Computerizing Reporting Systems in Wildlife Law Enforcement

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Abstract: As the computer age dawns on wildlife law enforcement divisions across Southeastern United States, it has become all too clear that you *will* get your data computerized eventually. If you are slow to respond, you will be victim of another agency's idea of what your informational needs are. Green-lined paper will flow with little control and you will drown in a sea of information. The key element to taming the computer is to have control of the source document, the problem, and the report. Large portions of wildlife agency budgets are devoted to this pursuit and law enforcement departmental heads are obligated to use the funds in the most efficient and economical manner. In this computerized age, we can do no less than utilize to the maximum extent possible these machines that are designed to provide useful information.

As western European culture was breaking out of the bonds of the Dark Ages and the new exploring age of the Renaissance began to flourish, there existed a small group of men who could rival kings for power and vanquish kingdoms at will. Fleets of ships and mighty armies survived or died at their hands. These mortal men were the map-makers of the day. Their supreme power to manipulate kings and armies was all vested in one thing they had that no one else had. That thing was information. Information alone gave them the power to plot the courses of events that would shape modern history.

The modern "map makers" are computer programmers with their silicon chips, magnetic tapes, and other electronic marvels that collect and dissemi-

nate data at mind-boggling speed. If wildlife law enforcement is to stay abreast of this information-crazed world, we must avail ourselves to these modern miracles so that we can be in a position to make responsible decisions based on current reliable information so as to direct our organizations effectively and efficiently.

It is not necessarily true that more information is better information, just as growth is not always better than no growth. After all, growth for the mere sake of growth is the definition of cancer.

As we in law enforcement enter the new computer age in wide-eyed wonder at this new power which can analyze, compare, compute, and print everything we know with megabytes to spare, we must stop and remember our initial goal: better information, not necessarily more information.

Citations

All wildlife departments use computers in one way or another either by using in-house terminals or by using multi-use data banks. The prime example is computerized arrest reports. We all started in this area because, in the beginning, the arrest was the ultimate in production and everything was evaluated from this factor (chart 1).[1]

The citation documents not only public contact but an officer's area of activity at a specific time. The social information, name, address, etc., is important when looking for habitual offenders or instances where several warnings by different officers were issued to the same person for the same or similar offense (chart 2). This information is appreciated by the state attorney's office and is well received by the courts when pronouncing sentence. Although the social information is relevant to final dispositions and habitual offenders, it has little meaning when compiling statistical data. Documenting county of violation, offense, species, and management areas do have statistical value when looking into officer workload, officer position allocation in special areas and future equipment needs (chart 3).

Is there any supervisor who doesn't squander his time reviewing columns of numbers on itinerary reports and says to himself, "If only I could make these numbers make some sense?" Other priorities soon beckon and he is forced to scribble his initials somewhere and the information that could have been his is passed on with nothing asked and nothing learned. Having made the completed trip up the supervisory line, the report is filed away in neat little boxes, in neat little stacks, along neat little rows, in a room with a door that locks.

[1] Charts (examples of computer printout) are available from the authors on request. Charts were not included in this publication because the size differential between computer printout and this proceedings would require reduction that would render the charts illegible.

Itinerary Reports

All this information flowing up the chain with fewer and fewer people at each level to review it or gain any knowledge from it could not last much longer in our area. It was decided that, first of all, as much information as possible should be turned around and sent back to the field in a format that could be easily understood. The logical place to start was with the document which had the largest amount of unused information—the itinerary report.

First the itinerary was coordinated to coincide with 2 biweekly pay periods. It was called the 28-day itinerary and it was to double as a salary voucher and leave record (chart 4). This was to reduce the work load in our personnel office. Columns of useless information on the old form were deleted and only the necessary facts of the day were entered.

Numbers are only numbers but a picture is worth a thousand numbers so a simple bar graph was selected to show an officer's in-service and out-of-service time at a glance. Since each officer is delegated the responsibility of choosing the best 8 hours out of each 24-hour workday, this simple graph would clearly indicate how well he was handling this responsibility (chart 5).

