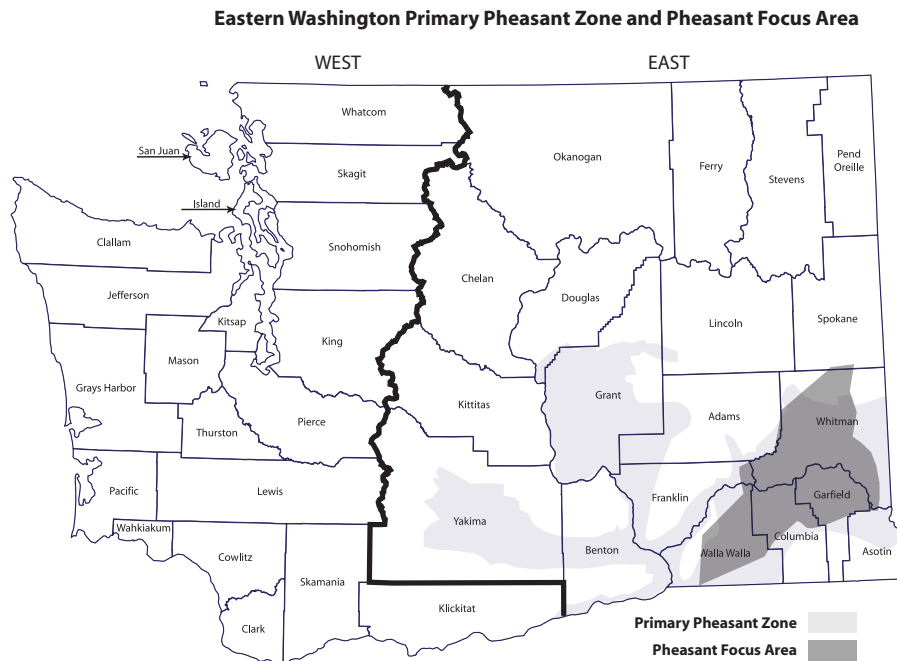


Performance Audit Report

Eastern Washington Pheasant Enhancement Program

Department of Fish and Wildlife

Report No. 1002127



December 10, 2009



Washington State Auditor Brian Sonntag, CGFM

www.sao.wa.gov

About the audit

We audited the Eastern Washington Pheasant Enhancement Program in response to a legislative request.

Objectives

This audit was designed to determine if the Department of Fish and Wildlife uses:

- Effective strategies to improve pheasant harvests in Eastern Washington.
- Sufficiently reliable data to support management decisions.

Scope

We audited the performance of the Eastern Washington Pheasant Enhancement Program from its inception in 1997 through 2008. We focused on whether the Program is meeting Department goals and Program objectives and whether it uses best practices to meet those goals and objectives. We did not audit the Western Washington Pheasant Program.

What we found

Pheasant populations have decreased in Washington primarily due to loss of habitat, which is the critical factor in sustaining healthy pheasant populations. Although the Department fulfilled its legislatively mandated pheasant release strategy, that strategy has not been effective at sustaining or improving pheasant populations and hunting opportunities in Eastern Washington. In contrast, South Dakota, which is a recognized leader in pheasant management, has increased its pheasant population and hunting opportunities by focusing on habitat enhancement instead of pheasant releases.

The Program has leveraged its limited resources by engaging in habitat enhancement activities through partnerships with other organizations that have complementary objectives. The 2009 Legislature rescinded the requirement for the Program to use 80 percent of its funding on pheasant releases. This will allow the Program to expand these partnerships by reallocating funds it formerly used for pheasant releases.

The Program uses pheasant harvest estimates from an annual hunters' survey to monitor long-term pheasant population trends. This is reasonable because harvest estimates trend similarly to roadside counts in states that measure both. The Program will need to develop on-site population monitoring to help assess its habitat enhancement efforts.



Mission Statement

The State Auditor's Office independently serves the citizens of Washington by promoting accountability, fiscal integrity and openness in state and local government. Working with these governments and with citizens, we strive to ensure the efficient and effective use of public resources.

About Initiative 900

Washington voters approved Initiative 900 in November 2005, giving the State Auditor's Office the authority to conduct independent performance audits of state and local government entities on behalf of citizens to promote accountability and cost-effective uses of public resources.

I-900 directs us to address the following elements in each performance audit:

- Identification of cost savings.
- Identification of services that can be reduced or eliminated.
- Identification of programs or services that can be transferred to the private sector.
- Analysis of gaps or overlaps in programs or services and recommendations to correct them.
- Feasibility of pooling auditee's information technology systems.
- Analysis of the roles and functions of the auditee and recommendations to change or eliminate roles or functions.
- Recommendations for statutory or regulatory changes that may be necessary for the auditee to properly carry out its functions.
- Analysis of the auditee's performance data, performance measures and self-assessment systems.
- Identification of best practices.

Initiative 900 provides no penalties for auditees that do not follow recommendations in performance audit reports.

The complete text of the Initiative is available on our [Web site](#).

Audit issue	Recommendations
<p>Issue 1: Pheasant populations and hunting opportunities have declined due to loss of habitat.</p>	<p>Recommendation 1: The Program should reallocate funds to habitat enhancement and develop pilot projects to demonstrate the effectiveness of specific habitat enhancement methodologies. A portion of reallocated funds could be used as matching funds for federal Voluntary Public Access and Habitat Enhancement Program grants. The Program should continue to emphasize the pheasant focus area, but also consider areas within the larger Eastern Washington primary pheasant zone for additional projects. Department-owned or -managed lands and Natural Resources-managed lands enrolled in the Conservation Reserve Program may offer flexible management options for establishing habitat improvement demonstration areas.</p>
	<p>Recommendation 2: The Program should identify and pursue additional opportunities for partnering with others to leverage habitat enhancement funding. The Program should pursue partnerships with conservation organizations and consider opportunities outside of the pheasant focus area but within the primary pheasant zone to preserve and restore landscapes such as wetlands, shrub-steppe, grasslands and working farms.</p>
	<p>Recommendation 3: The Department should increase pheasant hunting opportunities on private lands by addressing landowner concerns. The Department should develop guidelines that reasonably limit the number of hunters and access hours without compromising public access objectives. Requiring written permission may be acceptable if the Department can ensure that landowners are not showing favoritism.</p>
	<p>Recommendation 4: The Department should scale down pheasant releases in Eastern Washington with the goal of limiting releases to specific high-demand events such as youth hunts and holidays. Because pen-reared pheasants are easy targets for predators and do not sustain populations over time, they should only be released just prior to a limited number of events that attract large numbers of hunters. The Department should scale down pheasant releases at a rate that accommodates the needs of hunters while wild pheasant populations rebound.</p>
	<p>Recommendation 5: The Department should provide the legislature with evidence that reallocating funds from pheasant releases to habitat enhancement and hunter access is an effective use of resources. The Department's annual report to the Legislature should focus on progress toward achieving the activities and benchmarks already identified in the 2009-2015 Game Management Plan, including:</p> <ul style="list-style-type: none"> • Developing a method to determine the degree to which Eastern Washington pheasant releases impact overall program objectives, including pheasant harvest and hunting opportunities. • Doubling the number of acres of quality pheasant habitat by 2014. • Developing annual reports that describe efforts to evaluate habitat enhancement efforts on pheasant population levels. • Monitoring pheasant populations. <p>The annual Pheasant Status and Trend reports provide a good template for reporting to the Legislature. In its first report to the Legislature, the Department should include a plan, developed in consultation with stakeholders, on how it intends to scale down pheasant releases in Eastern Washington and a discussion of adjustments it intends to make in its other activities.</p>

