IMPACT OF MARKED VEHICLES ON STATE CONSERVATION OFFICERS

Department of Natural Resources
Division of Law Enforcement

A Staff Study Submitted to the
Northwestern University Center for Public Safety
School of Police Staff and Command
Impact of Marked Vehicles on State Conservation Officers

Problem
DNR conservation officers continue to report to supervisors and managers that marked vehicles are negatively impacting operations-level fish and wildlife law enforcement. The entire fleet of law enforcement patrol vehicles of the state Dept. of Natural Resources (DNR) is conspicuously marked with agency identifiers. Reported associated negative impacts include, but are not limited to:

- Problems in conducting semi-covert surveillances.
- Inhibiting investigation and/or response to sensitive or complex violations.
- Difficulties meeting and working with cooperating individuals (CIs).
- Reduced apprehension of violators.

Such negative impacts have the potential to contradict the stated mission of the department and the division to protect the state’s natural resources through quality law enforcement. Law enforcement is integral to fisheries and wildlife management in the state.

Assumptions

- People will modify their behavior, and not knowingly commit criminal violations, including fish and wildlife violations, in the presence of law enforcement officers in marked patrol vehicles.
- The overall crime rate for fish and wildlife violations in the state has remained relatively constant, and will likely continue to remain so for the foreseeable future.
- With an average assigned patrol area of approximately 600 square miles, contact rates between DNR conservation officers and hunters/anglers will continue to remain relatively low.

Facts

- There were 1.976 million persons (residents and non-residents) that hunted and/or fished in the state in 2006, while 2.069 million persons indicated that they participated in wildlife related recreational activities (U. S. Department of the Interior, U. S. Fish & Wildlife Service, 2007).
- There are only 210 sworn DNR conservation officers to enforce fish and wildlife laws in the state (DNR, 2007).
- Of the currently staffed sworn positions in DNR, all have been equipped with marked vehicles since 2002, including managers, supervisors, and law enforcement specialty positions (except three covert investigators).
• All other automobiles and trucks in DNR belonging to other field service divisions (fisheries, wildlife, forestry, state parks, waters, ecological resources and trails & waterways and administration) are conspicuously marked with the agency logo on both sides of the vehicles.

• Arrests and written warnings for selected fish and wildlife violations have decreased since DNR conservation officers’ vehicles have been marked, compared to when they were unmarked (DNR; Annex A).

**Discussion**

State law requires all motor vehicles used in the enforcement of traffic laws or uniformed general patrol by all law enforcement agencies, except conservation officers, to have uniform colors and markings (Annex B). The state legislature specifically excluded conservation officers because of the nature of their unique duties. However, in 2001-2 all law enforcement vehicles in the DNR were marked with agency identifiers. Prior to that time, with the exception of a few which were marked at individual officer’s requests, all law enforcement vehicles were unmarked. Soon after vehicles were marked, DNR conservation officers reported problems and difficulties in effectively carrying out certain law enforcement duties, especially those associated with fish and wildlife law enforcement.

**Data and surveys.** First, to determine if there was any quantitative impact on violator apprehension in the state since DNR conservation officers’ vehicles were marked, a review of arrests and written warnings statistical data was conducted. There are two types of fish and wildlife violations: continuous and opportunistic, or discrete. Examples of the former are taking fish or wildlife without a license or with illegal equipment. These are subject to detection over a period of time. The presence or inspection by a conservation officer is like a sample from a continuous distribution. The probability of detecting such violation types is much greater than the probability of detecting the opportunistic type, such as the act of shooting big game from a roadway or taking fish and wildlife over the daily limit. These violation types require surveillance or an undetectable law enforcement presence. Consultations were conducted with several very experienced state conservation officers to identify a relatively few discrete natural resource violations that the officers felt would likely be impacted by the visibility of a marked vehicle (B. V. Schultz, S. Jacobson, T. Provost, personal communication, January 10-12, 2008; Annex 2). Data was obtained from DNR arrests and written warnings records for two established 5 year time periods, 1989-1994 and 2002-2007 for these violations. The data comparison revealed a clear and discernible decline (-53%) in combined arrests and written warnings for these selected discrete violations after conservation officers’ vehicles were marked (Annex A).
Second, state and federal natural resources law enforcement agencies nationwide were surveyed regarding their agency’s use of marked and unmarked vehicles and officer-reported impacts to fish and wildlife law enforcement by marked vehicles. Some agencies (such as Wisconsin, Nebraska, West Virginia and the U.S. Fish & Wildlife Service) utilize unmarked vehicles almost exclusively, and reported no negative impacts. The vast majority (84%) of agencies surveyed employ combinations of marked and unmarked vehicles. In addition, most (81%) natural resources law enforcement agency administrators surveyed did report that officers experienced issues or problems in conducting fish and wildlife violation investigations or performing surveillances while using marked vehicles. In some instances, state law mandates the use of marked law enforcement vehicles. In most of those cases, agency administrators indicated that they would utilize unmarked vehicles if they could (Annex C).