Detailed information for each day's patrol activities were summarized and analyzed to show each officer how efficient his overall work had been for the past 28 days. As this information flows back down the chain of command, new perceptions of individual performance are formed. Questions are asked, solutions sought, and answers found.

Multiple applications of information are a computer's strongest suit. Summarizing individual itinerary reports allows the compiling of regional quarterly, semi-annual, and division annual reports with no additional effort on staff or field supervisory personnel (chart 6).

Management areas that are patrolled by wildlife officers are summarized and the hours and miles are itemized by the officer and totaled for submission through our fiscal department for Pittman-Robertson monies. In this function, the itinerary report has become an invoice (charts 7 and 8).

Vehicle Operational Costs

The next fertile field of information to be plowed under and replanted by the computer was vehicle equipment and operational cost. The system, as it existed, required each officer to complete 2 separate reports per vehicle or piece of motorized equipment (charts 9 and 10). From these reports, 3 computerized summaries duplicated needless information, buried meaningful information, and left out important and relevant information. It could take any 1 of 3 cross-referenced indexing reports to locate the specific location code and equipment number for the piece of equipment you were interested in

(charts 11, 12, and 13). Needless to say, all too soon one's interest would wane and the desire to delve further into the mundane world of operational cost was lost. Any attempt even to try to analyze the information or even to draw any conclusions from it was abandoned.

The simplification of the final report was the key (chart 14). Placing the information also on the itinerary report made the information immediately related to not only a person, but a region as well (chart 5). With only a slight adjustment in the individual itinerary analysis report that is printed by the computer, all motorized equipment operational cost data would appear on the officer's report who was responsible for that piece of equipment. While supervisors were reviewing the officers' time chart to recommend any adjustments, the supervisor could also analyze the operational efficiency of each officer's piece of equipment.

The vehicle operational cost report describes the vehicle being reported by equipment number, make, model, and year of manufacture. It also lists the gallons of fuel purchased during the 28-day period, the cost of the fuel, the average cost/gallon of fuel, quarts of oil, cost of oil, average cost/quart of oil, any repair costs, ending miles, miles driven during the 28-day period, cost/mile to operate each piece of equipment and the miles/gallon (chart 5).

While it is recognized that in a 28-day report period, the cost/mile and miles/gallon would vary widely depending on fill-ups at the beginning and ending of the period, information collected over a period of 6 months or 1 year could give a fairly accurate report of how efficiently the piece of motorized equipment was being operated.

All officers are required to submit their itinerary reports to the regional offices no later than 5 days following the end of the reporting period. Within 10 days, the information is received, processed, and on its way back to the individual officer through the chain of command. The unique thing about the new reverse flow of information is that it makes our supervisors become better supervisors. The feedback is rapid enough to still be relevant. The captain discusses areas of concern with the lieutenants. The lieutenants discuss with their sergeants special areas of need and the sergeants show the individual officers how the patrol efforts can be improved.

The information that travels this complete circle from originator to director and back to originator induces each officer to improve his individual performance. With better planning, each officer can reduce his miles driven each day which reduces total operating cost. Management areas can be patrolled more effectively by supervisors reducing duplicating patrol efforts. Better planning based on better information at all levels ensures that officers are seen in the right places at the right times, increasing our public contact through higher visibility.

Conclusions

While computers are very sophisticated in their workings, their greatest benefit to wildlife law enforcement is to make the complicated simple and the confusing understandable. With a conscious effort toward simplicity, the goal of better information for better decisions through computing can be yours.

Information Education and Hunter Education Sessions

Editor's Note:

As in previous conferences, the 37th Annual Conference of the Southeastern Association of Fish and Wildlife Agencies held concurrent sessions on Conservation Information and Education and Hunter Safety; however, this year these sessions were of the workshop format designed to encourage audience participation and discussion. No manuscripts were intended for publication.