

Non-Lead Ammunition Program Hunter Survey

Final Report

to the

Arizona Game and Fish Department

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February 2006

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Executive Summary

Introduction

Arizona Game and Fish Department (AZGFD) recognizes that lead poisoning is a mortality factor among the population of experimental, non-essential California condors that are being re-established in Arizona as part of the 10(j) Rule of the Endangered Species Act. Research suggests that lead from spent firearm ammunition is one of several sources of lead poisoning and may contribute to condor mortality.

In an effort to reduce this potential mortality factor, AZGFD offered coupons for free, non-lead ammunition to all hunters who had been drawn for big game hunts in Units 12A and 12B (prime hunting areas in California condor range) in 2005. Hunters were not required to participate in the program, but were encouraged to redeem one coupon for two boxes of non-lead ammunition (a limited variety of calibers and bullet weights was offered) at participating Cabela's (mail order) and Sportman's Warehouse (walk-in) stores.

In September 2005, AZGFD hired D.J. Case & Associates (DJCase), communications specialists in natural resources conservation, to survey hunters who received these coupons. D.J. Case surveyed participants and non-participants to determine the program's effectiveness and make recommendations for program enhancements.

Coupons: In 2005, AZGFD sent coupons for free, non-lead ammunition to 2,393 hunters drawn for big game hunts in Units 12A and 12B. The mailing included two coupons along with an explanatory letter about the non-lead ammunition program.

Survey: In October, DJCase developed two survey instruments, one for hunters who redeemed coupons for free ammunition (see Appendix A) and one for hunters who did *not* redeem coupons (see Appendix B). AZGFD reviewed these survey instruments and made edits in content and style. AZGFD printed and mailed surveys to hunters drawn for big game hunts in Units 12A and 12B. DJCase collected all surveys returned, entered responses into a database, and analyzed survey responses for both for hunters who redeemed and didn't redeem coupons. The final report is based on that analysis. An incentive for hunters to complete surveys was a random drawing for two \$250 gift certificates. DJ Case performed the random drawing and mailed certificates to winners.

Results

The survey was mailed to 2,393 hunters. Of those, 1,105 (46%) returned completed surveys. Of the surveys returned, 96% were sent by mail and 4% via the web-based survey form. Most respondents (85%) redeemed their coupons for non-lead ammunition. This is a high response rate for survey response and program participation.

Most participants (85%) tested the non-lead ammunition before the hunt, which is just what AZGFD hoped they would do.

Most participants (60%) rated ammunition accuracy as excellent or above average, with less than 4% suggesting it was below average or poor. There has been a lot of speculation that non-lead ammunition is not as accurate as lead, but most hunters in this survey who tried it don't think so. Similar results exist when hunters used non-lead ammunition on game.

Most respondents would use non-lead again, especially if ammunition was provided free.

Overall, perhaps the best indicator of the success of this pilot program is the fact that of all participants, nearly 75% would recommend non-lead to other hunters, while only 4% would not.

Recommendations

Based on responses of participants, we recommend that AZGFD should

1. **Continue effort:** Continue the non-lead program as budget allows.
2. **Support non-lead use:** Promote and make non-lead ammunition available as one of several ways that hunters can assist with California condor conservation efforts.
3. **Calibers and bullet weights:** Expand the number of calibers and bullet weights available to hunters participating in the program, especially smaller calibers preferred by youth hunters (.243).
4. **Coupons:** Provide only one coupon for free ammo, rather than two as was done in 2005. This process should be simplified so redeeming more than one coupon is not possible.
5. **Testimonials:** Consider contacting award winners to see if they would be willing to give testimonials about the ammunition and/or the fact that they won the contest (or both).
6. **Promote survey results:** Consider promoting survey results as part of or in addition to testimonials to allay concerns or prejudices about non-lead ammunition by showing Arizona hunters' positive experiences and views.
7. **Promote through partners:** Consider continuing to promote the condor conservation program to constituents through partners. Pro-hunting partners can positively impact hunters who didn't participate due to fears that the program was influenced by anti-hunters.
8. **Communicate research:** As it becomes available, the department should consider communicating ongoing research about how lead affects condors to help sway hunters who are not convinced that lead from spent ammunition is a problem for condors.
9. **Work with vendors:** Make sure that all participating outlets and the appropriate employees are informed about offering redeemable coupons. Future surveys might include questions about whether hunters experienced challenges to getting coupons redeemed with vendors. Such questions could focus AZGFD's efforts to communicate effectively with vendors and their employees.

Introduction

Arizona Game and Fish Department (AZGFD) recognizes that lead poisoning is a mortality factor among the population of experimental, non-essential California condors that are being re-established in Arizona as part of the 10(j) Rule of the Endangered Species Act. Research suggests that lead from spent firearm ammunition is one of several sources of lead poisoning and may contribute to condor mortality.

In an effort to reduce this potential mortality factor, AZGFD offered coupons for free, non-lead ammunition to all hunters who had been drawn for big game hunts in Units 12A and 12B (prime hunting areas in California condor range) in 2005. Hunters were not required to participate in the program, but were encouraged to redeem one coupon for two boxes of non-lead ammunition (a limited variety of calibers and bullet weights was offered) at participating Cabela's (mail order) and Sportman's Warehouse (walk-in) stores.

In September 2005, AZGFD hired D.J. Case & Associates (DJCase), communications specialists in natural resources conservation, to survey hunters who received these coupons. D.J. Case surveyed participants and non-participants to determine the program's effectiveness and make recommendations for program enhancements.

Methods

Coupons: In 2005, AZGFD sent coupons for free, non-lead ammunition to 2,393 hunters drawn for big game hunts in Units 12A and 12B. The mailing included two coupons along with an explanatory letter about the non-lead ammunition program.

Hunters were given two coupons – one was redeemable at Cabela's and the other at Sportsman's Warehouse stores -- for the sake of convenience, so that hunters had an option of where to redeem coupons. However, they were asked to redeem only *one* of the two coupons. (One coupon would allow them two free boxes of non-lead ammunition.)

AZGFD collected coupons from retailers and used coupon data to prepare a database to mail surveys to hunters who redeemed coupons and those who didn't.

Survey: In October, DJCase developed two survey instruments, one for hunters who redeemed coupons for free ammunition (see Appendix A) and one for hunters who did *not* redeem coupons (see Appendix B). AZGFD reviewed these survey instruments and made edits in content and style.

Soon thereafter, AZGFD printed and mailed surveys to hunters drawn for big game hunts in Units 12A and 12B.

The mailing explained the survey and reiterated why hunter input was needed; it announced that hunters who completed the surveys by the December 15 deadline would be entered into a drawing for two \$250 gift certificates (one from Cabela's and one from Sportsman's Warehouse). AZGFD mailed the surveys to hunters along with a postage-paid return envelope addressed to DJ Case. Additionally, DJCase developed a web-based survey form that enabled hunters to respond online if it was more convenient for the hunters than the paper form. This web address was included in the survey mailing.

DJCase conducted the random drawing (hunters did not have to redeem the coupon in order to enter the drawing) and selected two winners. DJ Case mailed prizes to winners.

DJCase collected all surveys returned, entered responses into a database, and analyzed survey responses for both for hunters who redeemed and didn't redeem coupons. The final report is based on that analysis.

Results

The survey was mailed to 2,393 hunters. Of those, 1,105 (46%) returned completed surveys. Of the surveys returned, 96% were sent by mail and 4% via the web-based survey form. Most respondents (85%) redeemed their coupons for non-lead ammunition.

Participant Survey

Following is a text summary of results from the participant survey. For complete survey results, including open-ended responses, see Appendix C.

Demographics: Of respondents who participated in the non-lead program, 88.6% were male, 28.4% were younger than 24 years of age, 27.1% were between 25 and 44 years old, 35.8% were between 45 and 64 years old, and 8.7% were 65 years old or older. When asked about their level of education, 30.1% had completed high school, 31.9% had some college education, 27.6% received a college degree, and 10.4% had a graduate degree.

Testing: Almost 85% of respondents tested the non-lead ammunition before going on their hunt, and they averaged 12.2 rounds fired during testing/sight-in. These respondents were asked how they would rate the accuracy of the non-lead ammunition and 28.5% considered it to be "excellent," 32.0% rated it "above average," 36.2% considered it to be "average," 2.0% considered it to be "below average," and 1.3% responded that it was "poor."

Performance: When respondents were asked how they would rate this ammunition's overall performance compared to lead, 7.4% replied that it did not perform as well as lead, 60.7% said that it performed about the same as lead, 17.5% indicated that it performed better than lead, and 14.4% were unsure.

Amounts: Additionally, respondents were asked what they thought about the *amount* of free ammunition provided and 17.2% indicated that "One box would have been enough, but it was

nice having the second box,” 77.3% replied that “Two boxes was a good amount, enough to test and hunt,” while 5.5% said that they really needed more than two boxes, with an average response of 3.3 boxes being needed.

Use and assessment: Almost 81% of respondents hunted and used the non-lead ammunition on their hunt, 15.1% hunted but did *not* use the non-lead ammunition on their hunt, and 5.5% were not able to hunt. When asked “Were you able to harvest an animal with the non-lead ammunition?” 41.6% indicated that they did.

For respondents that harvested an animal with non-lead ammunition, 86.2% tracked the animal less than 100 yards after it was shot, 10.7% tracked 100 to 300 yards, 1.5% tracked over 300 yards, and 1.5% did not recover the animal.

When asked, “*Overall*, what did you think of the non-lead bullet’s performance on game?”, 6.8% indicated that it did not perform as well as lead, while 70.5% felt that it performed about the same as lead, and 22.6% said that it performed better than lead.

Future use: When respondents were asked, “Based on your experience with this non-lead ammunition, would you use it again in the future if it were provided free?” 89.1% said “yes,” 3.6% replied “no,” and 7.3% were “unsure.” When asked if they would use it again in the future if it were *not* provided free, responses changed to 55.8% “yes,” 14.8% “no,” and 29.4% “unsure.”

Respondents who would not use non-lead ammunition again indicated that concerns about “performance” were most important, followed by “cost,” that they were “not convinced spent lead ammunition is a problem for condors,” and finally that they “need more scientific information about effects of spent lead ammunition on condors.”

Why they participated: Respondents were asked, “How important is each of the following in explaining why you participated in this Free, Non-lead Ammunition Program?” Most felt that it was very important that they were “asked to participate by Arizona Game and Fish Department,” followed by “it helped to protect condors,” followed by they “received free ammunition,” and finally, that they “heard or read that non-lead ammunition has good ballistics.”

Recommendations: Almost 72% of respondents said they would recommend non-lead ammunition to other hunters, while 24.7% were unsure and 4.2% indicated that they would not recommend non-lead ammunition to other hunters.

Non-participant Survey

Following is a text summary of results from the non-participant survey. For complete survey results, including open-ended responses, see Appendix D.

Demographics: Of respondents who completed a survey but did *not* participate in the non-lead program, 86.7% were male, 35.3% were 24 years old or younger, 22.2% were between the ages of 25 and 44, 36.6% were 45 to 64 years old, and 5.9% were 65 years old or older. With

regard to educational level, 30.6% had a high school diploma, 33.1% had some college, 22.6% received college degree, and 13.7% had a graduate degree.

Why they didn't participate: When respondents were asked, "How important were the following factors in causing you to *not* redeem the coupon for free non-lead ammunition?" the most important reason was "other" (see open-ended responses to this question in Appendix D) followed by "Non-lead ammunition was not available in their caliber." The next two most important reasons (statistically tied) were that "Non-lead ammunition was not available in my preferred bullet weight," and that "It takes too long to sight-in new ammunition."

The next three reasons were also tied in their importance and included that "redeeming the coupon was too complicated or too much hassle," that they "are not convinced that lead from spent ammunition is a problem for condors," and that they think "this program is an effort by anti-hunters to ban the use of lead."

The next two most important reasons (tied) was that they "handload hunting ammunition, and non-lead bullets were not provided by the program," and they "have *heard* that non-lead ammunition doesn't perform as well as lead." The least important reason for not participating in the program was that respondents "have *tried* non-lead ammunition, and it doesn't meet their expectations." [Italics by DJ Case]

Respondents were asked what one reason from the list above best described why they did not redeem their coupon, 43.2% said "other", 25.3% indicated that "non-lead ammunition was not available in their caliber," and 15.4% said that "redeeming the coupon was too complicated or too much hassle".

What would encourage participation: Respondents were asked, "How effective would each of the following be in encouraging you to participate in this program in the future" and provided a list of efforts. The most important was to "Offer non-lead ammunition in my caliber or bullet weight," followed by "Provide more information on how lead from spent ammunition is a problem for condors," which was followed by "Make it easier to get the non-lead ammunition." The final ranking options to encourage respondents to participate, "Offer non-lead bullets for reloading" and "Have private sportsman's organizations endorse this program along with the Arizona Game and Fish Department," were statistically tied in importance.

Analysis and Recommendations

The survey of hunters received a very good response rate, much better than expected. The high response rate could be due to: 1) receiving free ammunition, 2) being drawn for a very high quality (and high demand) hunt, or 3) both.

Most participants (85%) tested the non-lead ammunition before the hunt, which is just what AZGFD hoped they would do. Open-ended comments revealed that many hunters would not hunt with ammo that they hadn't tested for accuracy. Some respondents who did not use the ammunition or did not test it said they would have if it had been available in more calibers.

Most participants (60%) rated ammunition accuracy as excellent or above average, with less than 4% suggesting it was below average or poor. There has been a lot of speculation that non-lead ammunition is not as accurate as lead, but most hunters in this survey who tried it don't seem to think so.

Similarly hunters who used non-lead ammunition on game were generally pleased with bullet performance. Of the 42% who harvested game, less than 2% did not recover an animal hit with non-lead. Less than 2% had to track a hit animal more than 300 yards. Most (86%) tracked their animal less than 100 yards. Of hunters who used non-lead on game, 93% thought it performed as well or better than lead. Ammunition manufacturers may say that non-lead bullets are as good as lead, and shooting magazine writers may write testimonials about bullet performance, but the real proof comes when "real-world" hunters get out and use it on game in the field. For the majority of the respondents to this initial trial, performance seems at least adequate.

Most respondents said they would use non-lead again, especially if ammunition was provided free. Even if they had to buy their own ammunition, more than half said they would use it again, and only 15% said they would not. Given the relatively high cost of non-lead ammunition, this is a promising result for the future of this program.