Audit issue	Recommendations
Issue 2: The Eastern Washington Pheasant Enhancement Program does not have the data it needs to measure the effectiveness of its habitat enhancement efforts.	Recommendation 6: The Department should continue to survey approximately 25,000 small game hunters but should survey a higher proportion of hunters in the groups that harvest more game. By surveying a higher proportion of hunters in groups 2 and 3, the Department can reduce uncertainty in its harvest estimates without needing to increase the number of hunters in its survey.
	Recommendation 7: The Program should monitor pheasant populations on a local basis to measure the success of its habitat enhancement efforts and to strategize various methods to sustain pheasant populations and increase hunting opportunities. The Program should develop performance measures to evaluate the effects of its efforts on the pheasant population. This information should be included in the Program's annual report to the Legislature. The Program should analyze whether the Breeding Bird Survey data may be useful in developing its pheasant population monitoring protocols and use the data if it is found to be potentially useful.
	Recommendation 8: The Program should analyze the pheasant harvest and roadside count data for Grant and Adams Counties and determine the feasibility of using these data sources. County-level harvest estimates, Department-led roadside counts, and Breeding Bird Survey data are all available annually. Cross-validating this data over time may shed light on its utility for measuring population trends on a county or local basis.
	Recommendation 9: The Program should use the data it has started collecting in 2009 on harvest of released pheasants to analyze the effectiveness of pheasant releases in Eastern Washington. The Program should use this information as evidence of the preference for funding habitat enhancement and hunter access instead of pheasant releases.

What's next?

Initiative 900 requires the legislative bodies for the government agencies in this report hold at least one public hearing to consider the audit findings and to receive comments from the public within 30 days of this report's issue.

The corresponding legislative body must consider this report in connection with its spending practices. A report must be submitted by the legislative body by July 1 each year detailing the status of the legislative implementation of the State Auditor's recommendations. Justification must be provided for recommendations not implemented. Details of other corrective action must be provided as well.

The state Legislature's Joint Legislative Audit and Review Committee (JLARC) will summarize any statewide issues that require action from the Legislature and will notify the appropriate fiscal and policy committees of public hearing agendas. Initiative 900 provides no penalties for audited entities that do not follow recommendations in performance audit reports.

Follow-up performance audits of any state or local government entity or program may be conducted when determined necessary by the State Auditor.

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About the Audit

Why We Did This Audit

We audited the Eastern Washington Pheasant Enhancement Program in response to a legislative request. This audit was designed to determine if the Department of Fish and Wildlife uses:

- Effective strategies to improve pheasant harvests in Eastern Washington.
- Sufficiently reliable data to support management decisions.

What We Found

Pheasant populations have decreased in Washington primarily due to loss of habitat, which is the critical factor in sustaining healthy pheasant populations. Although the Department fulfilled its legislatively mandated pheasant release strategy, that strategy has not been effective at sustaining or improving pheasant populations and hunting opportunities in Eastern Washington. In contrast, South Dakota, which is a recognized leader in pheasant management, has increased its pheasant population and hunting opportunities by focusing on habitat enhancement instead of pheasant releases.

The Program has leveraged its limited resources by engaging in habitat enhancement activities through partnerships with other organizations that have complementary objectives. The 2009 legislature rescinded the requirement for the Program to use 80 percent of its funding on pheasant releases. This will allow the Program to expand these partnerships by reallocating funds it formerly used for pheasant releases.

The Program uses pheasant harvest estimates from an annual hunters' survey to monitor long-term pheasant population trends. This is reasonable because harvest estimates trend similarly to roadside counts in states that measure both. The Program will need to develop on-site population monitoring to help assess its habitat enhancement efforts.

Scope and Methodology

We audited the performance of the Eastern Washington Pheasant Enhancement Program from its inception in 1997 through 2008. The audit focuses on whether the Program is meeting Department goals and Program objectives, as well as whether it uses best practices to meet those goals and objectives. Our recommendations are limited to the Eastern Washington Pheasant Enhancement Program; we did not audit the Western Washington Pheasant Program.

We reviewed published research on pheasants and pheasant programs in other states to identify best practices. We identified state legislation relevant to Department goals and the Program and its objectives, and determined whether legislation, goals and objectives are aligned with best practices. We interviewed Program staff; reviewed Department and Program reports; reviewed historical data regarding the numbers of pheasant hunters, harvest and releases; and analyzed Program activities and the availability and quality of data that the Program needs to measure success.

The Department provided the data we used to portray pheasant harvest and hunter trends. The Department estimates these numbers based on responses to its annual hunter survey. We analyzed the Department's methodology and are making a recommendation that should reduce the level of uncertainty of harvest estimates. The Department uses this data in its own reports and publications and acknowledges

that the pheasant harvest and number of hunters have declined significantly over the years. *Based on this, we determined that our use of the data would not change our audit conclusions.*

We conducted this performance audit in accordance with generally accepted government auditing standards, prescribed by the U.S. Government Accountability Office. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In addition, we addressed the nine elements contained in Initiative 900, detailed in Appendix A.

Background

The Legislature created the Department in 1993 by combining the Department of Fisheries and the Department of Wildlife. The supervising authority for the Department is the Fish and Wildlife Commission, which is composed of nine citizens, appointed by the Governor, who serve staggered six-year terms. The Commission appoints the Department Director; establishes Department policy; and monitors the Department's implementation of the goals, policies and objectives the Commission established.

The Department has a dual mission to protect, restore and enhance fish and wildlife and their habitats while providing sustainable fish and wildlife-related recreational and commercial opportunities. The Commission established goals to assist the Department in achieving this mission:

- Achieve healthy, diverse and sustainable fish and wildlife populations.
- Ensure sustainable fish and wildlife opportunities for social and economic benefit.
- Ensure effective use of current and future financial resources in order to meet the needs of the state's fish and wildlife resource for the benefit of the public.
- Implement processes that produce sound and professional decisions, cultivate public involvement and build public confidence and agency credibility.
- Promote development and responsible use of sound, objective science to inform decision-making.

The Department's six-year Game Management Plans include species-specific management objectives. The Department recently released a Game Management Plan for 2009-2015 that included revised objectives pertaining to the Eastern Washington Pheasant Enhancement Program. The Program, along with other game species programs, periodically reports to the Commission, the Department Director and the public on its progress in meeting its objectives. The most recent report was released in 2007.

