

# 2013 MARYLAND STATUS REPORT

Harry Spiker, Maryland Department of Natural Resources, Wildlife & Heritage Service  
1728 King's Run Rd., Oakland, MD 21550. Tel: (301) 334-4255; Fax: (301) 334-6541; E-mail:  
hspiker@dnr.state.md.us

## INTRODUCTION

Historically, black bears were found in all of Maryland's counties. However, as settlers cleared the landscape for agriculture, industry, and timber production throughout the 18<sup>th</sup>, 19<sup>th</sup>, and early 20<sup>th</sup> centuries, most of Maryland's suitable black bear habitat was lost. By the mid-20<sup>th</sup> century, black bears could only be found in the rugged mountainous areas in western Maryland. By the mid 1950s, only a few bears were estimated to remain in the state. In 1953, the black bear hunting season was closed due to concerns of a dwindling bear population. In 1972, the status of black bears was changed from 'forest game animal' to 'endangered species' in Maryland.

As habitat conditions improved with the maturation of second-growth forests, DNR began to receive increased reports of bear sightings and damage. As a result, in 1980, the black bear was moved from the 'endangered' species classification to that of 'nongame species of special concern'. In 1985, the black bear's status was once again changed to that of a 'forest game animal' with a closed hunting season.

Currently, Maryland has a breeding population of black bears in the 4 westernmost counties (Garrett, Allegany, Washington, and Frederick) (Fig. 1), with the highest bear densities found in Garrett and western Allegany counties (approximately 880 mi<sup>2</sup>). Although evidence of a breeding population is confined to the western 4 counties, DNR receives several bear sightings and complaints in central and southern Maryland counties each year.

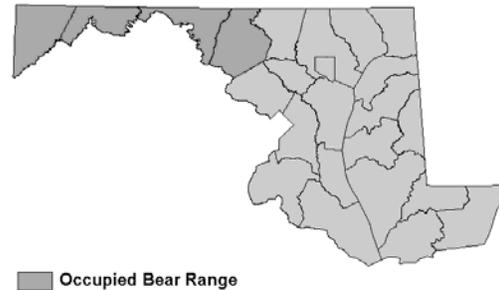


Fig.1. Occupied black bear range in Maryland.

## HARVEST DATA

In October 2004, DNR implemented Maryland's first bear-hunting season in 51 years. Subsequent hunts have been held each year since. A conservative hunt has been designed. Each year, a select number of permits have been awarded via a random selection process. 200 permits were issued in 2004 and 2005. These permits were valid in Garrett and the western portion of Allegany County. In 2006, the hunt area was expanded to include all of Garrett and Allegany counties. In 2006, 2007, and 2008, 220 permits were awarded. The number of permits was increased to 240 in 2009 and was increased again to 260 permits awarded in 2010 and 2011. In 2012, the number of permits was increased again to 340. To be entered in the drawings, applicants must submit a \$15 nonrefundable fee. The number of applications received has ranged from 2,192 to 4,027.

DNR established a harvest quota targeting an approximate 8 to 12% harvest mortality. This was based on the objective of achieving 20 to 25% overall mortality (seasonal +nonseasonal

mortality). Harvest quotas have ranged from 30 to 110 bears between 2004 and 2012. In 2004, hunters harvested 20 bears on the opening day of the six-day season. DNR closed the hunt at the end of the first day to avoid exceeding the harvest quota. In 2005, 40 bears were harvested in 4 days; in 2006, 41 bears were harvested in 2 days of hunting, 51 bears were harvested in 4 days in 2007, 56 bears were harvested in 4 days in 2008, 68 bears were taken in 4 days of hunting in 2009, and 67 bears were taken in 5 hunting days in 2010. In 2011, 65 bears were taken in 4 days of hunting and 92 bears were harvested in 2012 in 5 hunting days. The annual hunter success rate has been 12% for the last 5 hunting seasons.

**POPULATION MANAGEMENT**

Population Estimate - In 2011, DNR conducted western Maryland’s most recent black bear population survey. A DNA-based mark-recapture study was conducted in Garrett, Allegany, Washington, and Frederick counties. Similar studies had been conducted in 2000 and 2005 in Garrett and Allegany counties. 240 grids (sized 12.0 km<sup>2</sup>) were established across the study area. Black bear hair samples were collected and sent to the USGS Aquatic Ecology Laboratory in Kearneysville, WV for genetic analysis. We then used the genetic results to estimate the abundance and density of adult and sub-adult black bears in western Maryland. The following is a summary of those results:

Due to a lack of samples, we were unable to produce reliable black bear population estimates for Washington and Frederick counties. Sample size was expected to be lower in those counties because of the lower bear density. However, bad weather and low quality hair samples further reduced the sample size to a point where any abundance estimate would likely be inaccurate.

The total abundance estimate for adult and sub-adult bears in Garrett and Allegany counties was found to be 701. This represents a 94% increase since the 2005 population estimate of 362 adult and subadult bears. The density for these counties was calculated at 64.5 bears/100 mi<sup>2</sup>

Scent Station Survey - Scent station survey routes are established across known portions of the black bear range in the 4 western counties annually. This survey has been conducted in western Maryland since 1993. Each route consists of 4 or more bait stations located 0.5 miles apart. The survey routes are established in mid to late July and checked 8 days after establishment for black bear activity. Visitation rates are then calculated and used to compare results between years.