Although the majority of respondents seem to have had good results with non-lead, both in accuracy and performance on game, it should be noted that the 15% who said they would not use it again listed poor performance as the top reason. This was followed closely by cost.

Overall, perhaps the best indicator of the success of this pilot program is the fact that of all participants, nearly 75% would recommend non-lead to other hunters, while only 4% would not.

Based on responses of participants, we recommend that AZGFD should:

1. **Continue effort:** Continue the voluntary non-lead program in prime condor areas as budget allows.
2. **Support multiple solutions:** Make non-lead ammunition available as one of several ways that hunters can assist with California condor conservation efforts. The goal is to make lead unavailable to condors, and non-lead ammunition is only one of the ways this can be done. Hunters should be able to choose the way that works best for them.

3. **Calibers and bullet weights:** Expand the number of calibers and bullet weights available to hunters participating in the program, especially smaller calibers preferred by youth hunters (.243, etc.).
4. **Coupons:** Provide only one coupon for free ammo. Even though materials sent out by AZGFD clearly stated that only one of two coupons should be redeemed per hunter, a fair number of hunters did not follow directions and redeemed both coupons. This process should be simplified so redeeming more than one coupon is not possible.
5. **Testimonials:** Consider contacting the award winners to see if they would be willing to give testimonials about the ammunition and/or the fact that they won the contest (or both). Testimonials can be used in future program announcements.
6. **Promote survey results:** Consider using survey results as part of or in addition to testimonials from hunters in announcements of future efforts. Hunters want to know what other hunters think. Show the negative comments as well—AZGFD should show both sides of the story and let hunters make their own decisions.
7. **Promote through partners:** Consider continuing to promote the condor conservation program to constituents through partners; in this way, they department can deliver key messages about options available to hunters to aid in condor conservation.
8. **Communicate research:** As it becomes available, the department should communicate ongoing research about how lead affects condors to hunters. Providing information over the long term can help hunters who feel uninformed about how lead impacts condors or those who “are not convinced that lead from spent ammunition is a problem for condors.”
9. **Work with vendors:** Make sure that all participating outlets and the appropriate employees are informed about offering redeemable coupons. While the extent of circumstances is not known, several participants noted that vendors weren’t aware of the redeemable coupons. It is not known whether the vendors rejected the coupons or simply lacked being informed yet redeemed them anyway. Future surveys might include questions about whether hunters experienced any barriers or challenges to getting coupons redeemed with vendors. Such questions could focus AZGFD’s efforts to communicate effectively with vendors and their employees.

Note: Fifty-four percent of hunters eligible for the non-lead ammunition program did not return a survey. Some of these redeemed the coupon for free ammo and some did not. It is impossible to speculate what these non-respondents think about non-lead ammo, condors, or anything else. As with most political elections, less than half of the population provides the input that administrators must use to make decisions. All of the results and recommendations contained in this report are based on the results obtained from respondents.

**Appendix A:
Participant Survey Instrument**

**Arizona Game and Fish Department
Free Non-Lead Ammunition Survey**

If you would prefer to complete this survey on-line, go to www.dicase.com/ammo

PLEASE COMPLETE THIS SURVEY AND RETURN BY DECEMBER 15, 2005, TO BE ENTERED INTO A DRAWING FOR A \$250 GIFT CERTIFICATE FROM CABELA'S OR SPORTSMAN'S WAREHOUSE.

Our records indicate that you participated in our free non-lead ammunition program. If you did NOT participate, please contact Kathy Sullivan at 928-214-1249, so we can send you the correct survey form so you can enter the prize drawing.

1. Did you test the non-lead ammunition before going hunting with it? No (*Go to Question 2*)
 Yes
- a. How many rounds did you fire during testing/sight-in? (fill-in) _____
- b. How would you rate the accuracy of the non-lead ammunition?
 Excellent Above Average Average Below Average Poor
- c. *Overall*, how would you rate this ammunition's performance compared to lead?
 Did not perform as well as lead.
 Performed about the same as lead.
 Performed better than lead.
 Unsure.

COMMENTS?

2. What do you think about the AMOUNT of free ammunition that was provided?
 One box would have been enough, but it was nice having the second box.
 Two boxes was a good amount - enough to test and hunt.
 I really needed more than two boxes. (If so, how many boxes did you need? _____)

COMMENTS?

3. Please check ONE response that best describes how you participated:
 I hunted and I used the non-lead ammunition on my hunt.
 I hunted but did NOT use the non-lead ammunition on my hunt.
 I was not able to hunt.

4. Were you able to harvest an animal with the non-lead ammunition? No (*Go to Question 5*)
 Yes
- a. How far did you have to track the animal after it was shot?
 Less than 100 yds 100 to 300 yds Over 300 yds Did not recover
- b. *Overall*, what did you think of the non-lead bullet's performance on game?
 Did not perform as well as lead
 Performed about the same as lead
 Performed better than lead

COMMENTS?

5. Based on your experience with this non-lead ammunition, would you use it again in the future if it were provided free?
 Yes No - **Why not? (Please explain in this space.)**
 Unsure

6. Would you use it again in the future if it were NOT provided free?
 Yes (Go to Question 8) No - **Why not? (Please explain in this space.)**
 Unsure

7. If you would NOT use it again, please rate the importance of the following reasons:

(Please check one response per row.)	Very Important	Slightly Important	Not Important
a. Cost			
b. Performance			
c. Not convinced spent lead ammunition is a problem for condors.			
d. Need more scientific information about effects of spent lead ammunition on condors.			
e. Other: (Please describe.)			

8. How important is each of the following in explaining why you participated in this Free, Non-lead Ammunition Program?

(Please check one response per row.)	Very Important	Somewhat Important	Not Important	No Opinion
a. Received free ammunition.				
b. Helped protect Condors.				
c. Asked to participate by Arizona Game and Fish Department.				
d. Heard or read that non-lead ammunition has good ballistics. Where did you hear or read it?				
e. Other: (Please describe.)				

9. How would you recommend non-lead ammunition to other hunters?
 I **would** recommend it to other hunters. I would **not** recommend it to other hunters. **Why Not?**
(Please describe.)
 Unsure.

10. Please offer any suggestions you might have on how to improve the Free, Non-lead Ammunition Program in the future, or any additional comments. (Attach a separate sheet, if necessary.)

Hunter Contact Information

Name and mailing address are required if you would like to be entered into the drawing. This information will not be released to anyone and will ONLY be used to contact you if you are a winner. (This information will ONLY be seen by an independent research firm and will not be provided to the Arizona Game and Fish Department or anyone else.)

Name: _____

Address: _____

City _____ State _____ ZIP _____

Phone number (optional): _____

Optional Information

Your demographic information will help improve future outreach efforts. It is not required, but please consider providing the following information. (This information will ONLY be used for research purposes. When you return your survey in the enclosed envelope, it goes directly to an independent research firm, and your individual results will not be provided to the Arizona Game and Fish Department or anyone else.)

Gender: Male Female
Age: 24 or under 25-44 45-64 65 or over
Education: High School Some college College degree Graduate degree

**THANK YOU FOR PARTICIPATING IN THIS SURVEY, AND FOR YOUR EFFORTS TO
CONSERVE CALIFORNIA CONDORS.**

**Please remember to return this survey by December 15, 2005 for a chance to win
a \$250 gift certificate from Cabela's or Sportsman's Warehouse.**

**Appendix B:
 Non-participant Survey Instrument**

**Arizona Game and Fish Department
 Free Non-Lead Ammunition Survey**

If you would prefer to complete this survey on-line, please go to www.djcase.com/ammo

PLEASE COMPLETE THIS SHORT SURVEY AND RETURN BY DECEMBER 15, 2005, TO BE ENTERED INTO A DRAWING FOR A \$250 GIFT CERTIFICATE FROM CABELA'S OR SPORTSMAN'S WAREHOUSE.

Our records indicate that you did NOT participate in our free non-lead ammunition program. If you DID participate (by redeeming the free non-lead ammunition coupon that was mailed to you by Arizona Game and Fish Department), please contact Kathy Sullivan at 928-214-1249, so we can send you the correct survey form so you can enter the drawing.

We would like to know why hunters like you did not participate in the Free Non-Lead Ammunition Program.

1. How important were the following factors in causing you to NOT redeem the coupon for free non-lead ammunition?

(Please check one response per row.)	Very Important	Slightly Important	Not Important
a. Non-lead ammunition was not available in my caliber. Please list caliber here: <input type="text"/>			
b. Non-lead ammunition was not available in my preferred bullet weight. Please list weight here: <input type="text"/>			
c. I handload hunting ammunition, and non-lead bullets were not provided by the program.			
d. It takes too long to sight-in new ammunition.			
e. Redeeming the coupon was too complicated or too much hassle. Why?			
f. I have <i>tried</i> non-lead ammunition, and it doesn't meet my expectations.			
g. I have <i>heard</i> that non-lead ammunition doesn't perform as well as lead. Where did you hear this? Please be specific:			

(Please check one response per row.)	Very Important	Slightly Important	Not Important
h. I'm not convinced that lead from spent ammunition is a problem for condors.			
i. I think this program is an effort by anti-hunters to ban the use of lead.			
j. OTHER REASONS OR COMMENTS?			

2. Which ONE reason from the above list BEST describes why you did not redeem the coupon?
 [Fill in the LETTER (a-j) of the best reason from the list above]: ____

3. How effective would each of the following be in encouraging you to participate in this program in the future:

(Please check one response per row.)	Very Effective	Slightly Effective	Not Effective
a. Offer non-lead ammunition in my caliber or bullet weight.			
b. Offer non-lead bullets for reloading.			
c. Have private sportsman's organizations endorse this program along with the Arizona Game and Fish Department. Please list an organization you would trust:			
d. Make it easier to get the non-lead ammunition. How?			
e. Provide more information on how lead from spent ammunition is a problem for condors.			
f. OTHER? (Please describe.)			

4. Please offer any suggestions you have on how to improve this program in the future, or any additional comments you may have. (Attach a separate sheet, if necessary.)

Hunter Contact Information

Name and mailing address are required if you would like to be entered into the drawing. This information will not be released to anyone and will ONLY be used to contact you if you are a winner. (This information will ONLY be seen by an independent research firm and will not be provided to the Arizona Game and Fish Department or anyone else.)

Name: _____
Address: _____
City: _____ State: _____ ZIP: _____
Phone number (optional): _____

Optional Information

Your demographic information will help improve future outreach efforts. It is not required, but please consider providing the following information. (This information will ONLY be used for research purposes. When you return your survey in the enclosed envelope, it goes directly to an independent research firm, and your individual results will not be provided to the Arizona Game and Fish Department or anyone else.)

Gender: Male Female
Age: 24 or under 25-44 45-64 65 or over
Education: High School Some college College degree Graduate degree

Thank you for participating in this survey, and for your efforts to conserve California condors.

Please remember to return this survey by December 15, 2005 for a chance to win a \$250 gift certificate from Cabela's or Sportsman's Warehouse.

Appendix C: Survey Results for Program Participants

Arizona Game and Fish Department Free Non-Lead Ammunition Survey

Program Participants Results

1. Did you test the non-lead ammunition before going hunting with it? (n=931)
 - 15.6% No (*Go to Question 2*)
 - 84.4% Yes
- a. How many rounds did you fire during testing/sight-in? (fill-in) (n=769) Avg.= 12.2
- b. How would you rate the accuracy of the non-lead ammunition? (n=796)
 - 28.5% Excellent
 - 32.0% Above Average
 - 36.2% Average
 - 2.0% Below Average
 - 1.3% Poor
- c. *Overall*, how would you rate this ammunition's performance compared to lead? (n=794)
 - 7.4% Did not perform as well as lead.
 - 60.7% Performed about the same as lead.
 - 17.5% Performed better than lead.
 - 14.4% Unsure.
- d. **COMMENTS?**
 - .243 was not available (2)
 - 1 inch groups at 200 yards.
 - 1 shot kill
 - Initial sighting in used lead 30-06 180 gr final sighting in used non-lead
 - 1st hunt with this type of gun
 - 30-06 dropped off about 4 inches at 100 yds.
 - a little harder to get sighted in at first
 - A little high and to the right.
 - A partition type bullet needs to be offered.
 - Accuracy from my rifle was primary-- other factory ammo shot better groups
 - Accuracy was above average. However I did not harvest a big game animal and am unsure of its penetration and expansion values.
 - Accuracy was fine, did not use on an animal to test its performance
 - Accurate and hard-hitting
 - All rounds shot to left had to reset gun, then ok.
 - as far as accuracy it was great
 - I was not able to harvest an animal, so I have no idea how well it performed in a field situation
 - As good or better than any other ammo I've shot in past

- At range I had very good grouping
- Ballistics seemed to be different than the equivalent in lead.
- Because of its length the shell would not chamber directly in to the magazine of my Remington model 7 rifle. The shell was about 1/16 too long and very pointed.
- Best group ever fired in my Win 70-338 wm
- Better if use to compare to standard lead-tip bullets about same to bonded bullets
- Better penetration, holds together, doesn't deform in my pocket
- copper bullets shoot appx. 8" higher at 100 yards compared to my round nosed lead bullets
- Couldn't really tell a difference
- Currently use Barnes X Bullets which I believe to be the same bullet
- Depends what you compare or use as your standard. I've handloaded Nosler premium bullets for years.
- Did not carry my caliber
- Did not feed well in my rifle. I have a 760 Remington 270 and ammo did not feed as well as lead- too blunt on the nose!
- did not get a deer to see
- Did not group as well as 180 gr SPBT at 100 yds.
- did not kill an animal (3)
- Did not need much adjustment.
- Did not recover bullet, it passed through 2 yr. old, 4 pt. male deer.
- Did not shoot as well as Remington SP 180 gr.
- Did not use for hunting
- Didn't have ammo for my caliber
- Didn't notice too much difference
- Different point of impact than lead for my rifle
- Drop rate over 100 yds is greater w/out lead
- During sight-in was unable to get it sighted in with non-lead ammo
- equal to lead at least
- Excellent idea (2)
- exited body a little cleaner
- factory ammo is not good for me
- Fouls the barrel.
- Good ammo
- Got 30-06 gun. I shoot 333-378
- groups at 100 yds were almost 2" . my handloads consistently group 1" or less.
- Groups were terrible! from a rifle that shoots under 1", I got 2"+!
- Hard to compare ballistics
- Hard to tell with only 1 use, I made 1 kill shot penetrating the shoulder.
- Have used Barnes bullets before, on elk in New Zealand. Perfect mushrooms!
- I am not a ballistics expert but I got my deer.
- I couldn't get the non-lead in a 243 bullet
- I did not need to make any adjustments to my scope for accuracy
- I did not shoot a deer to see how it would perform.
- I didn't fire any lead for sight-in. But copper performed at least as good.
- I didn't have the gun for the free ammunition
- I feel the 3 ribs (triple shock) on bullets destabilize accuracy.
- I had accuracy better than my own handloads
- I have hand-loaded these bullets with better accuracy before. They are excellent on game.

