

MARYLAND'S COOPERATIVE WILDLIFE MANAGEMENT AREAS: PUBLIC HUNTING ON PRIVATE LANDS

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Abstract: Maryland's Cooperative Wildlife Management Area Program provides public hunting on selected private lands surrounding the Baltimore metropolitan area. An agreement is signed by the landowner permitting the Department of Natural Resources, Wildlife Administration to manage the wildlife resource on his property. The Wildlife Administration, in return, is responsible for posting the area, establishing access points, repairing hunter caused property damage and controlling hunter use by issuing daily permits. A total of 2,899 ha (30 units) were open during the 1979-1980 hunting season. One thousand seventy nine different hunters utilized 56.7 percent of the 7,523 permits available during the 1979-'80 hunting season. Sixty-seven percent of hunters using the program were from the Baltimore area.

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The continual loss of wildlife habitat to the development of agricultural and forest land surrounding urban areas, and the posting of private property against hunting, has caused State wildlife agencies to find it increasingly difficult to provide recreation for the hunter living in these areas of high population. Even when hunting is available, hunter-density must be controlled, thus limiting recreational opportunities (Applegate 1978).

One such attempt at providing recreation for the urban hunter is being carried out by the Maryland Department of Natural Resources, Wildlife Administration through its Cooperative Wildlife Management Area (CWMA) Program, which serves both private landowners and hunters in the vicinity of the Baltimore City urban complex.

The authors wish to acknowledge Charles J. Green, District Manager (retired) for his unselfish efforts and rapport with local landowners, making it possible for the CWMA program to become a reality. We would also like to acknowledge Walter O. Cottrell and Albert Bourgeois, District Managers, for keeping the program viable and to Monroe C. Peeden, Jr., Regional Manager, who has been the administrative support for the program. A special acknowledgement to all the technicians and laborers who spent many hours in the field implementing the program. We are also indebted to all who reviewed the manuscript.

BASIS AND DESCRIPTION OF PROGRAM

The Cooperative Wildlife Management Area Program was initiated in 1972 in an attempt to resolve two problems. First, was the demand for a place to hunt, especially by hunters living in the metropolitan areas. This need was especially acute in Carroll and Baltimore counties just north of Baltimore City along the Pennsylvania border (Fig. 1). This area comprises the major portion of the ring-necked pheasant range in the state. Pheasants, having a high trophy value, created a greater hunting demand than other resident upland species.

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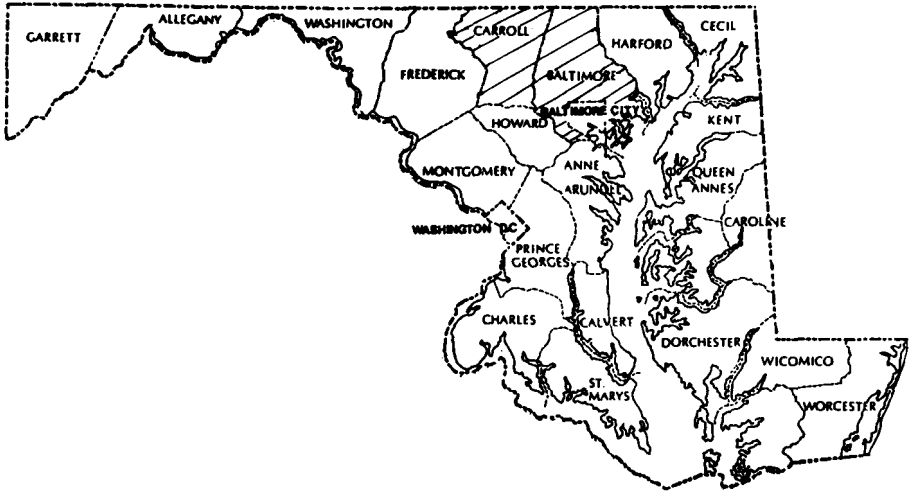


Fig. 1. Location of Carroll and Baltimore counties, Maryland.

The second problem was a direct result of the expanding human population in the metropolitan area and the decreasing huntable acreage. Landowners were finding it increasingly difficult to control hunting on their properties. Cumbersome numbers of hunters were asking permission to hunt in addition to those hunters who did not bother to obtain permission. Landowners were reluctant to prosecute trespassers because of the threat of retaliation, so they looked to the Wildlife Administration for help.

Earlier attempts at encouraging limited public hunting on private lands, by providing landowners with free signs that stated "Hunting By Written Permission Only", had failed. Hunters still found it difficult and time consuming to find a place to hunt and landowners were still being harassed.

