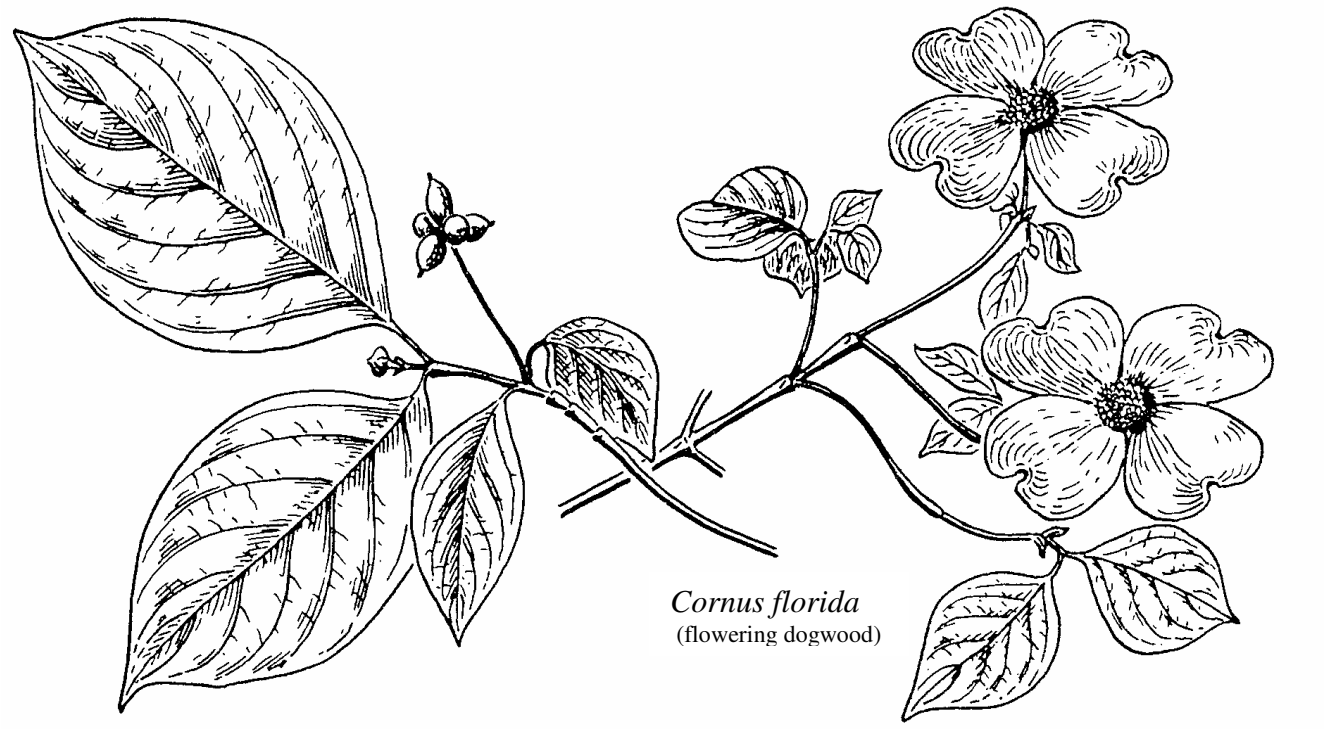
2006 WEST VIRGINIA MAST SURVEY AND HUNTING OUTLOOK



Cornus florida
(flowering dogwood)

WEST VIRGINIA DIVISION
OF NATURAL RESOURCES
WILDLIFE RESOURCES SECTION

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2006 MAST SURVEY

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The Division of Natural Resources (DNR) in cooperation with the Division of Forestry annually surveys the State to determine mast abundance of important trees and shrubs. Information on the quantity of wildlife food is provided to our cooperators, our hunters, and the news media.

Two hundred thirteen locations, covering all regions of West Virginia, were surveyed in 2006. Wildlife managers, foresters, wildlife biologists, conservation officers, retired wildlife managers and biologists, and a few selected other cooperators devoted their time to collect data. The survey would not be possible without the input of the above people. We sincerely thank everyone, and we extend our special thanks to retired persons and sportsmen that gave their time and effort without any monetary compensation. We seriously doubt that we could maintain good coverage of the state without their help and without the extra effort of those that conduct multiple surveys.

Many wildlife species are highly dependent on mast produced by our trees and shrubs. The amount of energy produced from mast is more important for survival of many wildlife species than forage from agriculture crops and herbaceous plants. Seeds and fruits from trees and shrubs are necessary for not only overwinter survival but also to assure wildlife is in good physical condition to reproduce. Because of the importance of mast conditions, biologists and wildlife managers are able to forecast black bear, squirrel, white-tailed deer, wild boar, and wild turkey population changes and harvests.

Compared to last year, the 2006-mast index for all species combined decreased slightly but remained above the 36-year average (Fig. 1). Although all hard mast species produced above the 36-year average there were a few species which declined from the 2005 index.

Scrub, red, black, and scarlet oak (Table 1) were down slightly from last year but the most noticeable decrease was observed for black cherry. Beech crops faired well for the second consecutive year.

Beech and white oaks were noticeably above the 36-year average while walnut and hickory nut crops were holding steady. Because of the major decrease in black cherry, the combined index of beech, hickory, oaks, and black cherry did not increase but it stayed consistent with last year's index (Figure 2).

The index of all oaks combined continued above our 36-year average (Figure 3). For the second consecutive year, all oak mast was good, but the white oak group faired better (Table 2). While black and red oak species showed only a slight increase, scarlet oak increased considerably. We must be cautious when comparing these indices because their values are not equal, i.e., some species are more prevalent than others and their overall impact in mast production can be influenced by their prevalence. Nevertheless, good acorn production is important because they are the most valuable mast species in West Virginia.