The ring-necked pheasant is the most popular game bird in Washington. According to the Department, more than 25,000 hunters harvested an estimated 94,000 pheasants in Washington in 2007. Although considerable, this is well below levels in the mid-1980s and prior, when the annual harvest was consistently more than 250,000, and often more than 500,000. In response to the decline, the 1997 Legislature created the Eastern Washington Pheasant Enhancement Program to increase hunting opportunities by requiring the release of pen-reared rooster pheasants on

sites accessible for public hunting. The legislation created the Eastern Washington Pheasant Enhancement Account and authorized the Department to use a portion of these funds to pay landowners to enhance habitat on public or private lands. The legislation also required that at least 80 percent of the money in the account be used to purchase or produce pheasants.

Pheasants were introduced to North America from Asia. They require a blend of habitats for nesting, roosting (sleeping and resting) and feeding. Uncultivated vegetation near cultivated crops is ideal pheasant habitat, but pastures, wetlands and streamside areas also provide suitable habitat. Adults feed primarily on cultivated grains and wild fruits, but will also eat weed and grass seeds, particularly in winter. Hens, chicks and juveniles consume insects during the breeding season. Pheasants are vulnerable in winter because concealing cover is scarcer and pheasants must forage for food at greater distances, exposing them to predators and harsh winter weather. Because pheasants have adapted well to the land on the edges of cultivated agricultural areas, populations have declined due to changes in agricultural practices that reduce the amount of uncultivated vegetation in the vicinity of cultivated crops. These changes have included farmers' use of machinery that cuts wheat stubble shorter and leaves less grain on the ground following harvest. The shorter stubble reduces protective cover and less grain reduces the food supply.

Commendations

In 2009, the Department supported successful legislation that rescinded the part of the law that required at least 80 percent of Eastern Washington Pheasant Enhancement Account funds to be used for pheasant rearing and release. This gives the Program more flexibility to implement effective pheasant management strategies. The Program is now working with other state and federal programs to leverage its limited resources with programs that have complementary objectives.

Partnering with other organizations to optimize the use of limited resources and to focus habitat enhancement efforts in select areas rather than to spread resources too thinly is a best practice. The Program has done both of these, by partnering with other organizations that participate in activities that complement the Program's habitat enhancement objectives and by concentrating its efforts in a designated pheasant focus area in Southeastern Washington.

Audit Results and Recommendations

Issue 1: Pheasant populations and hunting opportunities have declined due to loss of habitat.

Prior to 2009, state law required that at least 80 percent of the funds allocated to the Program be spent on purchasing or producing pheasants. This restricted the Department's ability to fund habitat enhancement, which is the most critical factor in sustaining long-term pheasant populations. It also hampered the Department's ability to meet its goals to preserve, protect, perpetuate and manage the pheasant population in Eastern Washington. Passage of the legislation puts the Program in a better position to sustain population and maximize hunting opportunities in Eastern Washington by reallocating resources to activities based on wildlife science, federal programs and hunter priorities. Since most good pheasant habitat is on private lands, Program efforts to increase access to this land will help increase hunting opportunities.

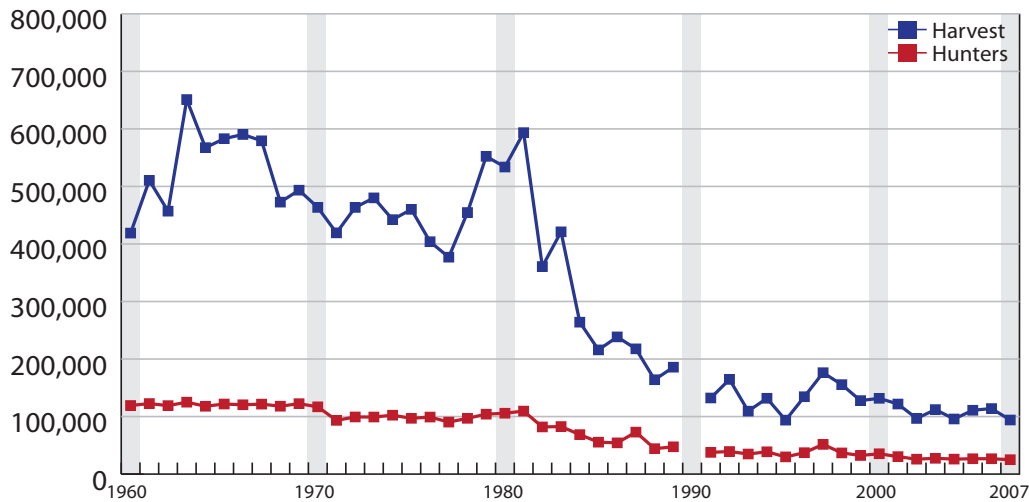
Harvests have declined from a peak of 651,000 pheasants to less than 100,000 annually.

Maintaining the delicate balance between public demand for recreational hunting and sustaining populations is not difficult in the case of pheasants, which naturally repopulate an area following hunting, so long as only roosters are harvested and habitat is maintained.

However, habitat in Washington was lost over time and pheasant harvest declined statewide, from a peak of 651,000 in 1963 to less than 100,000 in 1995.¹ This was due in part to nationwide changes in farming practices that left less uncultivated edges available for pheasant cover and less waste grain on the ground for food. The number of pheasant hunters in Washington declined similarly, from more than 90,000 annually through the 1970s, to less than 30,000 in 1995. Although the decrease in hunter activity may be partially the result of nationwide declines in hunter interest, the magnitude of the decline suggests that lack of pheasant may have contributed to the decrease in pheasant hunting. These trends are illustrated in Exhibit 1.

¹ Harvest and hunter trends are similar in Eastern and Western Washington. The Department uses estimates of harvest counts as a substitute for population because it does not perform actual population counts. This issue is discussed in Issue 2, Data Management.

Exhibit 1
Pheasant Harvest and Number of Hunters Has Declined Statewide



Source: Washington Department of Fish and Wildlife

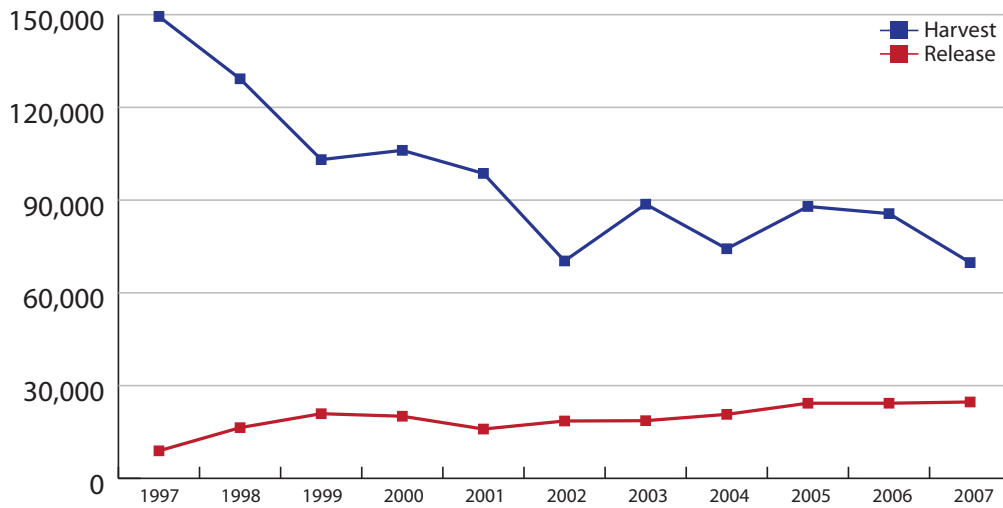
Note: Data for 1990 is not available. See limitation on data in Scope and Methodology section on Page 1.