Third, DNR conservation officers statewide were surveyed to examine and explore violation impact issues. An overwhelming percentage (97% of 143 officers responding) reported experiencing difficulty in fish and wildlife law enforcement that they felt was attributed to their vehicle being marked. DNR conservation officers related that they universally felt the use of marked vehicles very seriously compromised activities such as surveillance for compliance and detection of violations, and many officers reported instances where their presence was obviously noted by the hunter or angler, and violation detection was thwarted. Officers also reported a wide variety of problems illustrated by specific examples, such as difficulties in meeting with persons wishing to relay violation tips. Over 94% of officers reported that they had to modify their behavior to try to apprehend fish and wildlife violators. Some officers worked in pairs to drop an officer off to perform surveillance for instance. However, changes like this had the negative effect of reducing officer effectiveness by tying up two officers instead of one. Also, most (94%) DNR conservation officers indicated that magnetic devices issued by the department designed to “cover up” the agency markings with supervisory approval, were wholly ineffective (Annex D).

Available research. Some perceived benefits of marked police vehicles include better public relations, deterrence and warning visibility to reduce accidents (IACP, 1996). Clearly there are just as many arguments for unmarked police vehicles as there are for them. One benefit of unmarked vehicles includes the ability to observe behavior of those criminals otherwise predisposed to commit violations were it not for the presence of visibly marked police vehicles. Unmarked vehicles can increase the level of police presence by making people think that, “anywhere, anytime, any car could be a police vehicle (Bevin, 2008, A1).”
In fact, quantitative scientific studies of the actual value of marked police vehicles are lacking, and most discussions like the one above are simply subjective in nature. However, two scientific studies conducted by Illinois State Police and Monash University (Canada) revealed that:

- Minimally marked (semi-marked) police vehicles statistically had fewer, and less severe accidents than marked units on comparable patrols (Stoica, 1983).
- Semi-marked or unmarked vehicles were markedly more productive in terms of detecting and apprehending violators (Stoica, 1983).
- That unmarked (covert) vehicles were more effective than marked vehicles using radar for speeding offenses (Diamantopoulou and Cameron, 2002).

Law enforcement agencies across the United States have utilized a combination of marked and unmarked police vehicle strategies to combat crime (Rhodes, 2005; U. S. Dept. of Justice, 2004). Even traffic enforcement agencies have seen the value of unmarked vehicles to combat traffic violators’ behaviors such as aggressive driving (Grey, 1979). The National Highway Traffic Safety Administration (NHTSA) has stated that, “Use of unmarked, non-traditional vehicles for aggressive driver enforcement in the community will contribute to public awareness by increasing motorist uncertainty about which vehicles are used for enforcement (NHTSA, 1998).”

Many natural resources law enforcement administrators contend that limited numbers of conservation officers must patrol and protect the natural resources of geographical districts of immense area and that it would be difficult for each officer to be seen often enough in marked vehicle to provide the impression of omnipresence. Consequently, any attempt to create deterrence to violations by virtue of using only marked vehicles would likely fail. Actual deterrence may be best provided by unmarked vehicles, relying on the concept that hunters and anglers will suspect a conservation officer in every unknown vehicle that they see, and many report seeing the officer’s vehicle in many different places at the same time (Chapman & Hartman, 1962).

Robert H. Giles (1978), professor emeritus of wildlife management from Virginia Tech, stated, “There are no studies in wildlife management of whether the agent’s presence truly deters law violations” (p. 364). He lists unmarked vehicles as a component of a wildlife law enforcement strategy (Giles, 2000). Detection and deterrence of wildlife violations is likened to military search strategies, especially those of the navy, searching for an enemy ship in a vast part of an ocean (R. H. Giles, personal communication, January 29, 2008). Other studies verify that officer presence was not a deterrent to natural resources violations (Walker, 2007) and that unmarked vehicle patrols detected angling violations at a higher rate than when using marked vehicle deterrent patrol (Mikel, 1981). Although a well-marked vehicle may command more respect
than unmarked vehicles for fish and wildlife law enforcement, it also aids the lawless element. Punitive measures and the use of unmarked vehicles to deal more effectively with serious violations become necessary (Sigler, 1956).