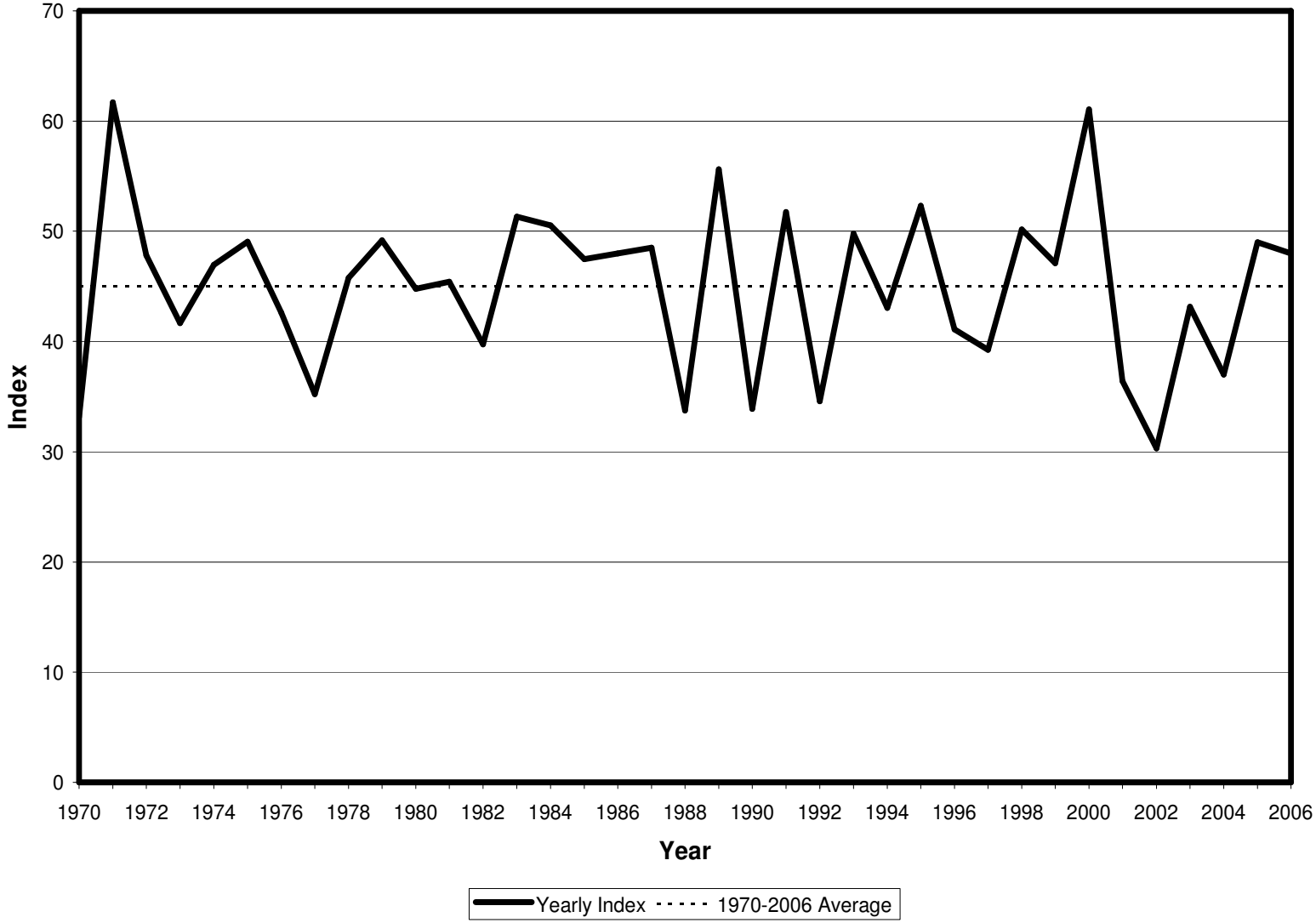

Figure 1. Indices of all mast species combined, 1970-2006.

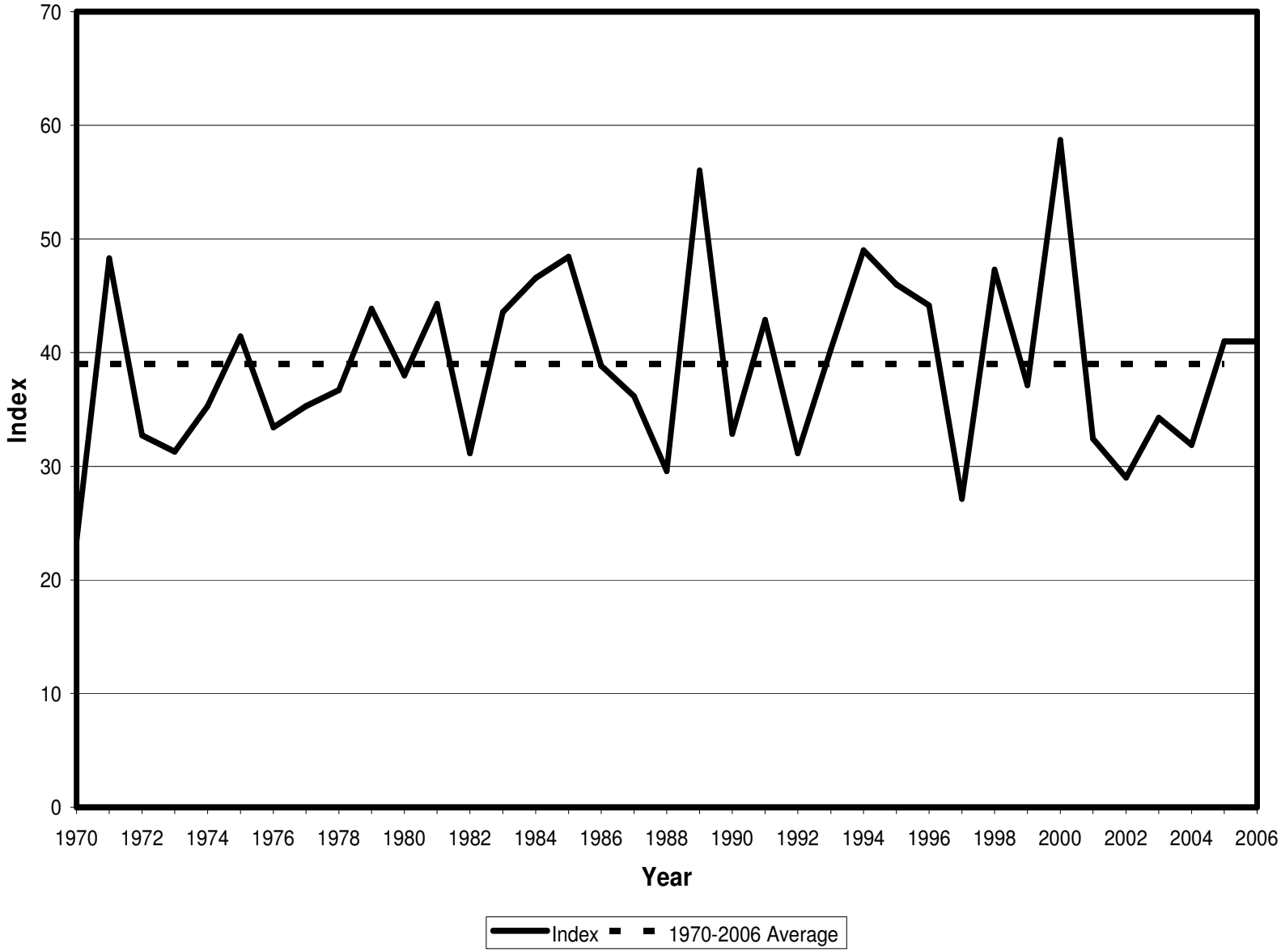

Figure 2. Indices of beech, hickory, oaks, and black cherry, 1970-2006.