- I haven't used lead ammunition
- I only fired 1 shot while hunting; it did kill the deer
- I only sighted in to 100 yds.
- I passed on all bucks I saw so no kill
- I purchased and loaded Barnes X bullets and got better accuracy and carried that
- I reload and copper bullets (Barnes) are my bullet of choice. They perform well on game
- I reload for myself and have found a load that gives me 1/2-3/4" groups with Nosler Accubonds
- I sighted in a new scope with lead first, hence only 4 rounds of copper needed. It shot about 1" lower at 100 yds
- I thought I would have to adjust my scope somewhat with this ammo, but I didn't.
- I thought it was the same as I used last elk season I shot 3 shells to sight my gun in. I did the same with these shells I just shot 4 extra!
- I use a 7 mm Remington Magnum. I've always been concerned about close range bullet expansion. I shot a large buck at 100 yards. The bullet clipped one rib on the way in and one on the way out. It pierced the center of both lung lobes. It was a "perfect" shot and yet the animal didn't flinch at all before running off. There was NO bleeding from the body at all. The buck began bleeding from the nose as he ran and expired after about 400 yards. We were persistent and lucky to find enough blood to track and find the animal. For this reason I am unsure of the bullet's capabilities.
- I used a gun with a boss system. that's why I used a lot of bullets to sight in
- I used Barnes X bullets in reloading and am very satisfied with their performance. I used them on an elk this year!
- I used the Barnes Coated XLC bullets in place of the OX
- I was impressed with the accuracy during practice shooting, killed my deer with one shot through the shoulder, through the heart, out the other side
- I would use this again
- In my gun over 300 yards I wouldn't shoot non-lead ammunition accuracy was poor. 100 yards to 300 yards it was average.
- In the western states we have wide open shots up to 400 yds. After 200 yds the bullet was very unstable.
- It was my first time with a 30-06 and don't know how qualified I am.
- Just the accuracy was a problem.
- killed deer at 125 yds with 1 shot. Went all the way through deer 270=130grain bullet
- Large wound area
- Lead does not drop as much
- Left a large exit hole and left a large blood trail.
- liked it thanks
- Looks nice
- lots of knockdown power
- Loved it!! This was a new rifle, I only used the non-lead ammo. I feel it is as good as anything! I could not say with 100% accuracy, however!!!! I know; It sighted true- and, was a one shot perfect harvest!! Thanks!
- Made no adjustments to existing ones- fired at all distances out to 300 yds 1" group at 100- 6" group at 300
- My husband reloaded the 95 grain Barnes X Triple Shock because I was not offered in .243
- Nice group @ 100 yds!
- No complaints
- No performance difference but expensive to purchase
- no real noticeable difference (2)

- none (4)
- Normally reload my own ammunition and have favorites.
- Not as much damaged meat
- Not offer in caliber I planned to use for the hunt.
- Not sure of the expansion of the bullet on medium 5 yd. game?
- Noticed no difference between this ammunition's performance and lead ammunition.
- One of the hunters with us took a female lion and he saved the bullet and I was impressed how perfectly it mushroomed without fragmenting.
- Only fired 3 rounds at sight-in since trajectory was exactly the same as the lead ammunition of the same bullet weight that I was already sighted in for.
- only have target practice to compare. no game yet
- Overall accuracy equal or better than lead
- Penetration was not as good as lead
- Seemed a little more powerful / more recoil
- seemed to create good groups at 200 yds
- seemed to shoot a little higher than lead
- Seems the non-lead ammo goes straight thru
- Shot a deer twice I got away did not expand shot him twice I personally will never use it again.
- Shot a deer with non-lead, couldn't retrieve.
- Shot at 100 yd. same as lead
- shot great for "free" ammo
- shot seven and one half inches low at one hundred yards
- Shot the same as lead rounds. No change of sights needed
- shots were comparable to lead ammo of same weight. very little adjusting
- Since my 11 yr old is honing his shooting skills, hard to tell for sure how accurate. Seemed to perform similar to lead.
- Testing & hunting both were the same
- The 30-30 ammo my dad assembled using Barnes 150g FP X-bullets fouled barrels and grouped worse than lead ammo.
- The ammunition was very consistent and grouped well
- the answer to "c" refers to uniform grouping. The groups fired were comparable to my usual 150 grain Winchester Premium loads.
- The bullet performed well, good penetration
- The copper bullets grouped very well
- The copper bullets had very good groups
- The lead free ammunition seemed to hit the target a little higher than lead ammo.
- The most accurate ammo I have ever used in my 30-06
- The no-lead ammo sight-in higher than lead. So I had to lower it about 6-8 inches @ 200 yds
- The recoil was unreal
- The shot I took were all in the Bull's Eye
- The weight retention is great. The expansion is great.
- These comments apply to the 257 Roberts ammo my dad put together using Barnes 100g TSX BT bullets.
- They shot the same to me
- This is a premium bullet/loading. Great cartridge, non-toxic, will gladly use. Super accurate.
- To me there seemed to be no difference in the way it shot compared to lead ammo
- Unable to find bullet for ballistic comparison
- Unsure compared to lead but it did perform well.
- Up to 300 yds I don't see much difference, compared to lead.

- Used a chrony on 24 rounds. Velocity was better than most factory rounds. 30 cal, 180 gr bullets averaged between 2,820 and 2,850 fas FPS. Pretty consistent!
- Used the ammo on an elk at 60 yds. and all it did was punch holes. Didn't seem to expand as a lead bullet does.
- used this ammo for antelope, elk and this deer hunt. All three were very easy to recover. Same grain (130) for all three
- usually use 150 grain- 160 was more power than needed for deer
- very accurate great penetration
- Very consistent group placement on the target. With an animal accurate, zero bloodshot, no wasted meat.
- Very good groups out to 300 meters. 7MM
- very nice ammo. Enjoyed shooting and hunting with them!
- Very pleased
- Very pleased so much so that I bought the Barnes component to reload other calibers
- Was a bit high and right from lead site-in point, but was consistent. Does not appear to spread as much as lead on impact.
- was unable to apply to game
- Was unable to kill an animal - could not check impact.
- Was very satisfied with the performance of the load.
- went through deer and probably didn't mushroom!
- When loading a round the bullet went inside the casing!
- worked great (2)
- would of liked a bigger grain bullet
- Shot 1-2" higher at 200 yards than factory regular ammo. That is a lot of difference for a kid shoote!!!!
- Some of the rounds worked well with certain rifles. I experienced poor grouping with my Winchester but OK with Remington.
- I used a gun with a boss system. That's why I used a lot of bullets to sight in.
- Would of liked a bigger grain bullet.
- A little harder to get sight in at first.
- Shot 3: group after zeroing in.
- These Federals shot excellent in our 7mm Rem. Mag. As good as our hardloads! They were used in my son's hunt.
- (.308 Winchester) These Federals shot poorly (3-4" at 100 yards). We hard loaded our own w/ 168g Barnes Triple shocks w/ Reloader 15 – good groups.
- I cannot fault the lead free bullet as the problem I had with accuracy. I have problems with federal ammo in my rifle no matter what bullet is used. As a reloader I will try the lead free bullet as I am sure I can work up an accurate round.
- Not offer in caliber I planned to use for the hunt.
- Did not carry my caliber (30-30)
- I help my dad reload, so this way my first time to use non-lead bullets.
- Groups were probably OK for hunting but not as good as Winchester factory 180 gr. 300 WSM
- Groups were not quite as good on the bench as the lead bullets I usually use. However, at 100 yards 5 shot group was less than 3 inches
- The ammo was accurate and in the animals we shot it retained it's weight and shape favorably
- I have a model 70 Winchester that has a very light 22" barrel. It did not like the 130 gr. triple X bullet and posted 3 ½" - 4" 5 shot groups at 100 yards. In my .220 Winchester.
- Tested as well as any other quality ammunition
- Groups were terrible! From a rifle that shoots less 1". I got 2" plus.
- The most accurate ammo I have ever used in my 30.06

- Me and my dad both got drawn and I shot the guns before we went and the 300 mag (30 cal) with 180 grain bullets shot perfect and the 270 with 130 grain bullet shot all over the place and the same lead bullet would shoot good.
 - For youth hunters (I'm 75 lbs) you need load for smaller cartridges like 243 and 6mm. Some kids even use 22-250 & 223 or 222. Since these calibers are not loaded w/non-lead loads perhaps reloading components (bullets) could be an option.
 - I sighted in with copper jacketed load 180 grn bullets at 100 yards 2 1/2 " high. I sighted in with 6 shots non-lead bullets group was 2 1/4" high at 100 yards.
 - When loading a round the bullet went inside the casing!
 - I only sighted in to 100 yards
 - I sighted in my rifle with lead ammunition and then used the bronze ammunition
 - Penetration was not as good as lead
 - Does not mushroom as well as lead. Do less damage to the animal, do not have faith in the round to bring down the animal as well as lead.
 - The copper bullets had very good groups
 - I reload for myself and have found a load that gives me 1/2 - 3/4 inch groups with Nosler accubonds(?)
 - This ammo does not give off or transfer energy into the game animal, bullet entered left shoulder went diagonally thru body cavity and out right hip. Left exit hole similar to entrance. Didn't mushroom well.
 - I did not kill a deer. However two members of my party did. The ammunition performed very well. The bullets stay together with very little loss of mass
 - I could not get my groups as tight as normal but that could be due to my set up. Only tried one day
 - Killed a deer with it exit wound looked similar to deer I've killed with lead. Accuracy was similar to lead.
 - I liked the fact that bullet tips would not deform under harsh conditions of riding around in my hunting pack
 - A box of this ammunition is pretty high (twice lead) is this because it's new? Otherwise people are going to use lead.
 - I already handload the Barnes TSX bullet. I shoot hundreds of rounds of them a year and use them exclusively for big game. I gave the free ammo to my hunting partner, who had the same hunt. They shot very good for him.
 - Cross wind component greater than lead. Also – must sight in specifically for the 180 30-06 round as impact point was not same as with 180 lead BT (siena). Still when sighted in/ wind compensated got greater than 1 degree MOA accuracy
 - Accuracy was bad – not good enough to hunt with. So I used hand loads with nosler partitions. I did not use your Barnes triple shok as I did not have enough time to work up loads with the Barnes.
 - Accuracy was terrible. Question/ vague accuracy did not perform as well as lead until hand loaded. I hand loaded Barnes triple shok and accuracy improved to my expectations. But in factory form it was un-useable. I also used a different rifle and used my own Barnes bullets. To reload my own. I did not use the factory ammo.
2. What do you think about the AMOUNT of free ammunition that was provided? (n=935)
- 17.2% One box would have been enough, but it was nice having the second box.
- 77.3% Two boxes was a good amount - enough to test and hunt.
- 5.5% I really needed more than two boxes. (If so, how many boxes did you need? (n=50) Avg. = 3.3)

COMMENTS?

- (testing plus hunting)
- 2 boxes creates the incentive to participate, 1 box may not.
- 2 boxes should be plenty if you know what you are doing.

- 2 were enough but some may need more
- Friends vouched for the accuracy of these rounds so to conserve, I sighted in w/ standard ammo I already had.
- A larger variety of calibers would have been nice. 243, 243WSSM, 260
- Already use Barnes XLBC 180 GN
- Always have extra box to sight in again if you bump scope, etc
- as it turned out I only needed one bullet- but I only fired 6 to test so I could save the rest for the hunt.
- Assuming that rifle & scope are pretty close
- Depends if your rifle is sighted in or close. 2 boxes is enough. If not, more (3) boxes.
- Did not provide the correct caliber for the rifle I used during my hunt. Unable to test.
- Enough to test the gun and go hunting
- for practice
- Good amount. My rifle was still on target.
- Great assistance
- Had an antelope hunt right before Kaibab and did not want to sight-in my rifle twice so I used the non-lead for both. I also managed to bump my scope and had to sight-in a second time.
- I also bought some myself.
- I bought my ammo
- I didn't use your ammo for my hunt. I was very disappointed with how they shot. I sighted in 3 guns and they never seemed to be consistent. I changed all 3 back to shot lead ammo.
- I felt more comfortable knowing I had two boxes.
- I gave the second box to a fellow tagged elk hunter who shot a cow elk with it.
- I had about a 4 inch drop with the non-lead ammo at a 100 yds compared the to lead with two 30-06's. My uncles two 270s had no drop. Just for your info.
- I had to sight in new scope
- I had to use other ammo to shoot. First sight-in used 20 rounds had only 20 rounds to go. Would be better to have more to shoot before hunt. 60 rounds would be good.
- I have been reloading with Barnes Bullets for the past 2-3 years so it didn't take me too long to get dialed in with this ammo. Someone unfamiliar with these bullets may require 2 boxes.
- I like to practice prior to hunting so it was nice having 2 boxes.
- I like to practice shooting with the ammunition that I will use hunting
- I may not have undertaken the effort to obtain just one box
- I only needed a slight vertical adjustment in scope compared to my regular cartridges of same grain.
- I only used 3 bullets since my rifle was already sighted in.
- I shot one box for testing, I took one box with me hunting, I have 9 bullets left
- I sighted in my rifle and practiced with the two free boxes; I then bought 3 more boxes to take on my hunt.
- I sighted in two guns and had plenty!
- I thought it was a great deal to get it and awesome for you to do.
- I used the 5 rounds to zero the rifle and one round on the hunt.
- I usually like to have 3 boxes to test and hunt
- I was so satisfied I felt quickly not having paid for the ammo!
- I will always use them from this point on! I have a coworker with an upcoming deer hunt on the south rim of the Grand Canyon and I will give him a box I have left to use.
- I would not have switched for 1 box
- If I had to site in rifle you might need two boxes
- If need more than 2 buy your self