The Eastern Washington Pheasant Enhancement Program has not achieved its goal to stem the decline in pheasant populations.

In response to declining pheasant populations and hunting opportunities, the 1997 Legislature created the Eastern Washington Pheasant Enhancement Program to increase hunting opportunities by focusing on the release of pen-reared rooster pheasants on sites accessible for public hunting. Because pen-reared pheasants do not have the natural instincts to find food in the wild and avoid predators, they have a much lower survival rate than wild birds. The Department releases pen-reared pheasants to improve hunting opportunities, not as a population management tool. Habitat enhancement, on the other hand, supplies pheasants with the food and cover needed for survival and has a greater potential effect on sustaining longer-term populations.

Comparing pheasant releases to harvest in Eastern Washington (Exhibit 2) presents compelling evidence that spending most of the available funds on pheasant rearing and releases has had little, if any, effect on sustaining pheasant populations over the long term.

Exhibit 2 Eastern Washington Pheasant Harvest Declined Although Releases Increased



Source: Washington Department of Fish and Wildlife

Note: See limitation on data in Scope and Methodology section on Page 1.

During the first six years of the release program (1997-2002), harvest continued to decline significantly. Releases have continued to increase, but harvest has at best stabilized. Because harvest would have rebounded quickly if pheasant releases had an effect on population, we can conclude the pheasant release program has had no long-term effect on population. In addition, the gap between pheasant releases and harvest suggests greater hunting opportunities exist for wild pheasant than for released pheasant in Eastern Washington. Because the Department's hunter surveys indicate some continuing support to fund pheasant releases, limiting releases to peak periods – such as the start of the hunting season, holidays and youth hunts – would be a more effective use of Program resources.

Habitat is the most important factor in sustaining pheasant populations.

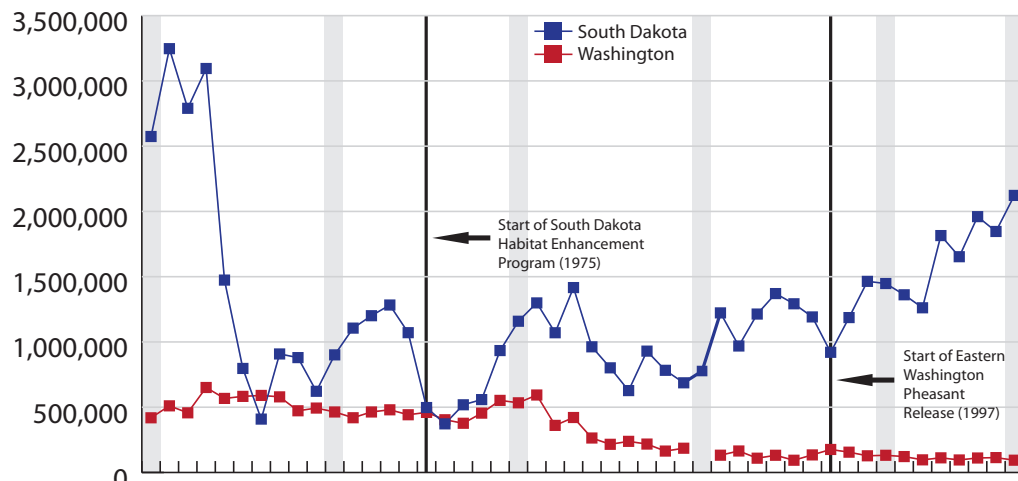
The pheasant population in a given area depends on habitat and weather. The effects of weather are short term, causing pheasant populations to fluctuate annually. The critical factor for long-term populations, therefore, is good quality habitat for breeding, avoiding predators and winter survival.

South Dakota is a leader in pheasant management, which includes a focus on habitat enhancement. Comparing South Dakota's pheasant harvests as an index of population with Washington provides further evidence of the advantage of focusing on habitat enhancement. Having found that pheasant release programs were either ineffective or cost-prohibitive, South Dakota discontinued releases. South Dakota has instead focused on habitat enhancement since 1975. Funded by a special pheasant stamp, spending on pheasant habitat in South Dakota has averaged over \$550,000 per year. In comparison, the Program manager estimates that expenditures on pheasant habitat in Eastern Washington have averaged approximately \$165,000 per year since Program inception, including \$11,000 per year from the Eastern Washington Pheasant Enhancement account, while expenditures for pheasant rearing and release have

averaged \$242,000 per year. While pheasant populations have decreased significantly in Eastern Washington, they have rebounded in South Dakota following a steep decline during the mid-1960s (Exhibit 3). South Dakota officials attribute their stable pheasant populations to "habitat quality and quantity."

South Dakota's climate and abundance of ideal pheasant habitat provide better conditions for pheasant than is found in Eastern Washington, so the effects of shifting expenditures from pheasant rearing to habitat will likely be less pronounced in Eastern Washington than in South Dakota. Development of suitable habitat and resulting growth in pheasant population may take several years to achieve because Eastern Washington receives less rainfall than South Dakota.

Exhibit 3
South Dakota's Pheasant Harvest Increased While Washington's Decreased



Source: Washington Department of Fish and Wildlife and South Dakota Division of Wildlife

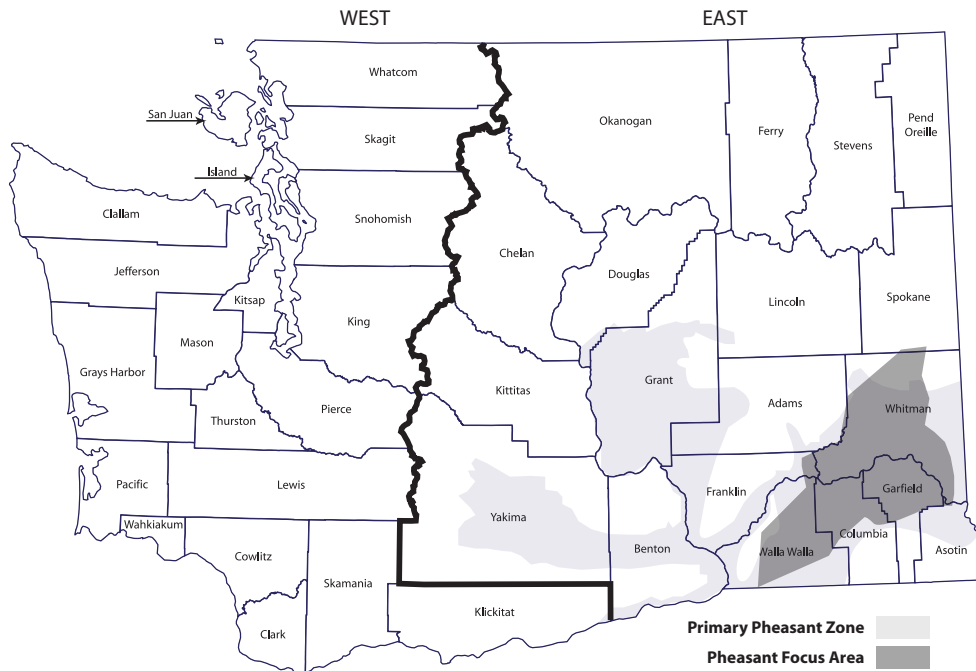
Note: Data for 1990 is not available. See limitation on data in Scope and Methodology section on Page 1.