Considering these facts, survey testimony and available research, three possible strategies or alternatives are available then to consider:

- Maintain the status quo consisting of all vehicles marked
- Operate a mixed fleet of both marked and unmarked vehicles
- Return to a fleet of unmarked vehicles

The disadvantages of the first alternative are that the operation of all marked vehicles has been clearly shown to negatively impact violator apprehension rates and the ability of officers to perform fish and wildlife law enforcement. Most state and federal natural resources law enforcement agencies operate mixed fleets of marked and unmarked vehicles. However, most agency administrators also indicated their officers experienced difficulties with marked vehicles. Likewise, the administrators also indicated a preference towards using unmarked vehicles for fish and wildlife law enforcement. There is a clear lack of quantitative scientific literature available to show that any level of marked law enforcement vehicles provides a true crime deterrent value—especially in the specialized field of fish and wildlife law enforcement.

**Conclusion**

In conclusion, there is a documented negative impact from marked vehicles in the apprehension of violators of certain opportunistic fish and wildlife crimes in the state. DNR conservation officers overwhelmingly emphasized that marked vehicles make the job of protecting fish and wildlife resources through effective law enforcement difficult. Other state and federal natural resources agencies also reported issues or problems with marked vehicles and the enforcement of fish and wildlife laws, and most agencies utilized some percentage unmarked vehicles. There is no basis based on available research to conclude that the marked vehicles provide any deterrence, nor any sense of agency presence greater than that provided already by the greater number of other DNR division’s marked vehicles. This is especially so when thoughtful analysis is given to the large spatial differentiation of the agency and the effect of that dispersal on visibility. Since all DNR conservation officers, including specialty officers and supervisors are sworn to enforce fish and wildlife laws, and there are administrative needs for unmarked vehicles (e.g., internal affairs investigations) it is most logical to return to the practice of using unmarked vehicles. The operation of unmarked vehicles by DNR conservation officers will enable increased violator apprehensions to better supplement the goals of fish and wildlife management in the state.
**Recommendation**

It is recommended that the DNR return to the practice of utilizing an unmarked vehicle fleet for DNR conservation officers. The following action items are necessary to implement this change (Annex E):

- The director of the division of law enforcement will need to meet with the DNR assistant commissioner for operations for approval to implement the recommendation (Annex E).
- No current formal policy or directive changes necessary.
- Issuance of quality, heavy magnetic agency identifiers for all vehicles to use under certain circumstances where higher visibility is desirable, such as special events.

**Approvals**

__________________________  □ Approved    □ Not Approved
Director-Division of Enforcement
Works Cited


Minnesota Dept. of Natural Resources (DNR) (2007). *Division of enforcement officer directory* St. Paul MN: State of Minnesota


Schultz, B. V., Jacobson, S., Provost T., MN DNR conservation officers. Personal communication, January 10-12, 2008


### Violation: Overlimit (Big Game)

- **1989-1994**: [Graph Details]
- **2002-2007**: [Graph Details]

### Violation: Overlimit (Small Game)

- **1989-1994**: [Graph Details]
- **2002-2007**: [Graph Details]

### Violation: Overlimit (Waterfowl)

- **1989-1994**: [Graph Details]
- **2002-2007**: [Graph Details]
169.98 POLICE, PATROL, OR SECURITY GUARD VEHICLE.

Subdivision 1. Colors and markings. (a) Except as provided in subdivisions 2 and 2a, all motor vehicles which are primarily used in the enforcement of highway traffic rules by the State Patrol or for general uniform patrol assignment by any municipal police department or other law enforcement agency, except conservation officers, shall have uniform colors and markings as provided in this subdivision. Motor vehicles of:

(1) municipal police departments, including the University of Minnesota Police Department and park police units, shall be predominantly blue, brown, green, black, or white;

(2) the State Patrol shall be predominantly maroon; and

(3) the county sheriff's office shall be predominantly brown or white.

(b) The identity of the governmental unit operating the vehicle shall be displayed on both front door panels and on the rear of the vehicle. The identity may be in the form of a shield or emblem, or may be the word "police," "sheriff," or the words "State Patrol" or "conservation officer," as appropriate, with letters not less than 2-1/2 inches high, one-inch wide and of a three-eighths inch brush stroke. The identity shall be of a color contrasting with the background color so that the motor vehicle is easily identifiable as belonging to a specific type of law enforcement agency. Each vehicle shall be marked with its own identifying number on the rear of the vehicle. The number shall be printed in the same size and color required pursuant to this subdivision for identifying words which may be displayed on the vehicle.