- If sight adjustment would have been necessary, 2 boxes would have been necessary. 1 box was good.
- I'm staying with all copper from now on !
- It seemed like two was a good number to get people to try it. I actually did only get one shot off while I was hunting. I will use them the next time I get drawn for a rifle hunt. I am a bow hunter.
- It was great sorry I didn't get a chance to shoot it, but I will soon.
- It was really good to have some free ammunition
- It was very nice to have even though I did not fire a shot while hunting!
- Junior hunt 1st time
- Just enough ammo THANKS!
- Just right
- Making more types and lighter calibers available would be good. I hunted with a 30-30 for this youth hunt, and that type of ammo wasn't offered.
- might offer a bigger range of calibers
- More than generous!
- My Remington 700 BDL did not need any adjustment from my old ammo.
- My rifle was already sighted-in so I didn't need to have two boxes. Performance seemed identical to lead ammo.
- My scope was off and it was nice to have enough ammo to sight in with.
- Need 338 ultra mag
- Needed more rounds because we thought we were having scope problems. The problem appears to have been a poor shooting gun. Barnes bullets appear to perform about the same as Federal 150 gr. factory loads. Not as well as 150gr. Nosler solid base.
- Never fired at an animal- never saw a trophy buck to shoot at!
- none
- Offer just Barnes Bullets to the reloader
- One free box and a half price coupon for a second box might be an excellent compromise.
- Only got drawn for deer -- if elk or antelope, might have needed 1 more box
- Seemed to shoot flat and true at 100 yds didn't drop as much at 200
- sent me wrong ammo
- Should have been available for any caliber or brand of non-lead bullets - more choice in bullet weights.
- Should use at least one whole box to sight in rifle.
- Since I was drawn for deer and elk the 2nd box was essential
- Superior bullets
- Thank you for sending the free ammunition.
- Thank you to whoever paid for this ammo
- Thank you! (4)
- Thanks for the extra box! I plan to use it on next year's hunts
- Thanks for the free ammunition!
- That was how well I liked it- thank you very much!
- The ammunition you sent did about 1-1.25" groups
- there is very little difference in point of impact with 130-140-150 bullets in 270g on with different manufacturers
- They "did not" send the proper caliber that I asked for.
- This is a great program.
- To sight in can take up to 25 bullets. Then you should have at least 20 rounds to make you feel like you have enough for the hunt of a lifetime 10 day long trip.
- Two boxes are enough to hunt with, but not enough to hunt and practice with.

- Two boxes is adequate.
 - Two boxes was extremely generous! Thank you!
 - Two boxes was incredible especially FREE!
 - two boxes was very generous (3)
 - two was good
 - very small adjustment for accuracy
 - we love these bullets, for hunting
 - what a great program! I hope it helps the condor and other scavengers
 - With 2 boxes I felt I had plenty to sight in the new rifle, and still participate in good hunting ethics. I did however purchase another box, just to be safe.
 - This was an excellent thing to help with these juniors in their hunt and teach them about wildlife concerns. P.S. Sportsmen Warehouse had no ammo available and were uncooperative
 - If I had to site in rifle you might need two boxes
 - Just because its free is great but if you and/or a kid must reshoot – resight in their guns just to use it you better have enough
 - I only needed 10 shells to sight in and 1 shot for the hunt, but it was nice to have 2 boxes. Mainly for sighting in. I don't think I would have taken the shells if only 1 box was provided.
 - I really appreciate the two free boxes. I am willing to test and help out our environment
 - Thanks
 - Used most of first box sighting rifle and getting familiar at various ranges
 - I personally (and one of my hunting partners) put new scopes on our rifles and fired 20-25 rounds to zero the scopes
 - My scope was off and it was nice to have enough ammo to sight in with
 - With the 270 I shot a box and a half and gave up
 - I only used 1 bullet to fill my deer tag
 - Thanks
 - The ammunition you sent did about 1-1 ¼" groups
 - I ended up buying an additional box in case sights were knocked out of alignment during transport
 - Took me a while (10-12) to get zero at short range then they seemed to perform different at 100 yards and used remainder of box to get close at that distance. I stopped so I would have rounds for the hunt
 - Ammo shot very close to where I was already sighted in so I still had 14 bullets from the first box to hunt with
 - I will expend 100 or more rounds in practice especially if the hunting situation could call for longer shots. This is needed to be ethically prepared for a sure human kill
 - Enough with 2 boxes for my bolt action, but when sighting in my partner's pump action took more than 15 rounds for sighting in
 - I shot and knocked down a deer a nice 4 point. The shot was 50 in the right front shoulder it got up and we track till dark. Finding only pieces of bone and flesh. Poor performance on this bullet
3. Please check ONE response that best describes how you participated: (n=940)
- 80.7% I hunted and I used the non-lead ammunition on my hunt.
 - 15.1% I hunted but did NOT use the non-lead ammunition on my hunt.
 - 5.5% I was not able to hunt.
4. Were you able to harvest an animal with the non-lead ammunition? (n=936) 58.4% No (Go to Q 5)
41.6% Yes
- a. How far did you have to track the animal after it was shot? (n=391)
 - 86.2% Less than 100 yds
 - 10.7% 100 to 300 yds
 - 1.5% Over 300 yds
 - 1.5% Did not recover
 - b. Overall, what did you think of the non-lead bullet's performance on game? (n=380)

6.8% Did not perform as well as lead
70.5% Performed about the same as lead
22.6% Performed better than lead

c. **COMMENTS?**

- 1 broke its back on the 1st shot
- 1 shot kill broke back
- About a 50 yard shot, so animal dropped where he was standing.
- Again I will never use it again.
- Again unable to answer those chokes! However I was very happy!! I will use lead-free ammo forever!!!
- Aimed shot at about 100 yards knocked animal to its knees. Lung shot was apparent from coughed blood in two locations. Almost no other blood trail! Conclusion, 7 mm round did not expand properly. Fatal hit resulted in lost animal.
- Animal traveled ~25', had totally bleed out.
I filled my tag with a nice 4x4 up in the Kaibab w/ 1 round. Zero bloodshot, I even recovered the round that traveled almost 4' in the animal. I have photos of projectile. A very nice copper "blossom."
- As long as Barnes X Bullets is great bullet. The ammo supplied was as good if not better than other commercial ammo on the market.
- Baseball-size exit wound
- Based on prior experience with Barnes X, on bear
- Better accuracy- bullet passed through deer completely, seemed to retain enough energy as the deer dropped within 25 yds
- Buck went down, moved about 2 yds, back was broken, entry hole seemed larger than exit
- Bullet apparently expanded well leaving a large exit wound. Caused massive damage making blood trail extremely easy to follow.
- bullet held together very well
- Bullet passed through the chest cavity.
- bullet seemed to hold together with no sign of shattering. Deer went <20 yds with heart shot
- clean pass through with no mushrooming
- Deer dropped at shot
- Did not fragment apart as much as the lead, yet still expanded perfectly.
- did not shoot (2)
- Did not shoot an animal. But target practice the load were accurate.
- Does not blood shot meat - but you might have to track it a little.
- DROPPED DEAD!
- Dropped deer right in its tracks (one shot).
- Dropped immediately (2)
- Excellent
- excellent damage path through animal
- Excellent performance on game.
- Federal Premium 130 grain Barnes Triple Shock in 270 good load for deer
- flew a little higher than expected
- Good penetration.
- Got my buck so good enough for me.
- great penetration, minimal damage
- Great performance. Great Mass retention penetration
- Had plenty of shots, did not harvest an animal as I was waiting for a larger buck.
- Hard to compare no similar types of bullets. Bullet blew up very badly.

- Hard to say it blows a big hole, two animals were shot with this bullet. The damage and shock was very extensive. All shots went through and through. A deer at 150 yards front shoulders through and through.
- Hard to say shot placement was very good.
- Not sure how it performs at long range but up to 300 yards it has great penetration and energy.
- I bought an extra box. I found the ammo too expensive at the Sportsman's Warehouse
- I couldn't get a non-lead bullet in a 243 bullet
- I did an excellent job on a large. I'm just not sure it was better than lead, but certainly not worse.
- I did harvest an animal, however I did it w/ lead ammo. did not know enough about the ballistics of non-lead
- I did not have success, but 2 of 4 in our party did.
- I didn't see any deer during the hunt but I did before
- I didn't shoot but saw some small bucks.
- I feel it worked well because it did the job and did not ruin any meat. Perfect lung shot that only broke 1 rib at the exit wound.
- I had the non-lead bullets, but opportunity presented itself to harvest a deer with bow and arrow.
- I hit my deer in the neck it went down no tracking. Hit buffalo in shoulder went less the 200 yds
- I missed the deer I was hunting to no fault of ammo.
- I shot a 3 year-old 8 pt buck- 160 lbs hanging weight at butcher. I like the ammo and will use it again. Shot the buck at 148 yds
- I shot my buck in the neck so she he died instantly
- I shot my deer with my 243. Free ammo not provided in this caliber. I used Federal Premium 100 gr. Nosler Part
- I shot the buck at 100 yrds. the bullet passed completely through the animal and broke the opposite front leg.
- I used it on an elk hunt in 4B - not on this deer hunt. I find the Barnes X bullets to be extremely effective.
- I used the rounds at the range in a friend's rifle.
- I was happy with the non-lead ammunition.
- I was impressed with the bullet's performance
- I was very happy with the performance of .270 cal. bullets. I would use them for other big game in larger caliber.
- I wasn't able to harvest an animal
- I will use it in my elk hunt (300 mag).
- I'm a reloader for 14 years and only in last couple of years, I been dedicated to using Barnes X bullet in all of my important hunts.
- It dropped two yards from where I shot it
- It was good
- larger entrance wound than lead. Exit wound about the same as lead
- Lost 1 big deer - it was stolen at end of blood trail. Killed small deer last day.
- my 13 year old son used the ammo on a cow elk hunt shot he in the neck dropped in her tracks I shot my buck in the neck at about 100 yards dropped in his tracks
- My deer fell where I shot it.
- My partner used ammo + did not have to track buck down immediately
- My son used the non-lead bullets and harvested a buck with one shot and deer dropped where he stood. non-lead bullet did a great job.
- Need to have some in 300 Weatherby
- Never used lead in this gun.
- No complaints 300 yd. shot mule deer went 10 yds. if that

- No shots taken
- Not applicable. Did not shoot at any game
- Not sure but the animal dropped within 5 yds of where it was shot
- OK! If it is better for the wildlife I support it.
- On this hunt which involved a broadside shot, the bullet seemed to lack the impact shock of lead-core bullets that partially fragment. However, the buck expired within 100 yards and because of a large exit hole it was very easy to track and locate. I expect that on a quartering shot this bullet would be more effective than lead-core bullets due to its deeper penetration.
- One shot kill at 175-185 yards.
- only went 10 yds
- Scope was off
- Shot deer in front of dead tree, bullet passed through deer into tree- heart shot
- shot deer in head, one shot
- Shot one deer at 160 yds - deer did not go 5 yds.
- Shot place was excellent & deer only ran approximately 40 yds before he dropped.
- Shot through the heart- bullet exited without any change in size- no impact expansion- by size of exit hole
- shot was close hard to tell
- Shot went through deer and did job, but exit wound was significantly smaller than lead round.
- Shoulder shot- good penetration- did not recover bullet
- The bullet got full penetration and did not separate.
- The bullet knockdown the animal with great penetration and clean
- The bullet went in side of deer hitting the backbone and then exiting the other side. Deer was approximately 200-210 yds out.
- The deer dropped in his tracks
- The deer were dinks but many dinks to shoot at.
- The non-lead bullet created more shock damage, hit front shoulder. The bullet stayed intact and mushroomed very nicely. I recovered the bullet from the animal.
- the penetration and expansion was better than I expected. The impact area was impressive!
- This ammo works great
- This is a premium bullet loaded by the best manuf. currently for accurate ammo.
- This was a Jr. Hunt. Federal does not have a nonlead .243 (most popular youth caliber) I picked them up for my 7mm mag which I will use when I draw the unit (Her father).
- Too close (60 yds) to tell difference
- Too much damage
I would like a lighter weight bullet offered
- use Nosler 150gr solid base. The accuracy was not good enough to take 250 yds or greater yard shots out of a Rem. 660 308 Rifle. short barrel youth gun.
- Used it to harvest mule deer in Colorado 2005 season
- Very happy!
- Very impressive! Animal dropped on the spot and rolled 10 feet
- Was shot in neck
- We love the Barnes X Triple Shock your ammo was not available in 223 so I reloaded a 53 grain Barnes X I have shot this bullet a lot and love it for hunting. Thanks we love the free bullets
- we use this ammunition on all big game
- Weather was too warm to bring big bucks to our area
- Went further than it should have with a perfect shot
- went through deer and could not recover bullet
- Worked excellent! Animal dropped in its tracks--bullet went right under the spinal column.