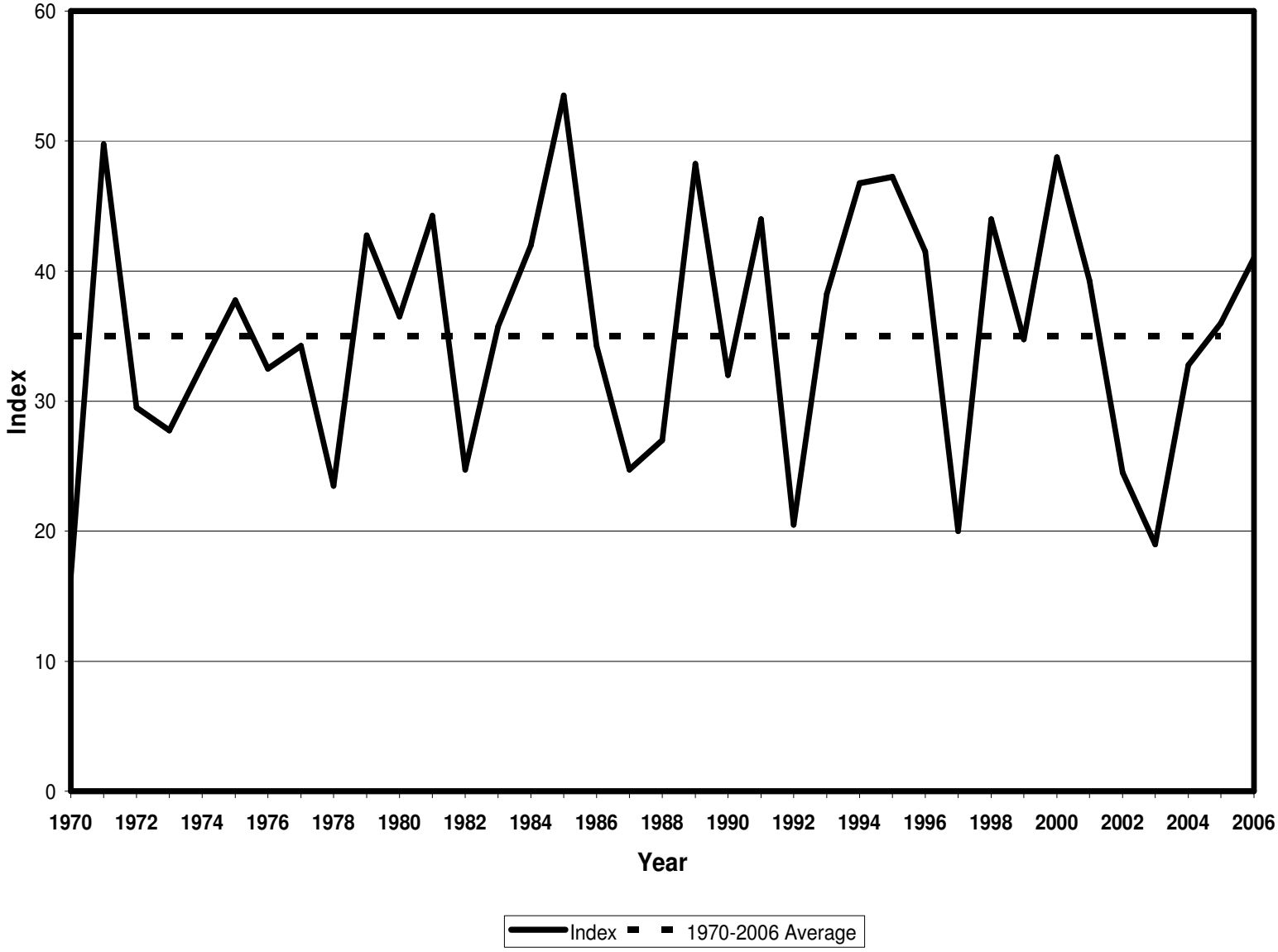

Figure 3. Index of oaks, 1970-2006.

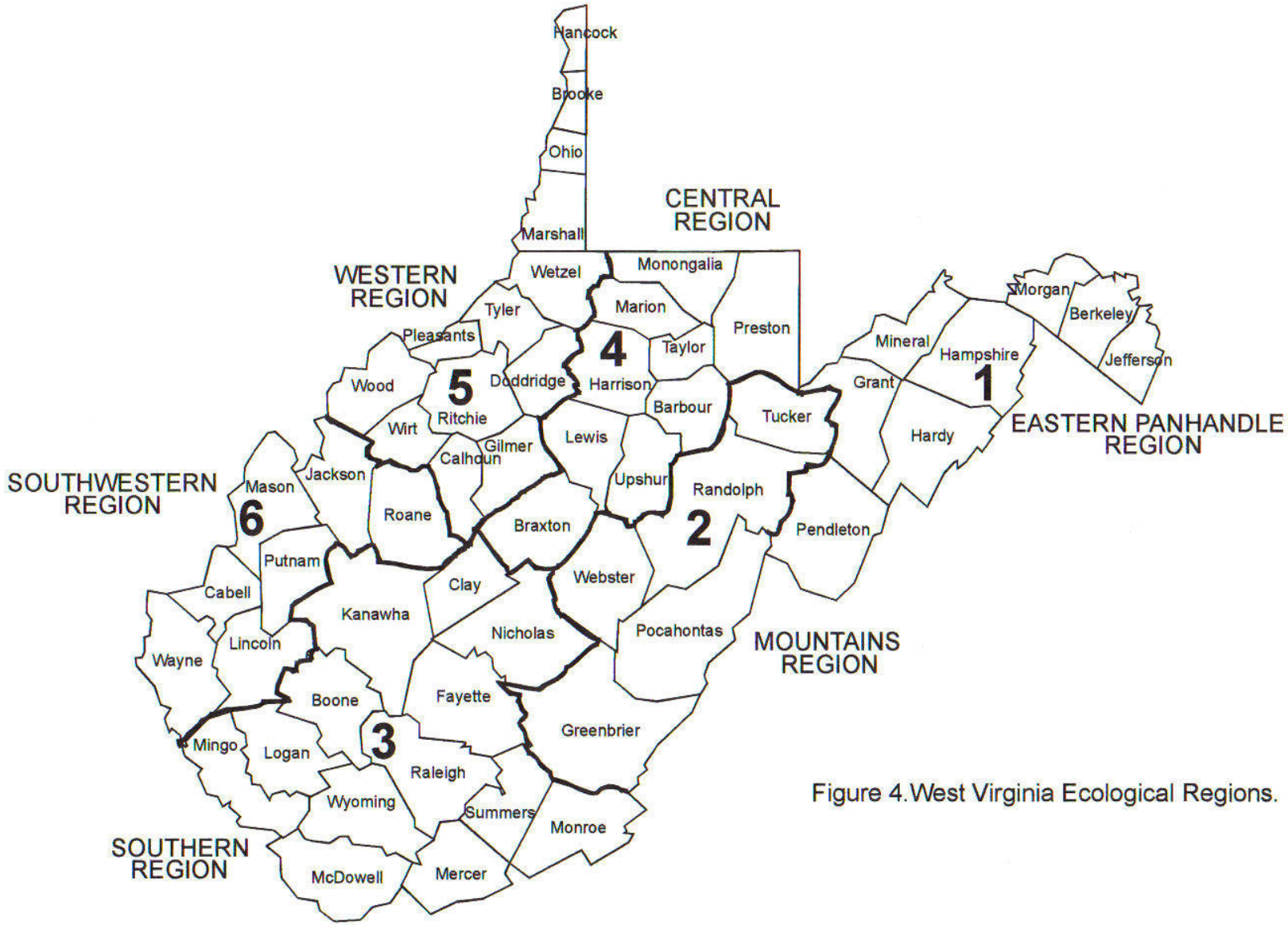

Figure 4. West Virginia Ecological Regions.

