taken through safety checks and routine maintenance?

Pickup Trucks	
Sedans	
SUVs	
ATVs	
Snowmobiles	
Other [please indicate type(s)	

9. How often do GOVs undergo routine maintenance?

Pickup Trucks	
Sedans	
SUVs	
ATVs	
Snowmobiles	
Other [please indicate type(s)	

10. Is an updated list of training completion for operators that operate specialized vehicles?

11. What, if any, training is provided specific to hauling trailers?

12. What percentage of the time are employees hauling trailers and what items do they haul?

13. How is completion of defensive driver training completion for operators tracked?

14. How many drivers have received defensive driver training in the past 3 years and where are those records kept?

14. What is the drug testing policy for operators involved in an accident?

15. If medical questions arise pursuant to the operator's ability to drive, what actions does management take?

_____
_____
_____

16. Which of the following vehicles are used by your staff to carry out their respective job descriptions? What training is provided for each vehicle?

Pickup Trucks	
Sedans	
SUVs	
ATVs	
Snowmobiles	
Other [please indicate type(s)	

17. What training is provided for each vehicle?

Pickup Trucks	
Sedans	
SUVs	
ATVs	
Snowmobiles	
Other [please indicate type(s)	

18. How soon after a new employee is hired do they receive defensive driver training? How often are they required to receive refresher training?

_____
_____
_____

19. Who provides the defensive driver training? (E.g., The National Safety Council (NSC); a WS employee using approved course materials; AAA; etc.)

_____
_____
_____

20. Do you have operators that work at airports? If so what type of training do they receive to ensure safe vehicle operation on airport property?

_____
_____
_____

21. Must new operators be observed driving any of the following vehicles before being allowed to operate vehicles unattended?

Pickup Trucks	
Sedans	
SUVs	
ATVs	
Snowmobiles	
Other [please indicate type(s)	

22. When operators are using specialized vehicles that require use of Personal Protective Equipment (i.e. helmets, goggles, etc.), what measures are taken to ensure the equipment is being used properly?

23. What measures are taken to ensure that vehicles are maintained in safe operating condition?

Pickup Trucks	
Sedans	
SUVs	
ATVs	
Snowmobiles	
Other [please indicate type(s)	

24. Does any training provided ensure that the operators can confidently perform a daily vehicle safety check before using the vehicle?

25. When it is necessary for an operator to drive to a remote location alone, what safety measures are in place if an accident occurs?

26. How are employees encouraged to report unsafe vehicle working conditions to management?

25. What steps are taken to foster a culture of safety awareness while on duty?

26. Is any type of literature (i.e. newsletters, posters, pamphlets) used as continuous reminders of the importance of safe vehicle operations?

27. Do you have an incentive program that rewards safe operators? If so, what awards have been given in the past three years?

_____
_____
_____
_____

Please provide any other notes or comments that you think would help to foster safe vehicle operations:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

_____ _____
Name of Person Completing Questionnaire Date

_____ _____
Email Address Phone

Thank you for participating in this survey.

ATTACHMENT 3—SOURCES

Levenson, Mark S. "All-Terrain Vehicle Injury and Exposure Studies." U.S. Consumer Product Safety Commission, Division of Hazard Analysis, 2003.

Moser, Phil and Costello, Jim. Session No. 543, "Confessions of a Business Driver: Understanding Driver Safety Risks." *Advanced Driver Training Services*. 2007.

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National Institute for Occupational Safety and Health. *Publication No. 98-142*, "Preventing Worker Injuries and Deaths from Traffic-Related Motor Vehicle Crashes." July 1998.

National Safety Council. "Fleet Accident Rates by Type of Vehicle, 1999–2001." Summarized from the *National Fleet Safety Contest*, 2001.