- Did not shoot
 - Had one chance at less than 50 yards, but was not a one shot kill (Other deer) therefore no shot taken
 - I was very impressed with the bullets performance! The buck literally dropped in his tracks
 - Deer was hit with fatal heart shot – no matter what bullet you shoot- animal was just as dead!!! Hit at 100 yard traveled 20 yards then died
 - I feel it worked well because it did the job and did not ruin any meat. Perfect lung shot that only broke 1 rib at exit wound
 - Only went 10 yards
 - Bullet blew up on entrance. A 2 ½ entrance wound blowing both lungs to jelly. Blood shot meat was removed for 10" around entrance
 - They definitely out perform any lead bullet on the market. Barnes triple shocks are great
 - We have hand loaded with Barnes (Triple shocks shoot best) for 2 years now – they out perform any lead bullet.
 - Did not fragment apart as much as the lead, yet still expanded perfectly
 - The deer were dinks. But many dinks to shoot at
 - Shot deer in front of dead tree, bullet passed thru deer into tree – heart shot
 - I did not get to use it on deer, but my dad shot an elk with it. The bullet went through both shoulders and stopped just under the hide. Mushroomed perfect and retain all weight. Nice bullet.
 - I did not have success, but 2 of 4 in our party did
 - I did not harvest an animal but I was present when two deer were shot. Both shots were at very close range and certainly in vital areas. In both cases the deer went down immediately but stood and ran after 5 – 10 mins.
 - I used the 270 and did not use lead free ammo. My dad used the 300 mag and killed a buck with one shot and I was impressed cause there was hardly any meat ruined. It was a small deer shot in the chest with a 180 grain bullet
 - I blood trailed for ¼ to ½ mile good blood trail. Shot mid chest took out both lungs
 - The bullet
 - Had to shoot twice. First shot hit deer in front scapula and deflected up thru shoulder. Did not enter chest cavity
 - Let me explain. My hunting partner scope fogged up after the rain during opening day. My hunting partner used my back up rifle and killed a deer. The deer was shot through heart so the deer went right down. With a lead bullet the heart would have been blown to bits, the copper bullet punched a small hole through the heart. The bullet also went through the deer with a small exit hole.
 - Killed a deer with it. Exit wound looked similar to deer I've killed with lead. Accuracy was similar to lead
 - It wasn't the ammo's fault; I hunted some of toughest country 12AE Kaibab has, just couldn't find an animal
 - First round passed through without opening! Second round hit bone and exploded(?) couldn't find bullet but found fragments
 - Could not tell bullet went completely thru
Animal dropped at shot (Hit high above lungs – through back) shot at 50 yards. Bullet passed through – not recovered
5. Based on your experience with this non-lead ammunition, would you use it again in the future if it were provided free? (n=935)
89.1% Yes 3.6% No - **Why not? (Please explain in this space.)**
7.3% Unsure
- ABSOLUTELY, YES

- Accuracy not up to my standards.
- because I like a bullet that can shoot a long way (over 250 yds)
- Because I never shot it
- copper fouling in the barrel
- Depends on hunt area- ammo appears too light for woods; missed 4 shots, switched to lead and 1 shot had buck, 180 grain
- destroyed too much meat
- Did not like it. Did not perform
- Do not like Hollow Point
- Does not expand - is junk as far as I can tell.
- Does not feed in my gun! If I get another gun I would be glad to use!
- factory ammo is not accurate
- Fouls the barrel.
- Goes through does not expand lost 2 deer because of these shells.
- I did not fire a shot the entire season
- I did not use it because I ended up using my 6 mm rifle which 6 mm ammo wasn't offered.
- I did not use it but would if a smaller cartridge were available
- I hit the deer in the lungs and liver and it didn't go through and didn't bleed. I thought I missed at first but I found it
- I intend to purchase the ammunition in all calibers I shoot
- I intend to use this ammo on my upcoming elk hunt.
- I like the concept of an all copper bullet and I want to help the condors.
- I prefer to load my own. (2)
- I reload but might use it in that area (if I get drawn again)
- I reload my own bullets and I am reluctant to change
- I will need to read more about the ballistics and expansion to decide if it has good qualities.
- If recoil was less, but I don't want to modify my weapon
- if requested
- In a different caliber (270)
- In my 33 years of hunting, this is only the second time I've lost an animal. The following day I shifted to my regular load and easily harvested an animal at a similar range and shot with the same rifle. There was a major difference in the expansion of the bullet as proved by the amount of blood loss from the exit wound.
- It made a bigger hole than lead and destroyed too much meat
- lead is better
- Like I said they need to be shorter and rounded at the tip.
- my wife used it, it worked great on her buck
- Need a variety of bullet weights. I have a .338 and got 2 boxes of 225 gr. It would've been nice to use a 180 grain
- no knockdown power
- People said the ammunition tore through the meat more than the lead ammunition
- Performance was low (4)
- The final shot on the animal was about 30' and it did not exit the body; also there was very little mushrooming of the bullet. In other words, I was lucky to have killed the animal.
- They were not very consistent to me.
- Was not available in my primary caliber (.243 WIN)
- We have been using Barnes X bullet way before this was offered.
- well it just doesn't work well with my guns
- Would try it with a different rifle

- Would try more practice with ammo
- Yes, even if not free!!! I will- to help preserve our wilderness!
- Yes, if partition type bullet was offered. No, if not.
- My brother and I participated in the 12A-W juniors only doe hunt. The loads offered in the free ammo program were mostly heavy caliber, heavy bullet loads that were not really good for junior hunters. We were shooting a .243 Winchester and a .260 Remington. We got 4 boxes of .30-06 for our Dad through your free ammo program, but he hand-loaded ammo for our guns using the Barnes all- copper X-bullets in our calibers. We recommend that in the future, you include in the program at least loads for the .243, which would be more appropriate for junior hunters. This seemed to be a popular caliber among the junior we met on the hunt.
- Copper fouling in the barrel
- Again, if animal hit w/fatal shot it dies no matter what you are using
- Only if I had a chance to really test it in my rifle; knowing how it performed at various ranges
- Well it just doesn't work well with my guns
- Lost too much meat
- But not in the rifle I used this hunt. It did perform through my sons rifle with very good results
- The ammo I tested in 180gr. 300 win mag was excellent; however, I didn't hunt with that caliber
- One deer was never found even with 3 people searching over 15 hours total. The second deer was found dead about 300 yards from where it was shot., but we waited 2 hours to pursue. In both cases there was very little blood where the deer was shot and were down for 5-10 min. There was very little blood anywhere outside the animal. I do not believe the bullets expanded properly.
- 270 it was too inconsistent and would not hold any kind of a pattern. In the 200 I would
- I did not use it but would if a smaller cartridge were available
- I have only seen one deer killed with a copper bullet, so it is hard to make a judgment. It did not appear to me that the bullet expanded enough. From what I saw if a vital shot was not made this animal would be lost
- Yes but only for deer in unit w/ condors. In bushy country I still use 220 grain lead for elk
- Only if they shoot with accuracy
- Only if it shoots in the rifle with enough accuracy to ensure a proper hit
- Impact will not do damage need to insure penetration

6. Would you use it again in the future if it were NOT provided free? (n=930)

55.8% Yes (Go to Question 8)

14.8% No - **Why not? (Please explain in this space.)**

29.4% Unsure

- \$30.00 a box is kind of steep
- \$32.00 a box plus not impressed with performance
- Accuracy? Could just be my firearm.
- After using all my supply of old ammunition, I switched to unleaded ammunition
- All things being equal I'm more confident in the stopping power of lead
- Barnes X Bullets are expensive to hand load. Commercial loads with Barnes are good but expensive
- Because I already had a supple of good bullets that I have used with handloads
- Because it costs much more than lead jacketed bullets
- Because of the price (32)
- Because I reload with non-lead HPS ballistic tips
- Believe it is rather expensive for the average hunter
- But only if I could find a bullet that shoots well in my rifle.
- Cost and drop of bullet

- cost and grains available
- cost to experiment and get it dialed in
- Could not find a trail. did not exit animal
- Depends on cost compared to lead. would use it in the same area if it was going to have a bad effect on wildlife
- depending on availability
- Depends on price (5)
- Depends on price?
 - unsure of stopping power
 - not convinced of accuracy
- Did not penetrate as well as lead
- Did not perform quite as well as lead and given the limited opportunities I like everything as good as possible, therefore I would purchase lead for the little extra edge.
- Did not seem to "hold" as [can't read]; out of every +4 rounds, one would go "wild".
- does not perform as well
- Don't want to have to re-sight rifle
- Expansion of lead better on my test.
- expensive and we reload
- Expensive would not unless mandatory
- Expensive, performs the same as lead
- Fouls the barrel. (2)
- Free ammo always gets my vote
- Friends have not had good performance on large game, bear, moose
- Handload and have a preference for different brand ammo
- I did miss a deer at 280 yds. but I am not sure if it was me or what!
- I have been hunting with Winchester Silver Tip ammo for years and I am very confident of its performance.
- I have started reloading Barnes Copper bullets the bullet tips do not deform in my pocket
- I hunt a lot and will check with others that reloaded like myself to see how they like the bullets
- I like ballistic tips
- I like heavy mag ammo
- I prefer to load my own. (11)
- I really do not feel lead (spent) bullets are any threat to condors with all of the other metal, plastic, bone, glass objects that have been removed from the dead birds they have tracked.
- I reload and have not been able to test different bullet weights and gains to be comfortable with one shot kills
- I reload, its not worth the expense to change unless you use them on everything
- I will use it again, but I still have a box of lead bullets to use. I prefer the bullet not fragmenting-- shot placement is very important.
- I would buy the lead ammo which I prefer and is less expensive
- I would have to check the cost and ballistics more. Free ammo could be used for anything including practice.
- I would not pay for the ammo. If it will not go directly into my magazine.
- I would purchase the exact ammunition with the exact bullet I prefer.
- I wouldn't pay for this product
- If it would help the condor population and if we were drawn for that area
- If price was reasonable and game and fish preferred us to use the lead free ammunition to protect the environment then yes

- If the accuracy was nearly as good as the bullets we use I love the idea of an all copper bullet. The weight retention and expansion are great!!
- If the cost wasn't so high per box I would use it again. Because of the free boxes I used it however, there has to be some reason (lower cost per box verses lead ammo) to make hunters use it over and over. Just need some kind of incentive and the cost would do it if subsidized by Game and Fish, manufacture, or special interest groups to offset the high price per box.
- If they were cheaper than regular ammo
- I'm a big fan of ballistics tipped bullets, price would determine which bullets I choose to shoot
- It is cheaper when my dad reloads ammo
- it is expensive and it needs testing with my guns.
- It is no better and not offered in as many varieties for reloading.
- It is very expensive for the gun I use. We reload our shells so this will help
- It was very expensive. I did not get to hit a deer so I did not see how it worked. I know how a soft point lead works.
- it's too expensive. Otherwise yes I would use it.
- Keep the price down copper is cheap
- Lead flies better
- lead is better and I really doubt a condor is saved by using copper
- lead is more efficient and I am not convinced this is saving condors!
- Like heavy mag ammo.
- more info on the bullet needs to be provided.
- No expansion.
- Not available in my area (2)
- Only due to the fact that it is approximately twice the price of the ammo I normally use. Since I like to visit the shooting range several times a year, the cost would be too much.
- Only for the condors
- Only if competitively priced i.e. within 20% of lead ammo
- only if the price was comparable to lead ammo
- Performance was low (3)
- Performed well on my deer, but only 1 trial where as I've had great performance many times with lead.
- Price and availability a factor, in condor area more likely I would
- Price- I had to buy a third box and it was significantly more expensive than lead equivalent and did not appear to perform any better.
- reload my own ammunition it is much cheaper and I can practice more
- Rotten groups!
- The ammunition costs too much even if you reload your own ammunition. To use for sighting in before you hunt
- The expense of the ammo compared to lead is too much more.
- The non-lead ammunition did not come in the caliber I used
- They were not very consistent to me.
- very effective, plus if it helps with the environment
- will use the cheapest
- Would in condor area, but not elsewhere
- Would load my own
- I hand load
- Because I would not have wanted to pay the extra money for the one bullet I used. Most of the time I fire only one shot for my deer.
- Copper fouling

- Holy Crap!!! My regular load shells are \$11.99 a box. These are \$32.99 a box that's 3 times the cost – no way!!!
- But only if I had a chance to really test it in my rifle; knowing how it performed at various ranges
- I wouldn't pay for this product
- I hunt a lot and will check with others that reload like myself to see how they like the bullets
- If price was reasonable and Game and Fish preferred us to use the lead free ammunition to protect the environment than yes
- Again due to the grain of the bullet unless I could find it in 150 gr. I would buy it and be a team player
- Yes in my .300 mag/ not in my .270 Winchester
- Rotten groups
- Keep the price down copper is cheap
- Believe it is rather expensive for the average hunter
- 300 mag if cheaper than lead. I would use it for this gun, not in the .270 because it didn't work
- I would have to check the cost and ballistics more. Free ammo could be used for anything including practice
- Does not perform as well
- \$32.00 a box plus not impressed with performance
- I would use the ammo that I currently own, prior to learning about the non-lead initiative
- I have seen arrows do more damage than the bullet from above. But please let me stress it is hard to judge a bullet from the one example above. I have hunted deer for 42 years and have my best choice lead bullets fail or not perform well.
- High cost rounds better accepted if cost were approx to lead ammo. \$26.00 for 20 rounds of 30-30 is too much
- I like my reloads
- High cost and poor bullet performance. Lead bullets would have mushroomed/expanded and caused more tissue damage and quicker kill
- Cost to experiment and get it dialed in
- Performed well on my deer, but only 1 trial where as I've had great performance many times with lead
- Only if they shoot with accuracy
- I use Barnes Triple Shok (Hand loads) in another rifle and works good – but not in the factory form
- Cost is much higher
- Impact will not do damage need to insure penetration

7. If you would NOT use it again, please rate the importance of the following reasons:

(Please check one response per row.)	Very Important	Slightly Important	Not Important
a. Cost (n=333)	44.1%	38.1%	17.7%
b. Performance (n=323)	80.8%	12.4%	6.8%
c. Not convinced spent lead ammunition is a problem for condors. (n=299)	32.4%	40.1%	27.4%
d. Need more scientific information about effects of spent lead ammunition on condors. (n=299)	30.8%	35.8%	33.4%
e. Other: (n=16) (Please describe.)	87.5%	0.0%	12.5%
<ul style="list-style-type: none"> • A little concerned about impact; what bullet will do 			

<ul style="list-style-type: none">• Accuracy!! (2)• Caliber availability not available in .270 Weatherby• Can I buy bullets (non-lead) to reload my own• Condor Preservation• Cost isn't an issue, if it works good use it. Plus it helps our condors• Cost would be the only reason. Protecting condors is very important!• Even if it is a possible problem I think it is a good idea to use this ammo as you can see this 270 130 grain took down a cow elk with 1 shot• Father is licensed falconer this is very important to their survival• Fouls the barrel.• I am more worried about a clean kill on a mule deer in that area than I am about a condor• I am very concerned about how lead affects all animals in our ecosystem.• I believe lead is a problem for all species of wildlife• I feel they performed very well. But more info about the effects on the condors would be needed• I fully support the Game & Fish initiative to protect the condors!• I know lead is a huge problem for condors I will always use copper in condor areas• I spotted a condor perched #93 he looked like he was sick. Call me if need more info on this bird.• I would use it• I would use the ammo I already own first.• If I drew another Kaibab hunt where condors are affected I would use the ammunition. But I would not use it on other hunts I drew in the state.• If I even get drawn again in the Kaibab I will use it• If supplied I would use the Barnes X Rounds• If this will help save the condors then we need to go this direction.• Lousy groups!• More calibers needed.• Need ballistic comparison chart I would use it			
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<ul style="list-style-type: none">• Never heard of lead problems with birds• never seen a condor• Not available in all calibers.• Often use hand loaded ammo• once it becomes main stream, I would be more likely to use it.• One hunter I talked to said his gunsmith said it clogs up your rifling and you really need to clean it well• Rather than free ammo you need to educate the hunter regarding relative importance.• reloading has always been the cheapest route• Suspect bullet will not open up as well as lead when hitting game.• The .270 win ammo did not group well in my rifle (.270 win featherlight)• The copper bullets grouped 2" @100 yds lead groups 1/2" @ 100 yds• The non-lead ammunition did not come in 243 caliber• the opening of the bullet• Unsure how to answer c + d I believe lead is harmful to condors• Unsure of effects this bullet has on rifle bore• Very poor shells, no expansion at all.• What makes you think that a very sharp copper bullet would not kill a condor?• When I run the numbers, there is enough lead in one of my 150 grain loads to poison a 10 kg bird, provided it is fully metabolized. I'm not wild about testing cumulative poisons on condors.• would maybe use lead in other areas than Kaibab• would use it again• would use it if free• Unsure of the question #C & D I can read it 2 ways. I think if it will help the condor's it's a good thing to use non-lead bullets. But only in the area of concern• Would not feed properly in Remington pump (partners gun) ok in my bolt action. Passed clean through animal on first shot without opening.• Once it becomes main stream, I would be more likely to use it• Lead kills condors. I do not think hunter are going to like copper bullets• I would use the ammo I already own first			
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<ul style="list-style-type: none"> • I fully support the Game and Fish initiative to protect the condors! • Lousy groups • Cost would be the biggest factor in not using this ammo again • Can I buy bullets (non-lead) to reload my own • Never even heard of lead problems with birds until you told me??? • I have been told that the solid copper bullets are very bad for barrels so I didn't use them until I get more info. • I'm no rocket scientist but you can't convince me lead would have any effect on condors 			
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8. How important is each of the following in explaining why you participated in this Free, Non-lead Ammunition Program?