Last year, hickory nuts were slightly above average and the trend continued this year.

The biggest loser of soft mast was black cherry. Black cherry is important for grouse and turkeys and shows a 41% decline from the 36-year average. Yellow-poplar production is up considerably from last fall at 34% above the 36-year average.

The production of soft mast in our understory trees and shrubs was varied, some species increasing and others decreasing from the 36-year average. Indices were lower for grape, greenbrier, and sassafras, while blackberry, dogwood, and hawthorn increased. Apple and crabapple remained above the 36-year average.

Statewide, no major differences in mast conditions were noted in regard to elevation except hickories and oaks were better at higher elevations. Black cherry was lower regardless of elevation observed.

When we started the mast survey in 1970, our main purpose was to use it to forecast squirrel populations and hunting outlook. Current mast conditions impact overwinter survival and reproductive success of many wildlife species. This year white oak acorns will provide a staple food source for squirrels and compensate for the slight decrease in hickory nut production.

It is recommended that hunters review the regional trends in mast as shown in Tables 3 and 4 to learn of food conditions in their region of the state. There are always some regional differences. Readers not familiar with our regions should refer to Figure 4 to determine the ecological region where they hunt.

REGION 1 (EASTERN PANHANDLE)

Mast conditions in 2006 are comparable but down from 2005 values for almost all mast species surveyed. White oak species increased from last year while hickory and walnut crops were slightly less. Black and red oaks only decreased slightly whereas scarlet oak increased 30%.

Mast from most understory trees and shrubs decreased 20% to 30% from last year. Compared to 2005, hunters should note the double digit decrease in scrub oak, grape, hawthorn, blackberry, and greenbrier. Some understory species such as dogwood increased noticeably from last fall. The decline in mast species should be tempered by the above normal production last year for most understory trees and shrubs.

While mast production was somewhat lower than last year, acorn prevalence was well above the 36-year average. Beech and hickory were noticeably lower than the norm as was black cherry. Walnuts were only slightly down.

Soft mast species (grape, greenbrier, and blackberry) were not as prevalent but the decline was not alarming.

At higher elevations, all species produced more mast than at lower elevations for this region. There was no noticeable difference in hickory and walnut crops but oaks seem to fair better at higher elevations.

REGION 2 (MOUNTAINS)

The beechnut crop in the Mountains is about the same as last year but did increase slightly (10%). Walnut and hickory production improved considerably while white oak remained the same. Chestnut oak was the big winner for the Mountains with a mast index increasing 235%. This will undoubtedly help compensate for the average white oak production. Red oak species decreased by more than 50% from last year and was even below the 36-year average. Unlike last year's bumper crop of black cherry, this year's crop experienced a 54% decrease which was also well below the norm. Another big producer for the Mountains was yellow-poplar which increased 234% from last year.

Production of trees and shrubs in the understory compared favorably to last year's production. Hawthorn, dogwood, and apple experienced only minor changes. Most soft mast species did not decline in magnitude as black cherry. Grape decreased 20% from last year while blackberry and greenbrier increased.

Most species in this region, with the exception of the oaks, produced crops similar to the 36-year average. Walnut production was up 98% from the norm. Red oaks were below the norm for all species surveyed except scrub oak. White oak production was above norm and should supplement the below average red oak production.

Wildlife should take advantage of the soft mast produced during 2006. Hawthorn, dogwood, blackberry, and greenbrier were present at or above 36-year levels.

Mast conditions at higher elevations were similar to the overall level for the Mountains. Beech, hickories, and walnut were found more prevalent at higher elevations than at lower ones. White and red oaks were found in greater numbers at lower elevations except for chestnut oak. Although lower production was reported for black cherry higher elevations appeared to be more productive.

Based on mast conditions, squirrel populations should be similar in this region next year. Mast from white and chestnut oak will help compensate the decline in red, black, and scarlet oak. Further, walnut and hickory provide some assistance to acorns and keep population levels stable.

REGION 3 (SOUTHERN)

Production of white oak and chestnut oak in the Southern Region increased from last year but red, black, and scarlet oak acorns declined. Beech, walnut, hickory, white oak, and chestnut oak were above last years indices. This is important because last year's values were considerably improved. Black cherry followed the statewide trend and was lower than last year's production.

Understory trees and shrubs for the Southern Region produced better than last year. This increase represents a two year trend in higher mast indices for these species. Increased indices were observed in scrub oak, dogwood, grape, crabapple, and blackberry. A slight decrease was recorded in indices for hawthorn, greenbrier, and apple.

All species surveyed for the Southern Region were above the 36-year average except for a slight decrease in greenbrier and sassafras. Although indices for red oaks were down, they remained at or above the norm.

Trees and shrubs in the understory were well above the 36-year average. Apparently the southern portion of the state was the only area which produced a normal black cherry crop. While black cherry was lower than last year's production, it was still within the 36-year norm.

There was very little difference in mast indices for this region based on elevation. Beech, walnut, hickory, white oak, and chestnut oak were all slightly better producers at higher elevations. Red oaks and black cherry were better at lower elevations.

Understory trees and shrubs were essentially the same at high and low elevations. Greenbrier and sassafras indices were better in lower locations.

REGION 4 (CENTRAL COUNTIES)

The most notable difference between the 2006 and 2005 indices is found in beech where a 258% increase was observed. Almost all other hard mast species showed some signs of decline when compared to 2005 values.

Understory trees and shrub species generally followed the same trend as hard mast. Greenbrier, blackberry, and scrub oak were only slightly above last year's values. 2006 indices for grape, hawthorn, and apple were noticeably below 2005 indices.

The 2006 decline in mast production for the Central Region holds true when the indices are compared to the 36-year average. Beech is the only hard mast species that was above the norm. Reduced production in the oaks and black cherry are clearly seen.

Understory trees and shrubs also had reduced production in 2006. Scrub oak and hawthorn were below normal values. Blackberry, dogwood, crabapple, and apple were the best producers in the region.

During 2006, higher elevations appear to have had better conditions for producing mast than lower ones. All hard mast species, except beech, were better producers in higher elevations than in lower ones. Black cherry did equally well at either elevation. Soft mast species (grape, dogwood, and blackberry) faired equally or slightly better at higher elevations.

REGION 5 (WESTERN)

Mast conditions in the western part of the state appear to be average to good. A decline in beech, walnut, hickory, and white oak from 2005 is somewhat tempered by the above average production last year. Chestnut oak and the red oak group were above last year's production. This should counter the loss due to white oak and hickory. Black cherry was down considerably as was grape and sassafras.