The Program has leveraged its limited funding by partnering with others to focus its habitat enhancement efforts.

Program staff work with other organizations that have complementary objectives, thereby effectively leveraging limited Program resources. In partnership with federal programs such as the Conservation Reserve Program, they engage in activities that include enhancing habitat and increasing access to privately owned lands for public hunting within the Department-designated Eastern Washington primary pheasant zone. The Program further optimizes its resources by concentrating its efforts in the pheasant focus area in Southeastern Washington, which includes four counties: Whitman, Garfield, Columbia, and Walla Walla. The Department identified this area based on three criteria:

- Cost of improving habitat on nonirrigated farmland is relatively low compared to irrigated agricultural areas.
- Annual rainfall is conducive to producing quality habitat without irrigation.
- Availability of Farm Bill programs such as the Conservation Reserve Program.

Exhibit 4
Eastern Washington Primary Pheasant Zone and Pheasant Focus Area



Source: Department of Fish and Wildlife

Two recent activities illustrate the Program's partnering efforts:

- The Program manager participated in a Department effort to secure state funding for a land purchase in the pheasant focus area. The primary objective was to protect threatened and endangered species, but the land also provided excellent pheasant habitat.
- The Department worked with the state offices of the U.S. Natural Resource Conservation Service and the U.S. Farm Services Agency to change the Conservation Reserve Program in Washington to encourage CRP-participating land owners to provide suitable pheasant habitat. This should help make up for the loss of CRP-enrolled acreage in Eastern Washington, which has declined in recent years due to record high wheat and alfalfa prices.

The Program can augment its successful habitat enhancement efforts by reallocating pheasant release funds and expanding its partnerships.

Reallocating a portion of funds spent on pheasant rearing would offer the Program the opportunity to expand these efforts, increasing the likelihood that the Program can meet the Department's dual mandates to sustain the pheasant population, while attempting to maximize public recreational hunting opportunities.

The Program focuses its habitat enhancement activities in the pheasant focus area, which has been a judicious use of resources. The 2009-11 state operating budget appropriated \$100,000 to enhance pheasant habitat on public and private lands in Grant, Franklin and Adams Counties. These counties are mostly outside of the pheasant focus area but within the primary pheasant zone.

Some areas within the primary pheasant zone are targeted by other organizations for ecosystem and/or habitat conservation. Besides farmland and pasture, these include wetlands, shrub-steppe and grassland, which have all been identified as high

priority landscapes for protection and restoration and can also provide high-quality pheasant habitat. These programs may offer opportunities for leveraging funds and cooperatively enhancing and maintaining pheasant habitat on a landscape scale, avoiding habitat fragmentation.

The following programs are operating within the pheasant enhancement area and may offer additional opportunities for partnership:

- The Nature Conservancy has purchased more than 30,000 acres in the Moses Coulee and Beezley Hills areas to preserve shrub-steppe. Moses Coulee borders the Department-designated primary pheasant zone, and Beezley Hills is within it. This protected acreage could help maintain pheasant habitat on contiguous areas, increasing natural pheasant populations.
- The Office of Farmland Preservation, in the State Recreation and Conservation Office, promotes conservation practices on working farms. Farmland preservation grants may be used to enhance ecological functions, including habitat, that provide benefits to wildlife.
- The state Department of Natural Resources manages 1.1 million acres of agricultural land and grasslands and has more than 47,000 acres enrolled in the Conservation Reserve Program, including 7,873 acres in the pheasant focus area, and 10,198 acres in Adams, Franklin and Grant Counties. Because Natural Resources promotes sustainable use of the lands it manages, its CRP-enrolled parcels may be appropriate for habitat enhancement pilot projects.
- At the state level, the Washington Biodiversity Council released the Washington Biodiversity Conservation Strategy in December 2007. The strategy's guiding principles include improving coordination among federal, state and local government; taking an ecosystem approach; and active stewardship by private landowners. Lands within the primary pheasant zone that are categorized as significant in the strategy may offer opportunities for cooperative management for biodiversity and habitat.

Landowner participation in hunter access programs has been limited.

In addition to high-quality pheasant habitat, access to privately owned lands for pheasant hunting is important to the Department's goal of maximizing hunting opportunities because most pheasant hunting takes place on privately owned lands.² South Dakota has increased its focus on public access to private lands since 1997, spending an average of \$632,000 per year on access from 1997 to 2001. As can be seen in Exhibit 3, pheasant harvests have been increasing at a faster rate in South Dakota since 1997, when it began to increase this emphasis. The Washington Department of Fish and Wildlife's Partnerships for Pheasants Program has partnered with private landowners to open approximately 6,000 acres to public hunting within the pheasant focus area. Participation by private landowners has been limited because some have concerns about uncontrolled access to their lands. Landowners in the pheasant focus area who were interviewed stated participation likely would increase if the Department limited the number of hunters accessing the property or required hunters to obtain written permission prior to going onto the land. The Program has been evaluating changes to access programs that consider these concerns while offering reasonable accommodation to the public.

² Seventy-five percent of the Eastern Washington pheasant hunters responding to a Department-sponsored survey in 2008 reported hunting on private lands. An earlier survey in 1997 reported that 76 percent of hunters' time was spent on nonpublic lands.

A new federal program offers the opportunity to expand habitat enhancement while providing public access on privately owned lands.

The federal Voluntary Public Access and Habitat Incentive Program (also known as "Open Fields") will provide grants to state and tribal governments to encourage owners and operators of privately held farm, ranch and forest land to voluntarily make it available for access to hunting or fishing. The Eastern Washington Pheasant Enhancement Program is a strong contender for Open Fields funding because it already has habitat and access programs, and its Partnership for Pheasants program has similar objectives. Funds now used for pheasant rearing and releases could be reallocated to provide matching funds, improving the chances of selection for a grant. With \$50 million of funding authority over a four-year period, Open Fields could significantly increase the acreage of private land that is managed for pheasant habitat and available for public access in Eastern Washington.

Recommendations

Now that the Program's funding restrictions have been rescinded, we recommend the Department take the following actions to ensure it meets the goals of the Eastern Washington Pheasant Enhancement Program.

Recommendation 1

The Program should reallocate funds to habitat enhancement and develop pilot projects to demonstrate the effectiveness of specific habitat enhancement methodologies. A portion of reallocated funds could be used as matching funds for federal Voluntary Public Access and Habitat Enhancement Program grants. The Program should continue to emphasize the pheasant focus area, but also consider areas within the larger Eastern Washington primary pheasant zone for additional projects. Department-owned or -managed lands and Natural Resources-managed lands enrolled in the Conservation Reserve Program may offer flexible management options for establishing habitat improvement demonstration areas.