(Please check one response per row.)	Very Important	Somewhat Important	Not Important	No Opinion
a. Received free ammunition. (n=919)	52.8%	33.8%	12.7%	0.7%
b. Helped protect Condors. (n=914)	60.5%	31.5%	4.3%	3.7%
c. Asked to participate by Arizona Game and Fish Department. (n=903)	64.7%	30.3%	4.1%	0.9%
d. Heard or read that non-lead ammunition has good ballistics. (n=717)	21.3%	19.4%	11.2%	48.1%
<p>Where did you hear or read it?</p> <ul style="list-style-type: none"> • a friend • A friend that hunts • a friend that self-loads • A hunting magazine. • Advertising (terminal ballistics) • After receiving letter I called Barnes! • Already shooting Barnes coated XLC's • American Hunter Magazine (5) • American Rifleman (3) • Ammo box. (2) • Ammunition web site • An article that was sent to me by AZGFD • At my wife's work • AZ Game and Fish Dept. (16) • AZ Game and Fishing News • AZ Game Newsletter • AZ Outdoors (3) • Barnes Bullet advertisements (2) • Barnes Bullets has a good reputation 				

<ul style="list-style-type: none">• Barnes Reloading Manual• Bugle Magazine (3)• Bullet MFG advertisement• Cabela's and tried it• Custom rifle makers, sporting magazines• Do not remember (2)• DVD from Barnes web sight• Family members.• Federal 2004 Ammo Booklet• Federal Advertising and various gun magazines• Federal Ballistic Sheet• Field and Stream Magazine (4)• Fish and game web site, game hunting magazines• Friends (9)• Friends and Reports• friends have tried these bullets and liked them.• From a relative that knows ammunition• from ads• From charts sent out• From Federal Ammo• From local gun shop owner• from manufacturer• from my dad. (5)• From the information that was mailed, internet & side of box• From the manufacturer• Game & Fish Application (2)• Guns & Ammo Magazine (6)• Guns & Ammo, American Rifleman, North America Hunter• Handloader and rifle magazine• Handloader mag and American rifleman• Handloader Magazine• Have not hear or read about it. (12)• have used Barnes XLC for 2 years• Heard and read first time through free offer. AG&FD.• Heard from a person that has used them and also reloads.• heard from my father and co-worker• Hunting Magazine (9)• Hunting magazines and bullet MFG advertisement• Hunting magazines and internet.• Hunting/shooting periodicals and internet forums				
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<ul style="list-style-type: none"> • I called Barnes bullets, in person and federal ammo. • I do a lot of reloading and have pick-up everywhere mag/man/TV • I hand load and have heard good things about Barnes Bullets • I have killed 2 elk with Barnes Bullets • I have used Barnes bullets for several years • I heard it from my grandpa that lead ammunition is harder to clean from barrel after extensive use. • I load and test my own bullets, so what I read or hear has little effect. • I really hadn't heard much about it until I drew Kaibab Tag • I reload and have used other Barns Products • I tested the ballistics and was satisfied with accuracy. • I think you should add the ballistics with the bullets • In a bullet manufacturer's information • in ballistics books + gun dealers • In outdoor life and Bugle • Info provide with ammo my son checked additional info. • Internet (10) • Internet - Barnes Website • It just did not perform well in my gun. • Local gun shops • Magazine Article (16) • Magazines and word of mouth curiosity on ballistics • My dad and I reload and we already new about non-lead ammo. • My father had great success on another hunt with this ammo. • My father informed me of the ammunition's performance. • My friends have given me good and bad reports on Barnes. • My hunting partner shot a buck and the ammo performed excellent! • My own use of them (2) • National shot show 2005 Las Vegas • Never read about it • no previous information (4) • Not true. • NRA Magazine (2) 				
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<ul style="list-style-type: none"> • NRA Rifleman magazine • On AZGFD email articles • On the internet azod.com • On the letter sent to me from the AZGF for Kaibab deer hunt • on TV • One of my monthly magazines • Only here • Other hunter friends • other hunters • Outdoor Channel • Outdoor Life (4) • Outdoor Life AZ Wildlife views local gun shop • Outdoor Life Field & Stream • Outdoor magazines • Past experience • Person's Rifle Shooter • Peterson Hunting Mag • Pollack gunsmithing • Previous experience with x-bullets. • prior personal experience • Product info with ammo • Provided pamphlet • Read a magazine article comparing top brands/types of loads • Read in Game & Fish • Read it on the Federal Brochure which was sent to me • Reloading manual. • Researched after receiving free ammo on net • Researched current ballistic tables deep penetration good bullet formation and detritions. • Rifle magazine, "Handloader" magazine • Rifleman Magazine, Game&Fish Info • Sportman Mag. • Sportsman's Warehouse (3) • Stats put out by Federal • surfing the internet. http://www.federalcartridge.com/default.asp?pg=27&firearm=1 • Test fire for myself • The pamphlet that was sent and I hooked up ballistics • Trophy Hunter Magazine • TV commercials and hunter magazines (2) • Use Barnes X Bullet in black powder gun in New Mexico • Used and hunted with Barnes "x" bullets in 				
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<p>handloads.</p> <ul style="list-style-type: none">• used before (2)• Used for 15 years• Used it before don't like the expansion• You• From my dad• Test fire for myself• Word of mouth• Heard from my father and co-worker• Friends have tried these bullets and liked them• I reload and have used other Barnes Products• On AZGFD email articles• I think you should add the ballistics with the bullets• American Rifleman• Material sent by AZGFD and various articles in magazines and on the internet• Hunting publications Barnes reloading manual, www.barnesbullets.com• Publications, Barnes reloading manual, www.barnesbullets.com• I didn't hear• Magazine articles• Read about it in Field and Stream or outdoor life magazine• Outdoor life• I do a lot of reloading and have pick-up info everywhere mag/man/tv• Field and stream mag• Hunting/shooting periodicals & Internet forums• Friends and reports• AZGFD articles on email• Had never heard of non-lead ammunition• My father informed me of the ammunitions performance• Advertising (Terminal ballistics)• Barnes bullet advertisements• Various articles in outdoor life and other magazines• Hadn't heard about it but pretty good for factory rounds, not as good as 30 cal, 180 gr. But hand loads with lead• Bad question "vague" are you talking about flight ballistics or terminal ballistics• Non-lead has no better ballistics than any other good bullets. It's by far more tempermental to good accuracy than lead/jacketed bullets and is by far harder to clean your rifle without special solvents and tight brushes• Excellent penetration not necessarily excellent ballistics• From adds				
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<p>e. Other: (n=37) (Please describe.)</p> <ul style="list-style-type: none"> • A letter I got last year when I hunted in the same area • B&C are the reasons no exposure until information on hunt received • Barnes Copper bullets do not get deformed after being in my pocket all day long • Barnes X bullet is supposed to be a high quality bullet • Barnes X Bullets are very good • Believe in protecting and maintaining proper wildlife and habitat. • Condors are Magnificent!!!! • couldn't get non-lead for my 243 rifle • Curious to see how it would perform. • Dad bought this in .308 for his elk hunt & will use it for cover deer in Dec. • Deeper penetration and cleaner kills • Did not carry my caliber. • Experience with the bullets. • Felt it was my responsibility as a responsible hunter. • Good bullet performance • great idea to protect scavengers! • Have used copper ammo before • Help save endangered bird. • Hey if it helps it did a good job on my wife's deer, no problem. • Hunters have to have good reason to change ammo -- more ed. is needed from G+F • I did buy VHAL shock (2 boxes) from Cabela's for my sons 260 MO Grain for a 12 West doe hunt. Shot at range. Performed excellent. Cost was reasonable but a little high. Would buy again though. • I felt that AZGFD would not endorse it if did not provide clean kills. • I had planned to are different ammunition • I hand load • I have heard about the quality of Barnes Bullets before- I never tried them for they are expensive- after trying them I see they are worth the extra cost. • I have hunted and fished in Arizona for my lifetime and am always open to new products that might preserve the wildlife in this great state. 	<p>75.7%</p>	<p>21.6%</p>	<p>2.7%</p>	<p>0.0%</p>
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<ul style="list-style-type: none">• I have used Barnes Bullets black powder hunting• I have used non-lead ammo in the past with good results• I knew nothing about the non-lead ammo until I was offered the free ones. I found it interesting to try them.• I know I will never use it again.• I know they are good and efficient bullets• I seen a condor in 12A, 150 feet above my head. It was great and made my trip all worthwhile• I use all the time anyway• I use it all the time anyway but different weight and hand loaded.• I wanted to try the exact ammo I was given anyway.• I was impressed on it's performance• I was very satisfied with the way these bullets shot when comparing to lead. I was extremely happy w/ the end result after a 200 yd shot• I wish it would have performed better in my gun. I would have used• ignorant of and new to copper slugs• I'm curious, who is paying the bill on these loaded ammunition? Two boxes per hunter x the number of tags drawn seems to be a lot of money for one bird. I only wish that it did not come out of funding that was meant for habitat improvement.• Info from "shooting times" and "guns" mag• It kills great but some guns don't like it.• I've seen bullets removed from killed game and the mushroom pattern and retained bullet weight are very convincing.• Lead free is safer to handle for everyone• Makes a clean kill• Mixed experiance on accuracy• my responsibility to protect our wildlife as needed. If it takes me to change my ammo, then I will.• my state game and fish department asked me to• Never heard of non-lead until hunt• Only Barnes X Bullets with a good manufacturer would I consider using the rounds. The rounds supplied are very good• Personal experiance with Barnes Bullets have been excellent				
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<ul style="list-style-type: none"> • Practice ammo got my 30-06 very hot, had to space ammo • Protecting condors from lead was the primary reason I used it. • Read about it in sporting books • Really it was requested by AZ and it's simply part of being a good sportsperson. • Reference questions 4 and 6. I liked how the bullet performed. I will seriously consider continued use of these bullets. • Saw a total of 5 different condors and one was feeding on a gut pile. It certainly brings home the importance of less toxic ammunition. Huge birds. • Thank you for free ammo (2) • The bullet performance • to help condor • Very accurate bullets. • wanted to try non lead ammo • We need to protect our environment • we shoot this bullet a lot. Figured if you went as far as giving ammo we would use it for you guys. Good luck with the condors. • Don't agree with spending lots of money to attempt bringing in condors – waste, but don't want to be source of their demise. Expensive birds! • The bullet performance • Non-lead ammo is a good program to protect non-harvested game. Such as condors, fox, bobcat, waterfowl –etc • I personally had to resort to a different weapon for the season. One of the other hunters had a pass through double king shot from 200 yards. With a 27- and the free ammo (impressive) • Experience. Elk shot w/ sienne 165 gr. Gameking – 40% weight loss! Barnes – unbelievable penetration expansion! • Barnes bullets, especially the Triple shokes, are the best bullet made • Have used other lead free bullets and sabots in muzzle loaders that preformed very well • 2 or 3 years ago I watched a family of eagles feeding on the gut pile from my elk in Unit 5B south. After receiving the literature about lead effecting the condors I knew it had to affect the eagles and any other animal feeding on the gut pile • Did not carry my caliber (30-30) • A letter I got last year when I hunted in the same area 				
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<ul style="list-style-type: none"> • Through my "sighting-in" process I believe I learned that the bullet did have good ballistics • My state Game and Fish Department asked me to!!! • Always want to help our wildlife when I can for future hunters • I would rather not consume, directly or indirectly any animal exposed to toxic metals 				
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9. How would you recommend non-lead ammunition to other hunters? (n=931)

71.7% I **would** recommend it to other hunters.

4.2% I would **not** recommend it to other hunters. **Why Not? (Please describe.)**

24.7% Unsure.