Subd. 1a. Vehicle stop authority. Only a person who is licensed as a peace officer or part-time peace officer under sections 626.84 to 626.863 may use a motor vehicle governed by subdivision 1 to stop a vehicle as defined in section 169.01, subdivision 2. In addition, a hazardous materials specialist employed by the Department of Transportation may, in the course of responding to an emergency, use a motor vehicle governed by subdivision 1 to stop a vehicle as defined in section 169.01, subdivision 2.

Subd. 1b. Operation of marked vehicle. Except as otherwise permitted under sections 221.221 and 299D.06, a motor vehicle governed by subdivision 1 may only be operated by a person licensed as a peace officer or part-time peace officer under sections 626.84 to 626.863. This prohibition does not apply to the following:

(1) a marked vehicle that is operated for maintenance purposes only;

(2) a marked vehicle that is operated during a skills course approved by the Peace Officer Standards and Training Board;

(3) a marked vehicle that is operated to transport prisoners or equipment; or

(4) a marked vehicle that is operated by a reserve officer providing supplementary assistance at the direction of the chief law enforcement officer or the officer's designee, when a licensed peace officer as defined in section 626.84, subdivision 1, paragraph (c), who is employed by that political subdivision, is on duty within the political subdivision.

Subd. 2. Specially marked patrol vehicle. The commissioner of public safety may authorize the use of specially marked State Patrol vehicles, that have only a marking composed of a shield on the right door with the words inscribed thereon "Minnesota State Patrol" for primary use in the enforcement of highway traffic rules when in the judgment of the commissioner of public safety the use of specially marked State Patrol vehicles will contribute to the safety of the traveling public. The number of such specially marked State Patrol vehicles used in the enforcement of highway traffic rules shall not exceed ten percent of the total number of State
Patrol vehicles used in traffic law enforcement. All specially marked State Patrol vehicles shall be operated by uniformed members of the State Patrol and so equipped and operated as to clearly indicate to the driver of a car which is signaled to stop that the specially marked State Patrol vehicle is being operated by the State Patrol.

Subd. 2a. **Specially marked police or sheriff vehicle.** The chief of police of a home rule or statutory city, and the sheriff of a county, may authorize within the jurisdiction the use of specially marked police or sheriff's vehicles for primary use in the enforcement of highway traffic laws and ordinances when in the judgment of the chief of police or sheriff the use of specially marked vehicles will contribute to the safety of the traveling public. A specially marked vehicle is a vehicle that is marked only with the shield of the city or county and the name of the proper authority on the right front door of the vehicle. The number of specially marked vehicles owned by a police department of a city of the first class may not exceed ten percent of the total number of vehicles used by that police department in traffic law enforcement, and a city or county that uses fewer than 11 vehicles in traffic law enforcement may not own more than one specially marked vehicle. A specially marked vehicle may be operated only by a uniformed officer and must be equipped and operated to indicate clearly to the driver of a vehicle signaled to stop that the specially marked vehicle is being operated by a police department or sheriff's office.

Subd. 3. **Security guard vehicle.** (a) All motor vehicles which are used by security guards in the course of their employment may have any color other than those specified in subdivision 1 for law enforcement vehicles. The identity of the security service shall be displayed on the motor vehicle as required for law enforcement vehicles. (b) Notwithstanding subdivision 1, paragraph (a), clause (1), a security guard may continue to use a motor vehicle that is predominantly black in the course of the guard's employment if the vehicle was being used in this manner before August 1, 2002.

Subd. 4. **Effective date.** Subdivisions 1 to 3 shall apply to those motor vehicles purchased subsequent to January 1, 1981.

Subd. 5. **Vehicle security barrier; exemption.** Marked State Patrol vehicles are exempt from compliance with any rule requiring a security barrier between the front and rear seats of the vehicle. A State Patrol vehicle shall be equipped with a security barrier at the option of the officer assigned the vehicle.

**History:** 1959 c 554 s 1,2; 1961 c 458 s 1; 1969 c 1129 art 1 s 4; 1971 c 491 s 36; 1980 c 578 s 10; 1981 c 37 s 2; 1985 c 248 s 70; 1986 c 444; 1987 c 162 s 1,2; 1987 c 334 s 1,2; 1989 c 17 s 1; 1993 c 326 art 7 s 3; 2002 c 267 s 1-4
Agency Name:

1. Does your agency utilize unmarked vehicles for fish and wildlife law enforcement? (An unmarked vehicle is a law enforcement vehicle equipped with emergency equipment but not marked with distinctive agency emblems.)
   