Recommendation 2

The Program should identify and pursue additional opportunities for partnering with others to leverage habitat enhancement funding. The Program should pursue partnerships with conservation organizations and consider opportunities outside of the pheasant focus area but within the primary pheasant zone to preserve and restore landscapes such as wetlands, shrub-steppe, grasslands and working farms.

Recommendation 3

The Department should increase pheasant hunting opportunities on private lands by addressing landowner concerns. The Department should develop guidelines that reasonably limit the number of hunters and access hours without compromising public access objectives. Requiring written permission may be acceptable if the Department can ensure that landowners are not showing favoritism.

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Recommendation 5

The Department should provide the legislature with evidence that reallocating funds from pheasant releases to habitat enhancement and hunter access is an effective use of resources. The Department's annual report to the Legislature should focus on progress toward achieving the activities and benchmarks already identified in the 2009-2015 Game Management Plan, including:

- Developing a method to determine the degree to which Eastern Washington pheasant releases impact overall program objectives, including pheasant harvest and hunting opportunities.
- Doubling the number of acres of quality pheasant habitat by 2014.
- Developing annual reports that describe efforts to evaluate habitat enhancement efforts on pheasant population levels.
- Monitoring pheasant populations.

The annual Pheasant Status and Trend reports provide a good template for reporting to the Legislature. In its first report to the Legislature, the Department should include a plan, developed in consultation with stakeholders, on how it intends to scale down pheasant releases in Eastern Washington and a discussion of adjustments it intends to make in its other activities.

Issue 2: The Eastern Washington Pheasant Enhancement Program does not have the data it needs to measure the effectiveness of its habitat enhancement efforts.

The Eastern Washington Pheasant Enhancement Program needs reliable information on pheasant population trends, hunter efforts and annual harvest in Eastern Washington to develop strategies and monitor progress on its goals of sustaining the pheasant population while maximizing hunting opportunities. The Program uses estimates of the number of pheasants harvested, based on an annual hunters' survey conducted by the Department, to monitor long-term population trends. Our analysis found it reasonable to use pheasant harvest estimates to track population trends. However, changing the survey methodology would reduce the degree of uncertainty in the Department's harvest estimates. The Program has just begun tracking the number of pen-reared pheasants that are harvested to determine the effectiveness of its pheasant release program. The Program does not currently monitor the effects of its habitat enhancement efforts on the pheasant population, but has identified this as a Program objective in the 2009-2015 Game Management Plan.

The use of harvest estimates to monitor population trends is reasonable, but the precision of the Department's harvest estimates is low.

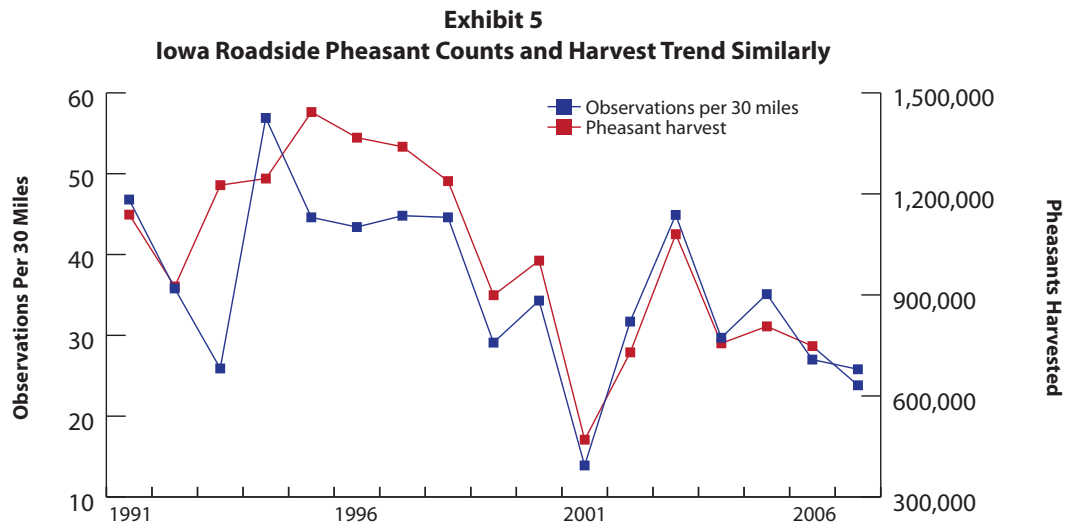
The Department uses pheasant harvest estimates to monitor long-term population trends. These estimates are based on an annual survey of a randomly selected group of small game hunters. Respondents report by county and species the small game they harvested and the number of days they hunted. The Department uses the survey results to estimate the total number of pheasants harvested based on the proportion of small game hunters that hunted pheasant in Eastern Washington, which is used to allocate funds to the Program.

Oregon, Idaho and Midwestern states that have large pheasant populations³ make widespread use of population counts taken along roadsides.⁴ To yield consistent results, these counts are taken by driving routes at certain times of day under specific weather conditions when pheasants are easy to count. States use these counts to predict how successful the upcoming pheasant hunting season will be and to track long-term population trends. The Department conducted roadside pheasant counts through 1998 but discontinued most of them due to budget constraints. It continues to conduct limited roadside counts in Grant and Adams Counties, but does not use these counts to estimate the harvest. The Program's reliance on harvest data for tracking statewide population trends may be appropriate if the harvest data closely tracks population counts and if it is reasonably accurate. To determine the reasonableness of using harvest data instead of population counts, we reviewed roadside count and harvest data for South Dakota, Iowa and Kansas, which have been collecting this data annually for many years. The data showed that roadside count and harvest data have similar variation over time. The

³ We analyzed information on the following Midwestern states: Iowa, Kansas, Minnesota, Missouri, Nebraska, South Dakota and Wisconsin.

⁴ In Iowa, for example, biologists and conservation officers drive 30 miles along designated backroads in August and count the number of pheasants and other small game they see. They drive 210 routes statewide.

following graphical comparison of Iowa's roadside counts and pheasant harvest confirms that pheasant harvest can be used to estimate population trends.



Source: Iowa Department of Natural Resources

The Department categorizes hunters by harvest in its small-game hunter survey sampling but does not gain full advantage of this categorization.

The Department estimates the number of pheasant harvested by obtaining data from hunters at the beginning and end of the season. When hunters buy a license that permits small-game hunting, the Department asks how many small game, including pheasants, they harvested the previous year and categorizes the hunter into one of four groups, based on their response. At the end of the hunting season, the Department randomly selects approximately 25,000 small-game hunters, including a portion from group, for a survey that asks about their harvest of small game by species and county. The Department then extrapolates a harvest estimate for each species and each hunter group based on respondents' reported harvest and the percentage of hunters in each group who responded to the survey.

This categorization is done to produce statistically improved harvest estimates. In theory, these improvements result from surveying a larger percentage of the groups with fewer hunters, and from surveying a higher proportion of hunters who harvest more game. In Exhibit 6, which shows the number of hunters and proportion surveyed in each group, groups 2 and 3 have these attributes. However, because the Department does not survey a higher proportion of hunters in these groups, it does not achieve the potential advantages of this methodology.