A total of 125 bait stations were established on 16 routes across Garrett County in 2012. Of these, 83 were visited by black bears, a 66.4% visitation rate. Four routes were established in Allegany County in 2012.

Bears visited 35 of the 65 bait stations for a 53.8% visitation rate. Bears visited 11 of 29 stations in Washington County, a 37.9% visitation rate. In Frederick County, 1 of the 21 stations was visited by black bears for a 4.8% visitation rate. The visitation rate was 54.2% across the whole survey area (Garrett, Allegany, Washington, and Frederick counties). Since 1993, this survey has revealed the greatest increase in visitation in Garrett County (Fig 2).

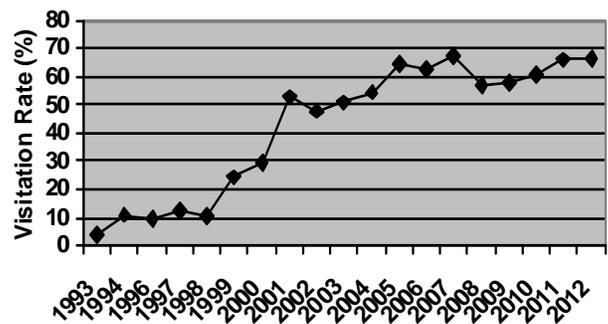


Fig. 2. Garrett County scent station survey results (1993-2012).

Since this long-term survey has been implemented, routes have been added to monitor range expansion across all 4 western counties. Despite the addition of routes into Maryland’s peripheral bear range, visitation rates continue to increase.

Reproductive & Mortality Surveys - DNR has been monitoring black bear reproduction since 1986. In 2013, 8 dens were successfully visited and 28 cubs were tagged for an average production of 3.5 cubs per sow. Since 1986, 338 cubs have been born to 114 sows for a long-term average of 3.0 cubs per sow. Currently, 16 radio-collared sows are being monitored in Maryland. The average annual litter size has ranged between 2.5 and 3.5 cubs per sow.

Black bear mortalities have been monitored since 1981. County and State Road Departments and other public service agencies (local and state police, etc.) have worked cooperatively with DNR to report road-killed bears and other bear mortalities in Maryland. In 1981, there were two known bear mortalities in Maryland. Nonseasonal bear mortalities are now common in western Maryland. In 2012, 69 nonseasonal bear mortalities were reported to DNR. While the long-term trend continues to increase (Fig. 3), nonseasonal mortalities appear to be stabilizing in Maryland’s core bear area (Garrett and western Allegany counties) while they are increasing in other areas.

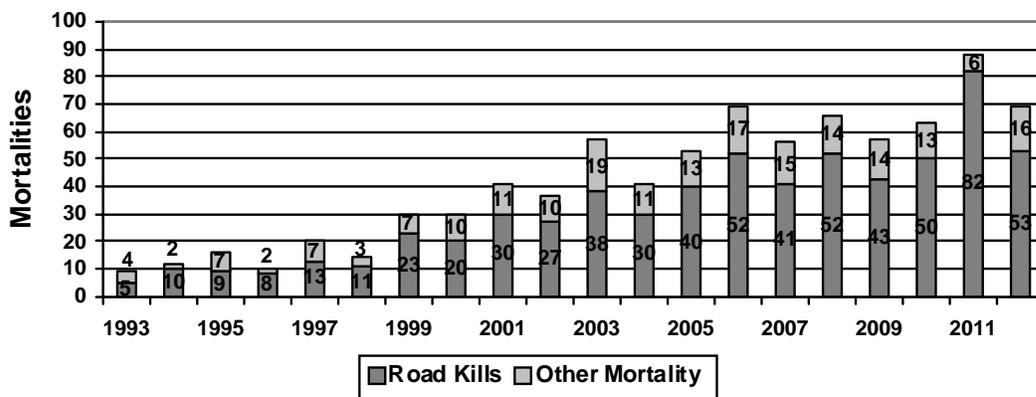


Figure 3. Non-seasonal black bear mortality in Maryland (1993 – 2012).

### CONFLICT MANAGEMENT

In 1996, a formal nuisance response plan was implemented and has been periodically revised as we continue to increase efficiency in handling human-bear conflicts. In 1997 a bear response team, consisting of DNR employees, was created to address after hours human-bear conflicts in Garrett County. Response team personnel are on call 24 hours a day, 7 days a week from April through November. The team can be contacted by DNR Communications Center personnel and local emergency management staff (911 center).

DNR holds a series of annual workshops for local public safety agencies (police & fire departments, 911 emergency management centers, animal control, USDA, etc.). At these workshops, the agencies are given guidance on how to handle nuisance bear calls in accordance with the nuisance response plan.

In 1995, the Maryland Legislature passed legislation requiring DNR to implement a bear damage compensation fund. Money for the fund is raised through the sale of a black bear stamp and other related merchandise. The fund is then used to reimburse farmers for agricultural damage caused by black bears. Since 1996, damage claims have ranged from \$4,500 to \$50,500 each year. Dependent on the value of the claims and the money available in the fund, DNR has reimbursed between 12% and 92% of the claims each year. Stamp sales have generally been poor, never providing enough money to provide 100% compensation.