- Poor accuracy (2)
- Ammunition is higher in price
- If price was same as non-lead
- If the ammo was still free!
- Anything that even has a slight potential in helping our wilderness is worth doing!!
- Cost (2)
- Did not perform
- Don't know enough about its performance
- Don't know enough about non-lead ammo to recommend
- Everybody should use it, it works great, very accurate
- excellent ammo- shot well in my .270
- Fouls the barrel.
- Have not heard positive feedback
- Have the make sure they will work in their rifle.
- high cost-marginal accuracy
- I am very skeptical of the bullet's performance. In my 33 years of hunting in AZ and UT, I have harvested 21 deer and 2 elk, usually with one shot. This is only the second time I've lost a wounded animal.
- I hand load Barnes X Bullets are expensive and hard to load. If supplied I would hunt with rounds supplied as long as same supplied.
- I need to see more examples of bullet performance first-hand
- I still need to shoot it more and see how it performs on an animal
- I would need more ballistics facts and comparison information
- I never tested it.
- I think you understand.
- I would ask them to please try it.
- I would if they were hunting in a condor area
- I would only recommend it if they had Kaibab tags.
- I would use it for condor area; not otherwise
- I would really have no opinion
- I would tell them I killed a deer with it but that this is just one story.
- In my opinion I was not using proper type bullet for this hunt. It worked, but not up to my past experiences.
- In the Kaibab because of the great birds the condors

- with exception to condor area would not recommend due to bullet performance
- It all depends on ballistics
- It destroys too much meat
- It doesn't penetrate through the animal and you might lose it
- Its worth a try, to see if you like it
- lack of penetration ability!!
- never used it
- No expansion.
- no mushrooming
- Not able to verify bullet performance
- not convinced it is better than lead
- Not enough experience using this ammunition.
- Not enough information on this one
But the older Barnes are great bullets
- Not sure if it's as lethal as lead
- Not triple shock but x-bullet
- Performance (7)
- Poor accuracy
- Quality ammo!
- The bullets are too light
- The manufacturers need to load better quality ammo
- The performance as far as weight retention and expansion is the selling point.
- We have not used the ammunition yet.
- We hunted in the rain on day one. At the end of the day "blue-green" corrosion on chambered round began. Not sure of effect on accuracy.
- who hunt in the condor area
- I need more facts on what its effects are on my rifle
- Shoots 1-2" higher at 200 yards than lead. Costs 3 times more than lead
- With exception of condor area would not recommend due to bullet performance
- But many good bullets out there in last 10-20 years
- I would tell them if it shoots well – shoot it. If it doesn't don't. Also be sure to properly clean you gun to rid any cooper fouling(?). It is softer than gilding metal used in normal jacketed bullets
- My accuracy results were for my gun; based on my sight in session it performed as well as my standard federal ammo – but not enough experience with it to give strong opinion
- I would tell them I killed a deer with it but that this is just one story
- I need to see more examples of bullet performance first hand.
- Lead bullets shot from ranges over 100 to 200 yards will usually exit a large animal (deer and larger) if adequate caliber is used
- The deer my hunting partner killed with a copper bullet had a very small hole punched through it. The deer was hit in the shoulder, through his heart, and exited the animal. The exit hole was very small, with a lead bullet it would have been large or not exited at all.
- Depends on game hunted. Expantions may no be adequate for antelope size game
- I'm a firearms instructor and would like to see some results of testing and do some testing of my own
- I would state that prehunt testing is vital to determine if a particular rifle likes the loading
- Performance observed two different calibers .270 & 7mm
- We have not used the ammunition yet
- Bullet came apart too fast
- I would have tested and shot many rounds before I would recommend bullets to anyone. The Fed. Bullets I received were the same in lead I already shot
- Not enough information on this one. But the older Barnes are great bullets

- Because these bullets only work well in certain barrels/ or guns. I wouldn't want to depend on a poor bullet to harvest something that we only get a shot at once a year
 - Not convinced it is better than lead
10. Please offer any suggestions you might have on how to improve the Free, Non-lead Ammunition Program in the future, or any additional comments. (Attach a separate sheet, if necessary.)
- 3 boxes (2)
 - 3 boxes heavy mag ammo
 - A large discount on say 5 boxes of ammunition might be more effective.
 - A very good program as is. I will have to harvest an animal before making a final decision on use/recommendation.
 - After receiving the tag, this was a welcome surprise. I was extremely happy with the entire process/hunt.
 - All four hunters that I was with used their own reloaded ammunition. Factory ammunition does not shoot well enough for any of us. If you offered free bullets instead of factory ammo I would use it.
 - A lot of people I talked with stated that it was not available in the calibers they used
 - Ammo was not available on shelf for sale
 - Ammunition was not available on the shelves. I was told the ammunition was very expensive but was unable to even see price since it was not on shelves.
 - Anyone drawn for the North Kaibab should receive free ammunition
 - Arizona Game and Fish and Sportman's Warehouse and Cabela's did a great program
 - As long as the price stays good, all will be good
 - ask for assistance from hunters the same way you did this year
 - Be able to choose bullet weights in grains. (3)
 - Bullets should be softer
 - Check the energy of the ammo
 - Continue to do the things you are doing (3)
 - Continue to work with youth hunters
 - Continue with info and education on use of non lead ammo.
 - Design more non-lead ammo that does not go straight thru the animal
 - different bullet weights?
 - Do as you did now- also add other areas such as 7-Gab
 - Do it the same way.
 - Do the same as in this hunt. Offer it for free, do research and surveys, if it works out for hunter and hunted or other animals involved, start using it on a regular basis but bring the price down.
 - Do the same for the 12AW hunt or give it to the people that used it last year. Thanks for the opportunity
 - Education is the key. One will not use it unless given the opportunity. Such as the free ammunition program provided. One box would have been enough- thank you!
 - Encourage other manufacturers to develop non-lead ammunition. Many hunters/reloaders have favorite brands, and loyalty to it is similar to Ford and Chevy owners!
 - Everyone likes to get FREE things, and if it helps save wildlife that's great too. Thanks
 - Everyone who uses non-lead ammo does not have to pay the Kaibab stamp, everyone who uses lead ammo has to pay the Kaibab stamp of \$30.00
 - Excellent
 - Excellent way to introduce this type of ammo. Thanks.
 - Extend free non-lead ammo to all drawn hunts
 - Flagstaff is in a hunting area, so make it available here for free as well.

- For a 30-06 deer I would prefer a 165-grain load (and Barnes does make a 165 gr X bullet but it was not offered)
- Free ammo was awesome!!!
- Get a better product
- GIVE FREE AMMUNITION and more people would come.
- give it to other Hunt Areas
- Give more facts about the condor death rates assumed to be from lead ammunition. Have Game and Fish push copper ammunition for all hunts to get people used to using it.
- Give more free ammunition
- Give more information on why non-lead ammo is so important to the condors' future.
- Give them one "incentive" box to control costs ask them to use it and tell them why and I believe the response will be overwhelmingly favorable. Ammunition costs are minimal in the overall cost of the hunt.
- Good program keep it up! (3)
- good program, should be mandatory
- Good program, the free ammunition helps us want to change the ammunition.
- Good program, will reap results in the future.
- Good program. I'm going to use my remaining ammunition on an elk hunt.
- Great program, wish I could have harvested an animal to get a better opinion of it.
- Have AZ Game and Fish Hunter Education include the non-lead ammunition program in the Hunter Ed Program.
- Have each hunter sign in at Jacob Lake and pick up ammunition there. If ballistics are an issue I don't believe manufactured ammo vary in ballistic enough between lead or copper.
- Have Federal check the ammo on guns that are not bolt action and try to correct the feeding problem!!
- Have game wardens ask hunters if they're using it, in addition to checking tags, licenses, etc.
- Have more calibers available (2)
- Have some type of information with stats and pictures in a pamphlet.
- Heavier bullet for wooded areas. (2)
- How can you improve free. I reload my own and took the chance of trying something new. Had done a lot of reading about the new bullets. They do perform extremely well. Very fast. Worried they not expand just enough. Would like and will try on bigger game. Elk or bear. Thank you for the two boxes it was appreciated.
- I also reload. What is available for those that reload their own shells.
- I am the father of Jordan Curtis. They did not offer non lead in 280 savage my son hunts with. So I got 30-06 and used on my elk hunt. Was very satisfied. (stats based on elk hunt)
- I believe a more aggressive hunter notification for the reason it is better to use lead-free ammo would improve this program. Before this hunt in 2005 I have heard no recommendations from no one that it is better to use lead-free ammo compared to lead ammo. Thank you for starting this program of safety for animals and all man-kind.
- I believe educating the hunters about the problem is the answer
- I didn't see any difference using non-lead over lead. Excellent bullets. Thank you!
- I don't feel it needs to be free; If the price were the same or near the same as lead, I would always use it. Promote the health benefit to people who eat game meat also.
- I don't know about the free part. Some way I am paying for it through taxes or my unreasonable out of state tag fees. I would suggest requiring it in areas of importance.
- I don't make bullets never intend to I have no answer.
- I feel AGFD and responsible parties did a great job with this program to protect our Condors. I would like the program to continue as is. "Great Job" to all of you...

- I feel that there would be more hunter participation if there was a larger selection of non-lead ammunition to choose from.
- I feel that your program is adequate at this time
- I have been fortunate enough to see the condors in the wild 2 times and the first was eating a deer carcass. They are a magnificent bird to see. If lead is poison to them, I'll pass it on to hunting buddies.
- I have heard since my hunt that copper jacket can evidently smooth your bore because the copper fills in the rifling!
- I have recommended it to other hunters already.
- I never saw any condors over any gut piles and I really question whether the program was worth the expense, or if it was just a knee-jerk response to some environmental group' s incessant whining. I think that the majority of a bullet will end up in bone or muscle which is probably taken from the field. I can never remember finding bullet fragments in the less dense gut tissue. Thanks for the free ammo, but I wonder if there was really any science involved. Brad Morlock
- I purchase 30-06 ammos (2 bx). If you could- offer 22-250 and 243 cal. next time. (55 gr.) (80-50 gr.)
- I shoot .338 Winmag. It's hard only having one choice.
- I shoot a 30-06
I think the 180 gr bullet offered was too heavy for deer.
- I shoot a 6mm Rem. and it wasn't available. my dad got two boxes of .30-06 for himself.
- I suggest offering the first box of non-lead ammunition free and the next two boxes at half price. The cost of donating ammo would still equal to two free boxes but the hunter will use the opportunity to obtain and shoot three boxes of non-lead ammo, some of it perhaps on other hunts. This would promote the use of non-lead ammo which is a good thing in my opinion.
- I talked to some hunters that did not use the unleaded because it was not offered in 30-06 less than 180 grains.
- I think all ammo should be supplied free of charge to all hunters
- I think by offering free ammo a lot of hunters are going to take a chance in using non-lead ammo and find out what they're missing and save the condors.
- I think it was a good intended program and wished I had the time to sight in ammo so it could have been used.
- I think it was very nice to offer the free ammo (2)
- I think it worked very well.
- I think it's a great program. Unfortunately, I didn't have time to test it before the hunt, so I used lead.
- I think the 2 free boxes should draw anyone to at least try the ammo- my biggest fear was that copper is harder than lead and might not stop an animal; I tried the ammo because it was free and also I will do what I can to protect wildlife such as condors; I will now always shoot copper Barnes Bullets.
- I think the program is just great the way it is- and I thank you for the free ammo!
- I think the program is OK if it helps.
- I think the program is ok the way it is!
- I think the program was very easy to use. I can't believe only 55% of the hunters responded to it. I thought free ammo (especially at the prices today) would attract more people. Overall these lead free bullets performed extremely well. I shot my deer at over 200 yds, across a canyon, on a dead run. From the point I shot him to where I found him was maybe 30 yds. these bullets work great.
- I think they are doing a great job.
- I think this ammo would be good for all game because other animals eat gut piles infested with lead and lead poisoning could spread. As it did with human baby cribs, etc.

- I think this was a very good way for Game&Fish to get hunters involved and informed about lead vs. copper bullets.
- I think you did a good job.
- I thought it was a good program as it was -- thank you.
- I thought the program was effective.
- I used 30-06 (180 grains) I thought it might be too much. (I normally use 150 grains) but since I shot no deer I could not judge its performance.
- I used my old ammo will use this next time. Thank you!
- I used the 30-06 180 grain ammo. I would've preferred a 150 grain option for deer.
- I was able to harvest a nice deer and also a bull buffalo with one shot on each animal. The deer through the heart and the buffalo in the skull.
- I was fortunate to be in a time of my life where I could afford a new gun. That with your offer of lead-free ammo was a no-brainer! My new gun has, will, and always will, shoot lead-free...That, I believe, is right!!! Thank you for the opportunity to have it that way!
- I was surprised that you only had a 55. I would send more then one maker.
- I wish I would have had the right caliber because I had a .243
- I worried about fouling my barrel but after several rounds fired there was no problem when clearing the gun. Accuracy was very good!
- I would encourage the use of non-lead ammunition based on the following:
 - environmental impact
 - health reason with consuming lead
 - bullet performance that I witnessed
 - Testimonials
- I would have tried 1 box of 2 different calibers, because I always take a back up rifle in case of malfunction of one.
- I would imagine this isn't just a problem with Condors. If so I would bet that most hunters would give free ammo a try. I did, It was great stuff.
- I would like the option of just bullets to reload since it was not offered in 223 or 243, or offer them in these calibers
- I would like to use a heavier grain bullet to see if it had better penetration
- I would not change it.
- If cost of lead-free ammo was comparable to lead ammo I would probable use it exclusively, regardless of area hunted. thanks for providing it.
- If hunter can afford to go hunt I'm sure he/she can afford non-lead ammunition for safe of other birds and condors.
- If it is really a problem you have to get everybody to use it. I think I saw 1 condor over Sowats Canyon not sure. Make it law same as lead for waterfowl hunting
- If its free no problem, but when it becomes cost prohibitive, maybe some sort of discount program for hunting zones in the California and Arizona Condor Range, might encourage hunters to still be condor friendly when hunting.
- If it's provided people will use it. If not, they will find a cheap substitute
- If non-lead ammo is beneficial to other wild life besides condors, consider expanding the program.
- If the wrong ammo is sent game and fish might collect it and return it to the mfq. so the hunter can have the correct round.
- If you can't promote it with free ammo you probably won't get it promoted need to offer more calibers
- Improve bullet spread on impact
- Improve post-impact performance.