Understory trees and shrubs were about the same as last year. Dogwood, hawthorn, blackberry, and greenbrier all increased or remained stable. Apple and crabapple showed signs of decline.

Although beech was lower than last year's index, production was still above the 36-year norm. White and red oak groups were clearly above the norm for the region. Black cherry was considerably below the 36-year average.

Trees and shrubs in the understory had above normal production. Except for grapes, the indices for soft mast species, i.e., yellow-poplar, blackberry, greenbrier, hawthorn, dogwood, crabapple, and apple, were above the 36-year average.

As for most regions in the state for 2006, mast production was best at higher elevations. Oaks should be found more abundantly in the higher elevations than lower ones.

REGION 6 (SOUTHWESTERN)

The Southwestern Region joins the Southern Region in producing consistent mast indices. Although hickory and walnut production is down, it is compensated by the oak groups (white and red). The Southwestern Region is the only region that reported better indices for both oak groups. Although scarlet oak acorn production is down, its overall composition is approximately one-third of black and red oak. This is the only region that reported an increase in black cherry from last year's survey.

Understory mast trees and shrubs surveyed generally produced similar to better mast than last year. Although there was not a major change in the indices of soft mast for this region, grape and apples were down 4% from 2005. Other than crabapple and greenbrier, all other species surveyed increased in production. This is particularly important because last year's values were above the norm.

The other good news is that most (14 of 18) trees and shrubs surveyed have more mast than average. The only species with mast conditions below the 36-year average production for this region were walnut, greenbrier, and sassafras.

This is the only region where more mast species produced better at lower elevations than the ridge tops. Beech, hickory, walnut, white oak, and red oak groups produced more food crops at lower elevations.

Squirrels will not have any food shortages this year, and this should result in more squirrels next fall.

Table 1. 2006 statewide index compared to 2005 mast index.

Species	2005	2006	Percent Difference
Beech	38	48	26
Walnut	55	40	-27
Hickory	50	49	-2
White Oak	29	42	46
Chestnut Oak	23	37	58
Black or Red Oak	49	44	-9
Scarlet Oak	43	40	-6
Black Cherry	58	27	-53
Grape	40	33	-17
Scrub Oak	40	37	-8
Yellow poplar	42	60	44
Hawthorn	57	53	-8
Crabapple	73	68	-7
Dogwood	52	58	11
Blackberry	58	64	11
Greenbrier	38	40	3
Sassafras	33	29	-12
Apple	84	73	-13
Other	60	74	24

Table 2. 2006 statewide index compared to 36-year average mast index.

Species	36-year Average	2006	Percent Difference
Beech	38	48	26
Walnut	37	40	9
Hickory	47	49	5
White Oak	36	42	18
Chestnut Oak	31	37	21
Black or Red Oak	42	44	5
Scarlet Oak	32	40	25
Black Cherry	46	27	-41
Grape	41	33	-19
Scrub Oak	40	37	-7
Yellow poplar	45	60	34
Hawthorn	48	53	9
Crabapple	54	68	26
Dogwood	49	58	19
Blackberry	54	64	20
Greenbrier	47	40	-15
Sassafras	41	29	-29
Apple	55	73	34
Other	67	74	10

Table 3. Percent difference in mast index by species between 2005 and 2006 by ecological region.

Species	Ecological Region					
	1	**2**	**3**	**4**	**5**	**6**
Beech	0	10	3	258	-6	0
Walnut	-43	97	15	-22	-64	-56
Hickory	-59	128	60	0	-40	-22
White Oak	151	0	89	-18	-15	32
Chestnut Oak	148	235	120	-7	26	37
Black or Red Oak	-4	-55	-27	3	53	23
Scarlet Oak	31	-54	-28	-8	49	-18
Black Cherry	-70	-54	-25	-77	-72	33
Grape	-23	-20	20	-35	-42	-4
Scrub Oak	-49	1	29	0	0	0
Yellow-poplar	13	234	35	51	8	30
Hawthorn	-28	8	-3	-31	0	38
Crabapple	-5	-15	29	-7	-3	-26
Dogwood	34	33	8	0	10	12
Blackberry	-33	4	25	4	50	27
Greenbrier	-26	34	-14	32	64	-24
Sassafras	-23	0	8	6	-64	0
Apple	-3	-3	-7	-21	-29	-4
Other	25	34	27	-13	39	-17

Table 4. Percent difference in 2006 mast index by species from average of years (1973-2006) by ecological region.

Species	Ecological Region					
	1	**2**	**3**	**4**	**5**	**6**
Beech	-47	-15	17	85	32	36
Walnut	-9	98	59	-3	-41	-18
Hickory	-31	56	27	-16	-19	15
White Oak	88	28	11	-40	4	51
Chestnut Oak	37	-14	43	-26	40	80
Black or Red Oak	58	-46	0	-12	31	17
Scarlet Oak	91	-47	19	-12	79	10
Black Cherry	-38	-47	4	-74	-65	24
Grape	-7	-31	3	-56	-38	43
Scrub Oak	-36	14	36	-10	-100	0
Yellow-poplar	49	25	32	19	38	33
Hawthorn	30	0	31	-26	56	43
Crabapple	36	5	70	15	54	13
Dogwood	10	7	22	8	35	40
Blackberry	-1	0	54	11	43	49
Greenbrier	-19	3	-7	-19	5	-11
Sassafras	-26	-39	-5	-15	-61	-7
Apple	20	36	44	24	16	51
Other	20	3	4	-27	36	-2

2006 WEST VIRGINIA HUNTING OUTLOOK

Jim Evans, Randy Tucker, William Igo and Eric Richmond

Most of the information used for this hunting outlook are observations provided by field personnel of the Wildlife Resources and Law Enforcement Sections of the Division of Natural Resources (DNR), foresters from the Division of Forestry, retired DNR wildlife managers and biologists, and a few other cooperators. These individuals make the publication of our hunting outlook possible. Hunting predictions are also based on current and previous mast conditions from the yearly mast surveys. Mast often dictates survival and reproductive success of many wildlife species the following year. Brood reports of ruffed grouse and wild turkeys are used as major predictors of populations and harvests. Other important information incorporated to judge upcoming harvests and animal numbers include the Spring Gobbler Survey, Bowhunter Survey, Raccoon Field Trial Survey, nuisance complaints, adjustments to bag limits, permit allocations, and hunting season type and length.

Table 1 is a quick check chart of predicted statewide harvests of our major game species for 2006. Harvests of most game species will be higher this fall and winter. Projected deer kill by season and region are shown in Table 2. Predicted fall wild turkey harvests are illustrated in Table 3. Hunting prospects on a regional basis are provided in Tables 4 through 8. This outlook is designed to forecast general prospects and is not intended to predict hunting conditions at specific locales. Particularly, with mast conditions comparable to 2005--the best that we've seen in the last 5 years--hunters are encouraged to scout their favorite hunting spots to learn more about food and game conditions.