The CWMA program consisted of a signed agreement between cooperators and the Wildlife Administration. The Wildlife Administration assumed responsibility for managing the hunting rights on the cooperator's property. Cooperators received no compensation from the State but were provided with a number of services. The boundary of the property was posted with CWMA signs, stating that hunting and trespassing is controlled by the Wildlife Administration. In addition to boundary line signs, "Safety Zone" signs were placed where hunting would be unsafe and "Restricted Area" signs placed in areas where the landowner wanted to restrict access. Parking areas were selected by the landowner and an all-weather parking facility established, posted as such, and provided with a trash receptacle. Parking lots were routinely policed and trash collected. Damage to fences by hunters was repaired. Department of Natural Resources Police Officers

routinely patrolled the areas and had the authority to issue citations for trespass as well as game violations. In addition to routine patrol the officers responded immediately to complaints from cooperators. Under the agreement, the cooperator was absolved of responsibility for prosecution and court appearances.

All hunting on CWMA's was managed through a limited daily permit system controlled by the Wildlife Administration. Public hunting was permitted 3 days a week; i.e., Monday, Wednesday, Friday or Tuesday, Thursday, Saturday (no Sunday hunting in Maryland). The alternate days were then open to the cooperator and/or his guests. Anyone hunting a CWMA was required to have a dated permit card in his possession, signed either by a representative of the Wildlife Administration or the cooperator (Fig. 2). Cooperators could issue permits to anyone for the alternate days as long as the regulations for CWMA's were followed. The number of daily permits issued for each CWMA varied according to quality of cover, game in season, and number of huntable acres. Generally a hunter density of 1 hunter/20 ha was maintained.

Cooperative Wildlife Management Program

Hunting Area _____ Issued by _____

Name _____ Date _____

Town _____ County _____ State _____

Hunting Lic. No. _____ Vehicle Tag No. _____

THIS PERMIT MUST BE DISPLAYED IN YOUR BACK TAG

Rules and Regulations for Cooperative Wildlife Management Areas:

- 1) Permit is valid for specified date only. Each hunter must have a permit, valid hunting license, Public Land Stamp, and other appropriate stamps in possession while hunting.
- 2) Park in designated parking areas only.
- 3) Please refrain from: Hunting in safety zones; fires; trespassing in restricted areas; target shooting.

HUNTERS your help is requested in evaluating the game populations on Cooperative Wildlife Management Areas. Please take a minute to carefully fill in the questions below and deposit in the designated boxes at the parking lots or return to the permit office.

No. Hours Hunted _____ No. Hunters in Party _____

Dogs Used: _____ Yes _____ No Hunting With: _____ Bow _____ Gun _____

Check	No.	No.	Check	No.	No.
Animal Hunted	Seen	Killed	Animal Hunted	Seen	Killed
Deer <input type="checkbox"/>			Pheasants <input type="checkbox"/>		
Squirrels <input type="checkbox"/>			Quail <input type="checkbox"/>		
Rabbits <input type="checkbox"/>			Dove <input type="checkbox"/>		
Woodcock <input type="checkbox"/>			Other <input type="checkbox"/>		

COMMENTS _____

Fig. 2. Daily permit card (top) issued to hunters on Maryland's Cooperative Wildlife Management Areas, and the hunter questionnaire (bottom) on reverse side of the permit card.

To obtain a permit from the Wildlife Administration the hunter or his representative (wife, friend, etc.) presented a valid hunting license to the clerk at the District Work Center's permit office in Western Baltimore County. No more than two licenses could be presented by one person. Permit cards were filled out with the hunter's name, license number, vehicle tag number, date and area to be hunted. They were then signed by a representative of the Wildlife Administration. Attention was drawn to regulations printed on the card. A dated reference log of the above information was also recorded. All permits were issued on a first-come first-served basis and were free of charge. The permits could be obtained up to 1 week in advance of the desired hunting date, with a limit of 2 daily permits issued to each hunting license holder during any one day.

A large topographic map with CWMA locations denoted by numbers, with a legend giving name, acreage, no. permits/day, days of week open and game species huntable on each area, was displayed at the permit office. This aided in selecting a CWMA and determining the approximate location and driving time. Maps of the selected individual CWMA were supplied to hunters. Maps showed access routes and location of Safety Zones, Restricted Areas and parking lots.

Hunters were requested to fill out a questionnaire (Fig. 2) on the reverse side of the permit after the hunt and place the card in the permit box provided at the parking lot. Boxes were checked regularly by Wildlife personnel and the cards retained for informational and reporting purposes.

A list of vehicle tag numbers of each CWMA was prepared daily during the hunting season and copies distributed to Department of Natural Resources Police and Wildlife field personnel. This facilitated law enforcement efforts by allowing tag numbers of vehicles parked in designated areas to be checked quickly against daily lists during routine patrol. If an inconsistent tag number was observed a concerted effort was then made to contact the hunters to check for any illegality.