Exhibit 6 Proportion of Small-Game Hunters Surveyed by Group 2008 Small-Game Hunters' Survey				
Harvest Reported When Buying a Small-Game Hunter License			Small-Game Hunter Survey	
Group	Harvest Reported	Number of Hunters in Group	Hunters Surveyed	
			Number	Percentage
0	0	67,471	21,456	31.8%
1	1 to 5	12,536	1,800	14.4%
2	6 to 20	5,828	1,312	22.5%
3	21+	2,607	632	24.2%

Source: Department of Fish and Wildlife

The Program can now estimate the proportion of harvested pheasants that are pen-reared.

Although pen-reared pheasants are tagged prior to release, the small-game hunter's survey did not distinguish between wild and pen-reared pheasant prior to 2009. Having this information would help the Program interpret harvest data to determine if the release program is a viable method of increasing hunting opportunities and pinpoint specific situations in which pheasant releases would be effective.

The Program does not monitor the effects of habitat enhancement on pheasant population or harvest.

Wildlife biologists agree that high-quality pheasant habitat is the most important factor in maintaining pheasant populations. Pheasants need a blend of habitat types for foraging, nesting and winter survival. Because of these complexities, Program staff should monitor pheasant habitat enhancement projects for effectiveness.

Pheasant harvest data are reported at the county level but are of limited use for measuring habitat enhancement success, which often takes place at a more localized level. The 2009-2015 Game Management Plan calls for monitoring pheasant population status within the pheasant focus area and gauging how habitat improvements are affecting population trends. The lack of baseline data, other than harvest estimates, will continue to make it difficult to quantify progress on meeting its objectives.

Data from the North American Breeding Bird Survey may be a cost-effective way to establish a baseline level of pheasant abundance in priority habitat areas, and possibly for tracking progress over time. The survey, sponsored by the U.S. Geological Survey and the Canadian Wildlife Service, uses a highly standardized protocol to measure population trends and abundance of species. More than 270 scientific publications have relied heavily, if not entirely, on the survey's data, including a report on population effects due to changes to the Conservation Reserve Program. The researcher of this report was satisfied with the robustness of the surveying protocols. The U.S. Fish and Wildlife Service also uses the survey's trends as one indicator to assess bird conservation priorities. There are seven routes in the survey that are within or adjacent to the Eastern Washington primary pheasant zone where one observer has

counted pheasants annually since 1992 or earlier⁵. These routes provide an excellent opportunity for the Program to use data that is already available to monitor pheasant population trends.

Recommendations

We recommend the Department take the following actions to ensure the Program has the data available to measure progress on its habitat enhancement efforts.

Recommendation 6

The Department should continue to survey approximately 25,000 small game hunters but should survey a higher proportion of hunters in the groups that harvest more game. By surveying a higher proportion of hunters in groups 2 and 3, the Department can reduce uncertainty in its harvest estimates without needing to increase the number of hunters in its survey.

Recommendation 7

The Program should monitor pheasant populations on a local basis to measure the success of its habitat enhancement efforts and to strategize various methods to sustain pheasant populations and increase hunting opportunities. The Program should develop performance measures to evaluate the effects of its efforts on the pheasant population. This information should be included in the Program's annual report to the Legislature. The Program should analyze whether the Breeding Bird Survey data may be useful in developing its pheasant population monitoring protocols and use the data if it is found to be potentially useful.

Recommendation 8

The Program should analyze the pheasant harvest and roadside count data for Grant and Adams Counties and determine the feasibility of using these data sources. County-level harvest estimates, Department-led roadside counts, and Breeding Bird Survey data are all available annually. Cross-validating this data over time may shed light on its utility for measuring population trends on a county or local basis.

Recommendation 9

The Program should use the data it has started collecting in 2009 on harvest of released pheasants to analyze the effectiveness of pheasant releases in Eastern Washington. The Program should use this information as evidence of the preference for funding habitat enhancement and hunter access instead of pheasant releases.

⁵ There are other routes that either have gaps in coverage or were not counted by the same individual each year.

APPENDIX A: Initiative 900 Elements

Cross-reference of where the nine elements of I-900 are addressed in the report.

I-900 Element	Issue 1	Issue 2
1. Identification of cost savings	None	None
2. Identification of services that can be reduced or eliminated	√	None
3. Identification of programs or services that can be transferred to the private sector	Not applicable	Not applicable
4. Analysis of gaps or overlaps in programs or services and recommendations to correct gaps or overlaps	√	√
5. Feasibility of pooling information technology systems within the department	Not applicable	Not applicable
6. Analysis of the roles and functions of the department, and recommendations to change or eliminate departmental roles or functions	√	√
7. Recommendations for statutory or regulatory changes that may be necessary for the department to properly carry out its functions	None	None
8. Analysis of departmental performance data, performance measures, and self-assessment systems	√	√
9. Identification of best practices	√	√

APPENDIX B: Department's Response



State of Washington
DEPARTMENT OF FISH AND WILDLIFE

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December 4, 2009

The Honorable Brian Sonntag
State Auditor
Post Office Box 40021
Olympia, Washington 98504-0021

Dear Auditor Sonntag:

Thank you for the opportunity to respond to the performance audit of the Washington Department of Fish and Wildlife's (Department) Eastern Washington Pheasant Enhancement Program. The department strongly supports the use of performance audits as an important tool to improve state government, which is why we have worked so closely with the Auditor's staff on this and past performance audits.

We agree with both issues stated in the report. The first issue confirms that pheasant populations have declined due to loss of habitat. The second issue recognizes that the department does not have adequate data to measure habitat effectiveness efforts. With the recent shift of emphasis away from raising and releasing pheasants, we will be focusing our efforts on habitat enhancement, improving harvest opportunity, and developing better ways to measure the impacts of our work.

We appreciate the Auditor's commendation on the department's successful efforts to rescind the part of the law that required the department to spend at least 80% of the Eastern Washington Pheasant Enhancement Account funds for pheasant rearing and release. This allows the state's limited resources to focus on pheasant habitat and provides the flexibility to implement more effective pheasant management strategies.

Enclose is the Department's response to the audit. We will track and report our progress on completing these tasks to the Governor.

Sincerely,

A handwritten signature in black ink, appearing to read "Philip Anderson".

Philip Anderson
Director

Enclosure

cc: Kimberly Dutton Cregeur, Office of the Governor

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From the Washington State Department of Fish and Wildlife
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Issue 1: Pheasant populations and hunting opportunities have declined due to loss of habitat.

The Department of Fish and Wildlife concurs with Issue 1 as presented. Research conducted throughout pheasant range shows that creating and maintaining quality habitat is the most effective way to increase and maintain pheasant populations and associated recreational opportunity.

Recommendation 1: The Program should reallocate funds to habitat enhancement and develop pilot projects to demonstrate the effectiveness of specific habitat enhancement methodologies.

AGENCY RESPONSE:

The Department of Fish and Wildlife concurs with this recommendation. Using a phased reduction will allow the Department to strategically reduce releases, increase habitat enhancement efforts, and inform the public of our actions. Funding allocated to habitat enhancement will be used to help address Objective 98 in the 2009-2015 Game Management Plan; to double the amount of quality pheasant habitat in the Pheasant Focus Area by 2015.