GRAY AND FOX SQUIRRELS

The factor influencing squirrel numbers more than any other is the mast conditions from the previous year. The reason is that food conditions from the previous year have a major impact on overwinter squirrel survival and the number of litters produced by squirrels. Squirrels normally produce a summer litter, but the spring litter is very dependent on overwinter food availability. In 2005 the oak mast index was above normal and hickory and walnut production was good. Forecasters are predicting that **the squirrel population will be definitely higher this fall!**

This is the second year in a row with decent acorns and hickory nuts. Squirrel populations should be recovering from lows of recent years so look for better overwinter survival and more squirrels in 2007. Walnuts did not produce statewide as well as in previous years. Walnuts are important to overwintering of fox squirrels, but abundant acorns and hickory nuts will keep the "old red squirrels" well fed.

Squirrels will be "cutting" hickory nuts early so look for good hunting in the hickory groves, especially in the Mountains and Southern regions where hickory nuts produced the best. Hunters also need to keep in mind that the second litter of squirrels is usually not available until after mid-October so those that hunt later in the season will benefit from the addition of juvenile squirrels to the population.

COTTONTAIL RABBITS

Cooperators from almost all regions are seeing more bunnies than last year and are **predicting better hunting for 2006**. The only exception is the Eastern Panhandle, where observers report cottontail populations similar to 2005. Late summer rainfall should maintain adequate cover to hunting season. Rabbit hunters and their beagles should have some exciting and productive outings for the 2006-2007 season.

RACCOONS

Similar to better hunting is forecast for 2006. Of 123 hunting outlooks received from participants, there were none that revealed lower 'coon numbers or predicted worse hunting. Good food conditions in 2005 obviously resulted in productive and healthly populations for 2006. One cooperator remarked about the high number of road-killed 'coons in his region. The Eastern Panhandle and Mountains have the best reports among the regions.

DEER

Several factors influence the forecasts of West Virginia's deer harvest for 2006. Evaluations by field personnel, mast crop, and hunting regulation changes can impact the projected harvest. Considering all of these factors, **the total 2006 white-tailed deer harvest should be slightly lower than 2005 harvest levels**. After four consecutive years of a lower statewide buck firearms kill, buck hunting should be slightly better this year with larger antlered bucks more common than in the past. Most regions had good acorn crops, so deer will be less available in field edges making archery season more challenging, and our prognosticators are predicting lower archery harvests. Although acorns are common in all regions, field personnel expect hunters to harvest fewer deer during the antlerless and muzzleloader seasons. Several counties have been closed to antlerless hunting or have reduced hunting opportunities. Hunters should review the 2006-2007 Hunting and Trapping Regulations summary for detailed instructions concerning specific bag limits and season dates.

BLACK BEAR

The forecasted higher harvest of bruins for 2005 panned out with a near record kill of 1,634. Abundant hard mast kept bears from hibernating early and resulted in a record gun kill of 1,047. With food conditions this year similar to 2005, most field personnel are expecting **harvests to be similar to the high kill last season**. Like last year an early November gun season with dogs and gun season during the first week of buck season (without dogs) will occur in four southern counties (Boone, Fayette, Kanawha, and Raleigh). If either the bow or gun kill (or combination) is slightly higher than 2005, a record Mountain State bruin harvest will occur. Severe wintry weather in late November or early December will put bears to bed early, and gun kills would then be depressed.

WILD TURKEY

Wild turkey brood counts are currently running about 4% above last year's production and are about 96% of our average brood production. The brood season was characterized by an early wet spring and average broods were reported in June and July; however, many observers recorded smaller poults indicating several re-nesting hens were successful in bringing off broods.

Regionally, brood counts are up 53% in the Eastern Panhandle counties and down 40% in the Mountains counties, almost the exact opposite of last years reports. The Western and Southern regions also have above average brood reports this year.

It is difficult to predict the wild turkey harvest this fall because the traditional fall hunting counties in the Eastern Panhandle have increased brood production while the counties in the Mountains have decreased reports. In the non-traditional fall counties only Hancock, Brooke, Ohio, Marshall, Wirt, and Wood counties have a one-week season this fall. Additionally, white oak, chestnut oak, and red oak mast was good in the Eastern Panhandle counties and will make fall turkey flocks scattered and more difficult to hunt.

Considering contrasting information, the harvest likely will be similar to last year. Although brood reports are up in the Eastern Panhandle, surveyors believe populations remain at lower levels. The traditional fall counties in the mountains still have decent turkey populations, although broods are scarce this year. Wood and Wirt Counties will likely have decent harvests this fall.

Hunters should keep in mind that white, red, and chestnut oaks in our Eastern Panhandle produced good this year. Birds will likely be scattered and feeding on acorns as the wild grapes are not as good as last year.

White oak in the Monongahela National Forest will be the major food item. The good news for hunters may be the poorer mast conditions in the mountain counties should concentrate birds around local feeding areas and make them easier to hunt.

In the Northern Panhandle, acorns will be the major food item with decent white oak as well as good red and black oak. Surveyors observed more birds in this area than last year.

Fourteen traditional fall-hunted counties will be opened to a 4-week split fall season (Oct. 21 – Oct. 28). Preston County will be open Oct. 21 - Nov. 4. Six counties (Hancock, Brooke, Ohio, Marshall, Wood, and Wirt) will be open October 21- 28.

Hunters should read the 2006-2007 Hunting and Trapping Regulations Summary, which is available at local license agents and Division of Natural Resources (DNR) offices, to learn more about changes in wild turkey hunting regulations this year. The summary thoroughly explains changes in seasons and regulations.

RUFFED GROUSE

Brood counts are running almost 20% lower than last year, with the majority of sightings again coming from the Mountains Region. However, the reports from this area are significantly down (40%!) from 2005. Broods are up in the Eastern Panhandle (9 last year, 15 reported for 2006), with counts in the Southern and Western regions similar to last year. Because of an abundant soft mast crop (hawthorn, greenbrier, dogwood) birds should be well scattered. **Flushing rates will remain low for 2006**, with field personnel expecting **similar to slightly poorer hunting than last year.** Some cooperators noted grapes produced very spotty – some clumps abundant with fruit, many other arbors barren. Hunters discovering productive grape thickets could do well in these areas, particularly late in the season.

WILD BOAR

Since the hog season was adjusted in 2003, eliminating the December gun season, boar harvests have been low. This was intended to prevent overharvests, and gradually increase hog numbers. A fall archery season will occur October 14 to December 31. A one-week (Oct. 23-28) gun season will be in effect in Boone, Logan, Raleigh, and Wyoming counties. Although a few more pigs may be killed in 2006, **both the archery and gun harvests for boar should remain low.** Populations are expected to grow with better acorn and hickory nut production in 2005 and 2006. However, these good food conditions will have hogs scattered, some in rugged terrain, which will make difficult hunting even more challenging.

Table 1. 2006 quick check chart of predicted statewide wildlife harvests.