Most CWMA's contained a number of habitat types which provided a variety of game species. Upland game, especially ring-necked pheasant and cottontail rabbit, were the most abundant and had the highest hunter interest. Squirrel hunting was permitted on properties with adequate woodlots and deer hunting with bow and/or gun occurred on CWMA's only where the cooperator allowed it.

Species huntable on each CWMA were determined jointly by the cooperator and the Wildlife Administration. Some cooperators left this decision entirely to the Administration's professional staff while others made specific requests such as NO DEER HUNTING.

Meetings between Wildlife Administration staff and cooperators were held each August to discuss upcoming hunting season dates, species availability and projected crop harvest and planting dates, in order to coordinate public hunting efforts with agriculture activities. As the season progressed, schedules were adjusted as needed.

CWMA's under agreement varied in size from 16 to 231 ha. In some cases adjacent property owners entered into agreements individually but their lands were administered as one unit. This allowed smaller property owners the advantages of the program in addition to simplifying the logistics of administration.

Since 1972 the total acreage in the program had fluctuated from the initial 2514 ha to a low of 1,591 ha in 1974 and 1975, and increased to 1937 ha in 1978. In 1979 the program was expanded to 2,899 ha (Table 1). Most of the loss in acreage in the program resulted from agriculture land being developed for residential use. Some farms were also eliminated because of marginal use by hunters or poor habitat.

Prior to 1978, efforts to expand the program had been limited. Most properties added to the program were by landowners who heard about the program from their neighbors. In 1978, after reviewing the acceptance of the program and evaluating the other options of

Table 1. Size (ha), number of available permits, and percentage utilization for the Cooperative Wildlife Management Area Program, in Baltimore and Carroll Counties, Maryland for the period 1972-1980.

Hunting season	Hectares	Permits available	Permits issued	Percent utilization
1972-73	2514	3934	1448	36.8
1973-74	2219	5940	1784	30.0
1974-75	1591	2920	1477	50.6
1975-76	1591	2712	1372	50.6
1976-77	1975	2913	1409	48.4
1977-78	1830	3973	1886	47.5
1978-79	1937	3455	2195	63.5
1979-80	2899	5584	2997	56.7

increasing hunting opportunities in metropolitan areas, a decision was made to expand the program by at least 810 ha for the coming year. In March of 1979 the Wildlife Administration hosted a game dinner as a gesture of thanks to participating cooperators, and invited many other potential cooperators to learn more about the program. As a result of this effort 9 (nine) new properties encompassing 961.5 ha were added.

PROGRAM RESULTS

There has been a 48 percent average annual use of available permits since the program was established (Table 1). This compared to an average annual use of 21 percent for Millington Wildlife Management Area on the Eastern Shore of Maryland and 28 percent for Indian Springs Wildlife Management Area in Western Maryland (Maryland Wildlife Administration unpublished reports). Both of these wildlife management areas required hunters to obtain free daily permits before hunting on the areas.

Ring-necked pheasant was the most popular game species present on CWMA's. Baltimore and Carroll counties have traditionally high pheasant populations and are reputed to be the most popular counties in the state for pheasant hunting. Since most state owned public hunting lands in Maryland were located in areas devoid of pheasants, the CWMA program played an important role in providing opportunities for a form of hunting recreation not available elsewhere.

The resident status of hunters utilizing the program tended to substantiate the validity of expansion and clarify the geographical limits of hunter interest. Sixty-seven percent of the individuals who hunted CWMA's in 1979-80 were from the Baltimore area, with 47.9 percent from Baltimore City and 19.1 percent from Baltimore county (Table 2). Twenty percent were residents of adjacent Carroll and Harford counties and 11.5 percent were from the highly suburban counties of Howard, Montgomery, Prince George's and Anne Arundel. Hunters from all over the state as well as from the adjoining States of Pennsylvania, Virginia and West Virginia utilized the program (Table 2).

The quality of the hunting experience provided to the hunting public increases with the number of species available for them to hunt. The Wildlife Administration made every effort to open as many CWMA's as early in the hunting season as possible, and to offer the greatest variety of hunting opportunities within the limits of the habitat and the cooperator's mandates. The entire 2,899 ha were open to dove, pheasant, rabbit, and quail during some period of the hunting season (Table 3). Squirrel hunting was limited by

Table 2. Resident status of hunters using Maryland's Cooperative Wildlife Management Areas as determined from permits returned during 1979-1980 season.

Resident status	Permits returned	Percent of total
Maryland		
Baltimore City	863	47.9
Baltimore County	344	19.1
Carroll County	295	16.4
Anne Arundel County	148	8.2
Harford County	64	3.6
Montgomery County	28	1.6
Howard County	16	0.9
Prince George's County	14	0.8
Cecil County	7	0.4
Garrett County	3	0.2
Kent County	3	0.2
Washington County	2	0.1
Queen Anne's County	2	0.1
Frederick County	1	0.1
Wicomico County	1	0.1
Pennsylvania	10	0.5
Virginia	1	0.1
West Virginia	1	0.1

Table 3. Number of Cooperative Wildlife Management Areas in Baltimore and Carroll Counties, Maryland open to hunting and total hectares by game species during the 1979-1980 hunting season.