Action Steps and Timeframe:

- Reduce the amount of funding devoted to purchasing pen-raised pheasants by at least 10% per year and reallocate those funds to habitat enhancement activities. The Department will begin reallocating funds beginning in 2010 with an ultimate goal of spending the majority of funds on habitat improvement activities.
- Develop specific habitat enhancement prescriptions for key habitats. General prescriptions have been developed and more refined prescriptions are being developed. Preliminary results should be available by 2011.
- Establish demonstration habitat plots on private or public lands by 2011. The Department began working on establishing demonstration plots in the fall of 2009.

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Recommendation 2: The Program should identify and pursue additional opportunities for partnering with others to leverage habitat enhancement funding.

AGENCY RESPONSE:

The Department of Fish and Wildlife concurs with this recommendation. Partnerships with federal and state agencies, as well as non-governmental organizations, increase the effectiveness of limited state resources. Partnerships can improve the Department's ability to work with landowners to improve habitat. There are also opportunities to use limited state resources to provide incentives to maximize the value of United States Department of Agriculture (USDA) Farm Bill programs that are designed to improve fish and wildlife habitat (e.g., Conservation Reserve Program (CRP)), or to improve public access in conjunction with habitat enhancements.

Action Steps and Timeframe:

- Annually pursue contribution agreements with the Natural Resources Conservation Service (NRCS) to increase habitat enhancement opportunities. A pilot agreement was reached in the last quarter of the 2009 Federal Fiscal Year. Additional agreements are actively being pursued.
- Pursue granting opportunities with the USDA and others. Granting rules for the USDA Voluntary Public Access Program (known as Open Fields) are due to be released in early 2010. Once a granting opportunity is available, the Department will pursue a grant with pheasant habitat and associated public hunting access as a component.
- Develop cost-share habitat and/or staffing agreements with Pheasants Forever, local Conservation Districts, or other entities on an annual basis.

Recommendation 3: The Department should increase pheasant hunting opportunities on private lands by addressing landowner concerns.

AGENCY RESPONSE:

The Department of Fish and Wildlife concurs with this recommendation. Landowner concerns vary widely and the Department must make sure that accommodations made to address the landowner's concerns do not greatly impact general public benefit. Increasing pheasant hunting opportunity is an objective identified in the 2009-2015 Game Management Plan (Objective 100).

Action Steps and Timeframe:

- Document rationale for landowner resistance to public hunting on their property and summarize by 2011 and use the results to help improve hunting access.

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- Develop quality private lands hunting opportunities through a variety of means. Investigate the feasibility of developing a hunting reservation system that addresses landowner concerns as well as the need for the Department to provide public benefit.

Recommendation 4: The Department should scale down pheasant releases in Eastern Washington with the goal of limiting releases to specific high-demand events such as youth hunts and holidays.

AGENCY RESPONSE:

The Department of Fish and Wildlife concurs with this recommendation. We think that a phased approach to the reduction is important so the decrease in releases and the increase in habitat enhancement spending are strategic and address the highest and best use of both released birds and habitat funding.

Action Steps and Timeframe:

- By 2011, utilize the Upland Game Advisory Committee and Regional WDFW staff to help identify the most effective release areas and timeframes. Annually coordinate reductions with identified priorities.

Recommendation 5: The Department should provide the legislature with evidence that reallocating funds from pheasant releases to habitat enhancement and hunter access is an effective use of resources.

AGENCY RESPONSE:

The Department of Fish and Wildlife concurs with this recommendation. We intend to provide reports as required by legislation. As stated in the program audit report, habitat enhancement provides the best opportunity to increase pheasant populations. Hunter participation tends to closely follow population trends.

It is important to note that habitat enhancements do not create immediate results, especially on a large scale. It will take time to implement habitat improvement projects (especially with existing staffing limitations) and have those improvements affect local pheasant populations. As habitat improvements are made across a larger area, more far-reaching effects can be made.

Action Steps and Timeframe:

- Create pheasant status reports on an annual basis. These reports will include habitat enhancement efforts, the results of population monitoring efforts, and a discussion on program effectiveness.

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Issue 2: The Eastern Washington Pheasant Enhancement Program does not have the data it needs to measure the effectiveness of its habitat enhancement efforts.

The Department of Fish and Wildlife concurs with Issue 2 as presented. The precision of current harvest estimates is not adequate to measure the effectiveness of habitat enhancement efforts.

Recommendation 6: The Department should continue to survey approximately 25,000 small game hunters but should survey a higher proportion of hunters in the groups that harvest more game.

AGENCY RESPONSE:

One of the Department's goals is to improve the precision of our pheasant harvest and hunter participation estimates, specifically in areas where it will help us measure the effectiveness of habitat enhancement efforts. We are not sure if increasing the proportion of hunters in the groups that harvest more game will accomplish that goal, but we are willing revisit our allocation formulas to see if we are allocating samples properly, and adjust if we find that changes will improve our precision.

Action Steps and Timeframe:

- Review small game harvest survey protocols to determine if changes to sampling or stratification will improve precision. Implement identified changes by 2011.

Recommendation 7: The Program should monitor pheasant populations on a local basis to measure the success of its habitat enhancement efforts and to strategize various methods to sustain pheasant populations and increase hunting opportunities.

AGENCY RESPONSE:

The Department of Fish and Wildlife concurs with this recommendation. As noted in the audit report, hunter harvest is a valid method to index population trends. However, the precision of harvest and hunter participation estimates at the county level should be improved. Funding reductions and changing priorities in the late 1990's resulted in the curtailment of spring crowing counts and summer brood counts. Both of these techniques can be used as an index to population trends.

Action Steps and Timeframe:

- By 2011, modify the small game harvest survey to increase the precision of harvest and hunter participation estimates at the county level. Concentrate efforts in the Pheasant

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Focus Area first, and then expand efforts to other important pheasant counties as possible.

- By 2011, consider implementing crowing count and brood count surveys in the Pheasant Focus Area to improve population trend information at the county level or smaller. Survey routes have been identified and a few pilot surveys were conducted in 2009.

Recommendation 8: The Program should analyze the pheasant harvest and roadside count data for Grant and Adams Counties and determine the feasibility of using these data sources.

AGENCY RESPONSE:

The harvest information collected in these counties is collected in the same manner as the remainder of the counties in the state. Additional data analysis for these counties will not reach a different conclusion concerning the usefulness of these data. Since funding is limited, efforts to increase the precision of harvest data and to increase the number of roadside counts (i.e., crowing and brood counts) will first be directed toward making improvements within the Pheasant Focus Area (see Action Steps in Recommendation 7 above).

Recommendation 9: The Program should use the data it has started collecting in 2009 on harvest of released pheasants to analyze the effectiveness of pheasant releases in Eastern Washington.

AGENCY RESPONSE:

The Department of Fish and Wildlife concurs with this recommendation. We began collecting this data in 2009 in an effort to evaluate the effect released birds have on overall harvest estimates. Continuing to collect the data over time should allow us to investigate the impacts, if any, of reduced releases.

Action Steps and Timeframe:

- As part of each year's small game harvest estimation process, develop specific statistics for banded pheasant harvest.