Species	More	Similar	Lower
Gray & Fox Squirrels	X		
Cottontail Rabbits	X		
Ruffed Grouse		Similar to Slightly Lower	
Raccoon	X		
White-tailed Deer			X
Wild Boar		Similar to Slightly Higher	
Wild Turkey		X	
Bear		X	

Table 2. 2006 quick check chart of deer harvest forecast by region and season.

Region	Season				
	Bow	**Buck**	**Antlerless**	**Muzzleloader**	**Total Kill**
1	Lower	Slightly Higher	Lower	Lower	Lower
2	Similar	Similar	Lower	Lower	Lower
3	Lower	Higher	Lower	Lower	Similar
4	Higher	Higher	Lower	Lower	Similar
5	Lower	Similar	Similar	Similar	Similar
6	Lower	Higher	Lower	Lower	Similar
Statewide	Lower	Higher	Lower	Lower	Slightly Lower

Table 3. 2006 quick check chart of wild turkey harvest forecast by region.

Region	Higher	Similar	Lower
1	X		
2			X
3	X		
4		Similar to Slightly Higher	
5	X		
6	Closed	Closed	Closed
Statewide		X	

ECOLOGICAL REGION 1

Table 4. Hunting prospects in Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, and Pendleton counties.

Game Species	2006 Outlook
Gray and Fox Squirrel	A good crop of hickory nuts and black and red oak acorns in 2005 resulted in better overwintering of squirrels and a slightly better population in 2006. Mast conditions in 2006, particularly white oak, are better this year than last so squirrels will be more abundant. Hickory and walnut are not as good this year, so look for squirrels to be working white oak early. Look for shagbark hickory to be cut-out early. Red oak and black oak are still well above average and this makes two years in a row with a good acorn crop in this region, so look for another good forecast for bushytails in 2007. Mast conditions were reported better at higher elevations. Most counties reported better squirrel populations.
Rabbits	Rabbit numbers were up last year and it is predicted to be about the same this year. All counties reported numbers about the same as last year which was a good year for rabbits.
Ruffed Grouse	Soft mast is below average this year in the Eastern Panhandle. Brood reports are about average this year for the region with Pendleton County reporting the best production. Low and high elevations have about the same amount of mast. White oak hit well and this will be important in overwintering better numbers of grouse. Look for a slightly lower harvest again this year in this region.
Raccoon	Surveyors are predicting more 'coons again this year which will mean more action for our 'Coon Hunting Brethren'. Raccoons will be feeding on red and black oak acorns. Good reports came from Berkeley, Hampshire, Jefferson, Mineral, Morgan, and Pendleton Counties.

Table 4. (Continued) Hunting prospects in Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, and Pendleton counties.

Game Species	2006 Outlook
Deer	Most surveyors are predicting better deer hunting this year than last; however, good acorn production this year may reduce bowhunting success by keeping deer out of the fields. Antlerless and muzzleloader harvests should be lower due to season changes, so overall kill in this region should be less than last year. Hunting forested areas, particularly oak stands, will be a good bet. Hunters should note that west of North Fork of the South Branch in Pendleton County is closed for the antlerless season, and east of the North Fork is open to permit only hunting as is Grant County east of the top of New Creek Mountain. The bag limit of antlerless deer in Grant County and Pendleton County east of the North Fork is one. The remaining counties in the region are open to antlerless hunting with a bag limit of 3 on private land. Review the 2006-2007 Hunting and Trapping Regulations for specific details.
Turkey	Brood production in this region is up over 50% and mast production is up. Both reasons will lead to more turkeys dispersed over a larger area. Surveyors have noted more turkeys than in 2005. Look for better turkey hunting this fall. All counties in this region except Jefferson are open to fall hunting.
Black Bear	Bear hunting during the archery season will probably be more challenging with more mast than last year dispersing the bruins. However, better mast may keep bears out of the dens longer giving gun hunters a better chance at bagging a bear. The majority of reporters believe there are more bears this year. All counties reported more bears or the same numbers as in 2005.

ECOLOGICAL REGION 2

Table 5. Hunting prospects in Greenbrier, Pocahontas, Randolph, Tucker, and Webster counties.

Game Species	2006 Outlook
Gray and Fox Squirrels	This will be a great year for bushytail hunting in this region. Beech, hickory, and white oak hit well at all elevations and a casual stroll through forests with these trees should result in a productive hunt. It was noted that squirrels were already cutting hickory (mid-August) and white oak (early September). Some hickories will already be "cut out" by season start, but hunters locating fresh cutting just prior to opening date will be successful. Counties with best reports are Pocahontas, Tucker, and Webster.
Rabbits	Surveyors report plentiful cottontail numbers and are predicting extensive workouts for beagles. Sufficient mid and late summer rains should provide good cover to supply abundant bunnies till season opening. Best reporting counties are Greenbrier and Tucker.
Ruffed Grouse	The hatch started out good in these counties with a good number of brood reports in June. Severe thunderstorms in late June, early July may have been detrimental to chicks as brood counts dropped sharply in July and August. Most surveyors are forecasting similar to poorer hunting in this region—abundant soft mast will cause birds to be scattered, further reducing flush rates. Late season hunters should note grape clumps that have fruited as grouse could concentrate in these during late winter. The best reports come from Webster County.
Raccoon	About all cooperators report better to similar 'coon populations. Good mast production last year should have resulted in good productivity and a healthy population in this region. Good food conditions, both berry crops and hard nut production, will cause masked bandits to be found throughout the forest, in bottoms as well as ridges. Greenbrier and Webster were best reporting counties.

Table 5. (Continued) Hunting prospects in Greenbrier, Pocahontas, Randolph, Tucker, and Webster counties.

Game Species	2006 Outlook
Deer	Previous deer management strategies have reduced herds in this region to a size that appears to result in healthier, more robust individuals. Survey participants report many "big" does with twins. Cooperators also expect, with the curtailment of antlerless seasons in this region, much reduced overall deer harvests. The bow kill should be about the same because food conditions are similar to last year's mast. The muzzleloader harvest should be greatly reduced because only antlered deer can be taken. Because they're older, less stressed, and well fed, any bucks taken during the antlered and muzzleloader seasons should be heavier and carry larger racks than in 2005. Randolph County qualified as a "best" reporting county.
Turkey	Brood reports are down almost 40% from last year in this region. White oak and soft mast crops are plentiful and widespread, so birds could be difficult to locate. Some surveyors are still calling for a better harvest than 2005 in some counties. Weighing all these factors together we predict a similar to slightly lower harvest for 2006. Pocahontas, Webster, and Tucker counties have best surveys.
Black Bear	Similar to slightly improved hunting is forecast by surveyors in this region. A good supply of beechnuts, acorns, and hickory nuts should dampen bow harvests, but sufficient foods should keep bears from hibernating early, resulting in a good gun kill. However, an "early" winter of snow and severe cold would put bears to bed prematurely, thus lowering the gun harvest. Best reports come from Greenbrier County.