   Yes [ ] No [ ]

   Comments

2. What percentage of your agency’s law enforcement vehicles is unmarked?
   
   Comments

3. If your agency uses unmarked vehicles, does your agency have removable (e.g., magnetic) identifiers for temporary use?
   
   Yes [ ] No [ ]

   Comments

4. If your agency uses unmarked vehicles, who is the primary user?
   
   Title

   Comments

5. If your agency uses only marked vehicles, would you use unmarked vehicles, or any combination thereof, if the agency were allowed to do so?
   
   Yes [ ] No [ ]

   Comments

6. Have your agency’s law enforcement officers ever reported any issues or problems with conducting fish & wildlife violation investigations or performing surveillances using marked vehicles?
   
   Yes [ ] No [ ]

   Comments
Figure C-1. Percentage of natural resource law enforcement agencies using marked, unmarked or combinations of marked and unmarked vehicles.

Figure C-2. Percentage of natural resource law enforcement agencies reporting issues or problems associated with conducting fish and wildlife investigations or performing surveillances using marked vehicles.
CONSERVATION OFFICER SURVEY OF MARKED AND UNMARKED VEHICLES FOR FISH & WILDLIFE LAW ENFORCEMENT

INSTRUCTIONS—Use the TAB key or your cursor to move to each field. Please answer all questions. When complete, please save the document and e-mail the completed form directly to 1LT Tim Knellwolf, MN DNR-Division of Law Enforcement. Please reply by 31-JAN-2008.

Thank you very much in advance for your help and cooperation!

1. Since employed as a state conservation officer, have you ever utilized unmarked vehicles for fish & wildlife law enforcement? Yes □ No □
   
   Comments

2. While performing fish & wildlife law enforcement duties, have you ever experienced any degree of difficulty that you reasonably believe was attributed to your vehicle being marked? If “Yes”, please give examples of operational situations.
   Yes □ No □
   
   Comments

3. Have you had to change your method of field operation (e.g., approach, surveillance, parking) to accommodate the fact that your vehicle was marked compared to when you operated an unmarked vehicle? If “Yes”, please give examples.
   Yes □ No □
   
   Comments

4. Has the use of issued magnetic “cover-ups” been a satisfactory solution to cover vehicle markings when involved in activities related to field identification of suspects, surveillance activities, confidential interviews or apprehension of violators?
   Yes □ No □
   
   Comments
Annex D—Conservation Officer Survey Results (Results)

Figure D-1. Percentage of conservation officers performing fish & wildlife law enforcement duties who have experienced any degree of difficulty that was reasonably believed to being attributed to the vehicle being marked.

![Figure D-1](image)

Figure D-2. Percentage of conservation officers that have had to change their method of field operation (e.g., approach, surveillance, parking) to accommodate the fact that their vehicle was marked.

![Figure D-2](image)

Figure D-3. Percentage of conservation officers answering whether the use of issued magnetic “cover-ups” has been a satisfactory solution to cover vehicle markings when involved in activities related to field identification of suspects, surveillance activities, confidential interviews, or apprehension of violators.

![Figure D-3](image)
MEMO
Division of Enforcement

Date: 06 February 2008
To: Assistant DNR Commissioner for Operations
From: Director of Enforcement
Telephone: 

Subject: USE OF UNMARKED VEHICLES BY DNR CONSERVATION OFFICERS

I would like to share with you a study regarding the impacts of marked vehicles on fish and wildlife protection efforts (see Attachment). After objective analysis of the use of marked vehicles for the past five years, it is my recommendation that we employ unmarked vehicles again throughout the division.

To return to the Division of Law Enforcement's past practice of using only unmarked vehicles, the following implementation steps will be required:

- Payment of 6.5% sales tax for new vehicle purchases (Estimated cost of 42 vehicles per year=$95,600/year)
- Purchase of civilian license plates and registration fees for 210 law enforcement vehicles (Estimated cost=$2,730/year)
- Purchase of quality, heavy-duty magnetic temporary Department emblems for vehicle doors for occasional high-visibility needs (e.g., special events) (Estimated cost=$7,000)

There will be no formal Division or Department policy changes necessary. The Bureau of Management Resources and regional shops will also be informed.

We are committed to serve the people of by protecting natural resources, the environment and public safety through quality education and law enforcement.