Species	Number of areas open	Total hectares
Mourning Dove	30	2899
Ring-necked Pheasant	30	2899
Bobwhite Quail	30	2899
Cottontail Rabbit	30	2899
Gray Squirrel	18	1824
Whitetail Deer (Bow)	11	1041
Whitetail Deer (Gun)	9	964

habitat availability but the severe restrictions on deer hunting (only 11 CWMA's open for archery and 9 for firearms) was the result of cooperator mandates. All areas closed to firearms deer hunting were also closed to all other public hunting during the deer season.

The legal agreement between cooperators and the Wildlife Administration contained no provisions for the application of prescribed wildlife management practices to enhance habitat. All harvestable surpluses were a direct result of natural reproduction on properties that, in general, were intensively farmed with little specific consideration given to game production.

Since there were no direct wildlife management practices conducted on CWMA's the only affect the Wildlife Administration could have on game harvest was through the control of hunting pressure. Observations over the past years of operation showed that properties opened T-T-S received a higher percentage utilization than those opened M-W-F. Noting this trend in hunter use the Administration's policy had been to open approximately 30 percent of CWMA acreage M-W-F and the remaining 70 percent T-T-S.

One criticism of the permit issuance procedure is the potential for a relatively small number of local hunters to monopolize the program. Records from the 1979-80 season showed that 1,079 individual hunters were issued permits by the Wildlife Administration. Five hundred and twenty-four (48.6 percent) of these were issued 1 permit and 257 (23.8 percent) were issued 2 permits. Only 146 (16.4 percent) were issued 5 or more permits and 38 (2.5 percent) 10 or more permits. The latter group were mostly older, local hunters, mainly retired, who use CWMA's as their primary recreation during the fall and winter months.

The data collected from the voluntary return of permit questionnaire cards (Fig. 2) provided Wildlife Administration personnel with an idea of the relative abundance and types of game on each area. This enabled permit personnel to advise prospective hunters about hunting potential on individual CWMA's. The data collected was also used to inform the cooperators on the reported success rates on their respective lands. In addition, the data was used in trend analyses of small game populations, comparing reported success rates to known population fluctuations or hunting conditions.

The cost of establishing and administering the CWMA program has varied, depending primarily on the number of additional acres added to the program. In 1979-80 the cost to develop the additional 961.5 ha was \$.94/ha, 25 percent of the total annual cost. The average annual cost for the past three years has been approximately \$1.21/ha.

DISCUSSION

The CWMA program in Baltimore and Carroll counties has answered the immediate need for providing hunting opportunities for the urban hunter and for providing relief to landowners surrounding the metropolitan area. The initial cost per acre of establishing a CWMA was high but certainly more economical than purchasing hunting lands on today's market. Smaller scale CWMA projects than those described in this paper have already been established in two other Maryland counties using the same legal agreement but with frameworks adapted to the local situation. Plans are now being formulated to expand the program in other counties where needed.

Some may feel that the degree of control the Wildlife Administration maintains over hunter access to CWMA's is too rigid to permit a quality hunting experience. This may be true for a more rural setting but the program in Baltimore and Carroll counties has shown that the success of any cooperative effort in an urban area depends primarily on the cooperator's satisfaction. Private landholders join such programs for the services provided. They want and need tight control. They want the powers of permit and law enforcement delegated to a responsible agency, allowing them the freedom to pursue their

agricultural or business activities without interruption. A dissatisfied cooperator means a loss of land and hunting recreation.

Wildlife managers in urban areas cannot continue to judge hunter satisfaction by traditional standards. Most urban residents accept restrictions and controls as a matter of course and have a different concept of space than the rural resident (McDonough and Harris 1977, Peterle and Scott 1977, Shaw et al. 1978). Experience with urban hunters that utilized CWMA's in Baltimore and Carroll counties indicated a large percentage of the participants were satisfied in knowing that they had "space" to hunt, they could "reserve" the space in advance, their competition for that space was "limited" and there was no threat of confrontation with landowners.

It is foreseeable that lands now open for public hunting as CWMA's will be lost eventually by conversion to incompatible land use. The Wildlife Administration has no control over the cooperator's disposition of property and lost acreage can be replaced only through intense efforts on the part of the Wildlife managers.

CWMA's are an interim measure at best, but appreciation for the present program may be summed up by one comment noted on a return permit. The hunter stated, in the space provided, "Thank you very much. God Bless You."

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