ECOLOGICAL REGIONS 3 and 6

Table 6. Hunting prospects in Boone, Cabell, Clay, Fayette, Jackson, Kanawha, Lincoln, Logan, Mason, Mercer, Mingo, Monroe, McDowell, Nicholas, Putnam, Raleigh, Roane, Summers, Wayne, and Wyoming counties.

Game Species	2006 Outlook
Gray and Fox Squirrels	Better hunting is forecast for most counties in the southern regions. Beech and hickory crops are up from the 36-year average. Hunters can expect good late season hunting in white, chestnut, and scarlet oaks, as their production is significantly higher than the average.
Rabbits	Ideal cover conditions exist due to adequate summer rainfall. Cooperators predict similar to better hunting throughout these regions.
Ruffed Grouse	Brood reports for both of these regions are rare. However, surveys indicate similar hunting prospects are predicted for these regions. Dogwood, crabapple, and hawthorn fruits produced well. Best reports come from Clay, Mason, Nicholas, and Putnam counties.
Raccoon	Cooperators are predicting similar to better hunting for the masked bandit throughout all counties in these regions. Good mast conditions will make hunters work hard because 'coons will be widely distributed.
Deer	Field personnel from most counties in these regions feel the whitetail harvest should be similar to that of 2005. With good white and chestnut oak production, the archery harvest may be down as the deer will be widely distributed throughout the forests. However, if the weather cooperates, the buck harvest should compensate for the drop in bow kill. Hunters are reminded to review the 2006-2007 Hunting and Trapping Regulations summary for details on seasons in specific counties. Most of the counties in these regions are now closed to antlerless deer hunting. Ensure that you are aware of the seasons and bag limits before you go afield.

Table 6. (Continued) Hunting prospects in Boone, Cabell, Clay, Fayette, Jackson, Kanawha, Lincoln, Logan, Mason, Mercer, Mingo, Monroe, McDowell, Nicholas, Putnam, Raleigh, Roane, Summers, Wayne, and Wyoming counties.

Game Species	2006 Outlook
Turkey	Brood counts are slightly higher for 2005. Mason and Summers did not qualify for a fall season in 2006. However, cooperators are predicting a better harvest for the traditional 4-week season in Monroe and Nicholas counties.
Black Bear	Good mast conditions should keep bears active throughout the 2006 seasons. Field personnel believe harvests will rival that of 2005. Archers may find it difficult to arrow a bruin as mast will be widely available. However, many bears will remain active throughout December. Boone, Fayette, Kanawha, and Raleigh counties continue to have special firearm opportunities. Consult the 2006-2007 Hunting & Trapping Regulations for details.
Wild Boar	The hog harvest should remain low for 2006. Good mast conditions will distribute available pigs throughout this already hard to hunt terrain keeping the archery harvest to a minimum. Leaf-fall will make it near impossible to find fresh sign as the gun season arrives on Oct. 23.

ECOLOGICAL REGION 4

Table 7. Hunting prospects in Barbour, Braxton, Harrison, Lewis, Marion, Monongalia, Preston, Taylor, and Upshur counties.

Game Species	2006 Outlook
Gray and Fox Squirrels	Survey participants feel squirrel hunting will be better than last year but with a twist. Hunters should not have to climb the mountains this year, as mast production is down at higher elevations. Red oak produced better low than higher elevations. Red oak produced better than white oak, but beech is the food source that is readily available (85% above 36 year average). Save your legs and stay in the valleys.
Rabbits	Hunting for cottontails should be similar to better than last year. September rains should maintain good cover. Best surveys come from Harrison and Lewis counties.
Ruffed Grouse	Grouse populations are predicted to be similar to last year in this region. The key to a successful hunt will be to find the food source. Grape and cherry production are down (56% and 74%) from the 36-year average. Dogwood and crabapple fruits are the best producing soft mast in the region with little variation between higher and lower elevations.
Raccoon	'Coon numbers should be similar to that of 2005. However, with spotty mast conditions, ringtails will be widely distributed. Hunters will get more strikes by staying in the hollows because that is where the best food sources are.

Table 7. (Continued) Hunting prospects in Barbour, Braxton, Harrison, Lewis, Marion, Monongalia, Preston, Taylor, and Upshur counties.

Game Species	2006 Outlook
Deer	The deer harvest is predicted to be similar to last year's harvest. Liberal harvest strategies in most counties of this region combined with below average mast conditions should keep the kill around that of 2005. Deer will be concentrated around available mast and fields. Details for whitetail hunting can be found in the 2006-2007 Hunting and Trapping Regulations.
Turkey	Preston County is the only county in this region qualifying for a fall season (Oct. 21 – Nov. 4). Spotty mast conditions should be favorable for a similar fall harvest to last year.
Black Bear	Bear numbers continue to increase as bruins expand their range. Ninety-six percent of surveyors predict a similar or better bear harvest in this region. Lewis, Marion, Monongalia, Upshur, and the western portion of Barbour County have a 4-week gun season without dogs. Preston County has a 4-week season with dogs.

ECOLOGICAL REGION 5

Table 8. Hunting prospects in Brooke, Calhoun, Doddridge, Gilmer, Hancock, Marshall, Ohio, Pleasants, Ritchie, Tyler, Wetzel, Wirt, and Wood counties.

Game Species	2006 Outlook
Gray and Fox Squirrels	A bumper mast crop last year will have the limbs shaking this year with bushytails. All reports indicate a 'best' hunting situation exists for squirrels in all counties of this region. Hunters should look to beech and oaks because the hickory that produced will mostly be "cut out" before season.
Rabbits	Cottontail numbers are again plentiful. Harvests are predicted to be similar to slightly better than in 2005. Late summer rains have aided in producing good cover for the bunnies.
Ruffed Grouse	Brood production is similar to that of 2005 and survey participants predict a harvest comparable to last year. Look for grouse in hawthorn, crabapple, and dogwood as grape production in low. Best report comes form Tyler County.
Raccoon	Similar to slightly better hunting in 2006 is predicted in all counties of this region. Acorn production is better at higher elevations. Best reports come from the Northern Panhandle.

Table 8. (Continued) Hunting prospects in Brooke, Calhoun, Doddridge, Gilmer, Hancock, Marshall, Ohio, Pleasants, Ritchie, Tyler, Wetzel, Wirt, and Wood counties.

Game Species	2006 Outlook
Deer	The overall deer harvest is predicted to be similar to last year for this region. Good mast conditions will spread deer out across the region. Archery harvests will likely be down for this reason. Liberal antlerless regulations remain in place for many of these counties. Consult the 2006-2007 Hunting & Trapping Regulations for further details.
Turkey	Good mast conditions will have flocks dispersed throughout their range, making it a little harder for hunting this year. Surveyors predict a similar to better harvest compared to last year. Brooke, Hancock, Marshall, and Ohio counties have qualified for a fall season to accompany Wood and Wirt.
Black Bear	Available food supplies will have bruins dispersed throughout the region. However, look for harvests to increase as the bear population continues to grow and expand its range. This region remains closed to a gun season. The archery season is open Oct. 14 thru Nov. 18. Good scouting will be essential for success.

Mast Survey

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