- Include .243 caliber in the selection. (12)
- Include in the offer copies of ads from hunting mags. It is good ammo, the lead-free is a bonus not a detriment.
- Increase the amount of calibers available. (28)
- In 30-30 as a caliber choice
- In varmint calibers .22 mag, .222 etc
- In more variety of choices - most hunters on trophy hunts use the best or better equipment than the "average" hunter. I personally hunt with Mark V. 300 Weatherby MAG.
- In a wider variety of calibers and bullet weights.
- Info on comparison of lead vs non-lead accuracy...
- Inform the hunter as to the testing results and educate
- It is good and easy now.
- It ran smooth
- It was convenient to receive the ammo- sportsman's 152 miles from home and important to the health of other animals.
- It was nice to have the free ammo. and the Barnes x performed well. However I don't believe a few ounces (or even pounds) of spent ammo. will have an effect on condors. If the money for this program came from taxpayers, I think it was a waste of taxpayer dollars.
- It was perfect! (2)
- It was very easy and simple to get- thanks!
- it would be better if you made it in 7x57
- It would be helpful to know a "knock down" or comparable ballistics to lead.
- It's a good program. Some may have not have participated because wrong weight of bullet or caliber, or they might hand load or just forget to send it in on time. My shot was too close to tell whether lead or non-lead bullets would be better.
- It's worth a try.
- just explain that "lead" is toxic for everyone
- Just keep informing hunters its important to protect the condors
- Just offer it at a discount to all hunters.
- Keep doing the program.
- Keep in close contact with the ammo manufactures so that this program can continue.
- Keep it going and expand to other hunts!
- Keep the ammo free! (3)
- Keep track of who has received non-lead ammo in the past and only provide them with 1 box in the future. Cost savings.
- Keep up the good work. Thank you. (2)
- Let out more info about why and more bulletins to alert hunters
- make a better bullet
- Make it available at all sporting goods stores Offer 30-30 as a caliber choice
- Offer a wider variety of calibers and bullet weights.
- Make it available in 280 Remington.
- Make it easier to receive ammunition because my sister did not receive hers and had to use mine
- Make it mandatory
- Make it mandatory on the Kaibab to protect the condors. I had the privilege of one circling our camp and it landed in a tree.
- Make more bullet shapes and weights so we can come up with a 500 yd bullet you need that confidence in your bullet to make a clean kill.
- Make more grain weights available for each caliber. (2)

- Might need more boxes due to fact that it performs differently than lead and needs more time and shots to adjust to the change
- More definite accuracy data, AZG&F test etc.
- More explanation to hunters as to why will help convince them.
- More info explaining the importance of cleaning the barrel after shooting these bullets- leaves a lot of copper fouling.
- More info on bullet needs to be provided
- More information on how we know condors are receiving led through hunting.
- More information on program Offer 30-30 as a caliber choice
- Offer a wider variety of calibers and bullet weights.
- more qualified facts on ballistics, killing power and actual proof that lead is proven to be a viable part of any bird's length of life or demise.
- More scientific info on effects
More scientific info on accuracy of ammo
- more than 55% should have participated
- No suggestions but I thought it was "easy" since I was notified through my unit 12A West Deer Hunt. I thought I received good info from AZ Game & Fish
- None - good program.
- None- Great Program! Thanks (2)
- non-lead ammunition is by far the best ammo I have ever used.
- Offer boxes of just bullets for the people who do their own reloading. If I had maybe 50 bullets and had time to work on accuracy. I think I would us all copper bullets.
- Offer components (just bullets to handload). Larger selection of caliber, brand and weights.
- offer free boxes for youth Hunts -- get the kids involved -- they are the future
- Offer high energy or heavy mag if they have barns X bullets
- Offer other ammo; not just Barnes triple shock.
- Offer smaller cal.; .22-250 (80-50gr.) and .243 55-80 gr. for doe hunt. Thank you!
- Offering just Barnes Bullets to the people that reload in the caliber they need, it would save you money and make the reloaders happy!!
- Once you sight in your rifle with non-lead ammo stay with it.
- One box is enough Offer 30-30 as a caliber choice
- Offer a wider variety of calibers and bullet weights.
- Did see condor specialists in the field and they were appreciative
- One box is really enough, I believe!
- one free box and a half price coupon for a second box might be an excellent compromise.
Have the lead free ammunition on the shelf. I went to several sportsman's warehouse stores and asked sales people if they had my 300 win mag lead free ammo and showed them the info packed sent by game and fish. They didn't have it on the shelf and no one knew where to get it. I had to order it on line from Cabala's. I have since found out that it was all at the service desk. Some employee training and signs in the ammunition area would have made my experience much better. contact me @ gregbeltz@cabalez.com for further info
- other material like bismuth- heavy shot etc.
- outline or explain that it is comparable w/ lead ammo
- Perhaps information in the Game&Fish regs, possibly using hunters; responses to this survey
- place the brochure in the game + fish regulations
- Please continue the program. Thanks Warden Nelson!
- Please have the option of picking just the bullets for reloaders. also don't limit me to just one bullet weight. I shot a 30-06 that has taken hundreds of shots to get to shoot 1 3/4" groups at 300 yds. I may need to try several bullet weights to come near that performance.

- Please make the same offer to reloaders. The manufacture could offer in 40 round packs. in only the calibers that were given.
- Point out you need to have your tag with you when you pick up the ammo
- Possibly use a ballistic tip for better expansion.
- Print or circulate information on the ballistics/performance of the non-lead ammunition
- Program has worked fine from my viewpoint
- program is good as is!
- Program is good. Many thanks.
- Program worked very good.
- Provide ballistics comparison information
- Provide Barnes bullets to handloaders to work up favorite loads (2)
- Provide bullets & reloading data for this particular load
- Provide info. of this program through A.Z.G.F.D. Hunter-Education Program, Wildlife views magazine, and AZGFD's P.B.S. Television series.
- Provide information on whether lead bullets are causing problems for the condor. I was in the Kaibab for 8 days and never saw a condor.
- Provide other choices by manufacturers other than Federal as they become available
- Publication in Arizona Wildlife magazine
- Publish the results of their survey
- put a page about it in the regulations
- Reduce the cost (3)
- Seemed like program worked pretty good. Although no one I talked to in field heard of it. Maybe increase the info about the program.
- send a letter to all hunters that got drawn for any hunt, and tell them about the program along with the free certificate
- Send all drawn hunters order forms for non-lead ammo. Tell them why non-lead is so important.
- Send info on condor area habitat and general info on its habits and their history to reintroduce
- Send more info on what is dose to condors and other animals that eat gut piles
- Set up very good. Plenty of shells and time to sight in gun
- Show ballistics test in A2 wildlife views
- Show results of a kill, compared to lead ammo (pictures and testimony)
- Since this is a great bullet, and some people reload their own ammo for optimum accuracy, AZGFD should offer just the bullets (non loaded ammo) for people who reload their own ammo.
- Since this was a "juniors only" hunt we used a .243 cal. which was NOT offered. I took the .30-06 to test at a later date since I plan to hunt the N. Kaibab in the future (I am the Dad). 2/3 of the juniors in our hunting party used .243 and both got deer. Fortunately for the Condors neither gut piles had bullet fragments in them. (neck and head shots).
Conclusion: Offer the ammo in .243 and do a better job of educating a very skeptical hunting community. I found out more from a volunteer biologist in the field in a ten minute conversation than I have from G+F.
- Sorry, I did not get a chance to fire the ammo prior to the hunt, nor did I take an animal, but had plenty of chances.
- Sportsman Warehouse said you had to pickup ammo at store and no store near where I live.
- Testing on the ammunition on different rifles, maybe do more.
- Thanks again!
- The ammo supplied was excellent. I used other ammo to practice. I used 20 rounds to sight in and shot before hunting. I had only 20 rounds to take on the hunt. I shot my deer with one round. There could be different issues if misses were involved.
- The deer I shot was only 35 yards away the bullet went straight through it.

- The fouling is still hard to remove from the rifle barrel.
- The paperwork was very organized and the process of picking up the free ammo was excellent. No changes need to be made!
- the program was fine, add ballistics information in the package.
- The round did as good if not better than my reloads. I think that the way you did it did its job.
- The way it was handled was easy and straightforward.
- They seem to be more accurate.
- This was a difficult program for me to participate in. I used the 257 Roberts caliber for this youth hunt, and since ammo was not available in that caliber I had my dad buy bullets and assemble ammo to use on the hunt. I told my dad I would rather not hunt than risk killing a condor with lead. The TSX bullets were accurate but hard to find.
- This was a difficult program for me to participate in. I used the 30-30 caliber for this youth hunt, and since ammo was not available in that caliber I had my dad buy bullets and assemble ammo to use on the hunt. I told my dad I would rather not hunt than risk killing a condor with lead. The Barnes bullets were inaccurate and hard to find in this caliber.
- This was a very good offer!
- This was a very good program. Helpful in explaining to kids the importance of conservation and management.
- This was an outstanding offer; thank you very much. I'd recommend increased publicity on the advantage of non-lead ammo!!
- To have it in all calibers 338 ultramag
- Try to have hunting magazines, Bugle, Rocky Mountain Game and Fish, etc. etc., run ballistics information and maybe results of hunters comments.
- Until now really did not know or understand why we were able to receive free ammunition
- Use a 150-170 grain load with lower recoil
- Validate accuracy- is it as good as lead
- Very good accuracy, but the animal went further than it should have in my opinion. Right behind the shoulder clean path through at 175 yards and he ran about 200-250 yards .308 cal
- Very good program. No complaints.
- When I learned of the LEAD FREE OFFER and the reasons behind its use it seemed like a good idea. I had read a little bit about Barnes Bullets and the reports seemed to be that they were accurate and performed well.
After receiving the ammunition I began to further investigate Barnes bullets. As I did a lot of information I found pointed to extra copper fouling of the barrel from the Barnes bullets, and although they retained their weight on impact the somewhat fragmentation of lead bullets actually provided more wound channels and was therefore more effective. I hand load and have worked up a load that is very accurate and performs well. After learning what I did about the Barnes bullets I was concerned about changing the accuracy of my rifle just before hunting and so I chose not to shoot them. If you could provide information that disproved my findings I would probably be more willing to use them. Thank you
- Wider selection of bullet weights.
- Worked for us (2)
- Would have liked to have seen more choices in caliber and bullet weight. For example .243 Win caliber was not offered. Also the 180 grain bullet weight in .30-06 Spring. that I received was a little over-sized for deer. If possible and practical, include hunters drawn in other units.
- Would like to have had the option of 25-06 bullet; also if the 30-06 was to be the only option more than one bullet weight would be nice. Also, an informational flyer providing ballistics and other data would be useful and help with sighting in.
- You could give out different caliber ammo. Otherwise you guys are awesome. Thank you SOOO much for all you have done.

- You did good. Keep up the good work. I saw lots of one shot clean kills.
- You have provided everything needed.
- You made it very simple to get ammo. I would have thought everyone would have taken advantage of the program. Give out a \$10-off coupon for either Cabela's or Wal-Mart. We all need things when we go. This could help!
- You might get better participation by offering the same bullet as a component by the box. This trophy hunt attracted hunters with specialty equipment (esp. rifles) so it's tough to really get everyone to participate.
- You might try buy one get one free. Contact younger hunters they will open to suggestion and our future hunter. You might try 22 ammo because of the target shooting most young people do. You might give away a package of the shoot and see targets made by Birchwood Casey with your ammo to help users test for accuracy. Thanks.
- You need to offer more choices- different calibers for instance: 30-30 and .32 special
- I would like to see confirmation from AG & F Dept saying they approve this ammo. Its very similar to fully jackets bullets and they are not allowed to hunt with
- It's a good program, but I think it's a waste of money to give away ammo
- I believe educating the hunters about the problem is the answer
- Maybe send info on the ballistics of the bullets. I wasn't aware of the ballistics. That could help for me and others to continue the use of the non-lead bullets
- My brother and I participated in the 12AW juniors only doe hunt. The loads offered in the free ammo program were mostly heavy-caliber, heavy bullet loads that were not really good for junior hunters. We were shooting a .243 Winchester and a .260 Remington. We got 4 boxes of .30-06 for our Dad through your free ammo program, but he handloaded ammo for our guns using the Barnes all-copper X-bullets in our calibers. We recommend that in the future, you include in the program at least loads for the .243, which would be more appropriate for junior hunters. This seemed to be a popular caliber among the juniors we met on the hunt.
- Sportsman's warehouse provided an easy and convient way to get the ammo. I would do it again because it was easy. Cabela's program was difficult and gave me the impression that they did not really want to give out the ammo but wanted the publicity and image of being environmentally friendly and marketing reasons.
- Nowhere on the packaging or in the information for the ammo does it state that it is lead free. The box even has a lead warning on it. Is the manufacturer trying to hide the fact that it is lead free
- More info/education on what lead does to endanger other animals, etc. After making a kill using lead
- Good program – Keep it up
- I can't think of any suggestions for improvement. I feel the program was great and very generous. \$50.00 worth of excellent ammo was more than generous and surprised my buddies to hear of such a program
- Offer a variety of other brands to help out the accuracy with rifles we maybe using. The federal product didn't work well in my model 70
- For me personally. I did not have enough time to really test this and would not hunt with ammo that I don't have confidence in. It would be easy to mention this non-lead issue in the hunt regulations book. People would have more of a chance to try it and hand loaders would also have time to work on loads test and shoot. Since it may take several years to draw a tag in Arizona, many people would already be aware of this and be using non-lead bullets by the time they were drawn for a license.
- Run a comparison with other bullets using level such as the Nosler Partion, and other high end bullets to help hunters want to help such animals as the condors by using it
- If you think we as hunters need to shoot non-lead bullets and are going to give them out to the hunter. Make it a must for each hunter to use them
- Fix the bullet so that it doesn't come apart so fast
- I would suggest that lead free ammo be offered in other brands and as bullets alone for reloaders

- Didn't use because it was not offered in a caliber a junior typically uses to hunt – calibers were too heavy (recoil wise). If you continue the program offer the ammo in lighter calibers i.e. 7mm/08
- Sorry we were not able to provide any more information on the ammunition. We were not able to hunt 12A because we tagged out in Colorado and we felt we did not need more deer than necessary. We were a little concerned about why the lead free ammunition cost so much more than a box of regular ammunition
- The hunter's I met in the field ordered the free ammo for larger caliber rifles not used on this hunt and hunted with their regular ammo. Maybe the Park Rangers could check when they check us in the field
- I feel that your program is adequate at this time
- If the nonlead ammo prices could be kept the same as lead ammo I think more people would be willing to purchase the non lead ammo. At this time it is about 50% higher in cost. If required to use, like with waterfowl people will do what they have to do to continue to hunt. They do understand the reasoning
- The bullets were very powerful maybe a little too powerful for deer because they caused a lot of damage, but they are very effective and I will probably use them again.
- Just make it a part of the area that is being hunted. The areas are protected and need to be kept safe and that is a privilege to hunt in these units
- Recommend it to the Navajo Nation Fish and Wildlife to participate in program. They have hunts by the Grand Canyon too. I had seen two condors on our cow hunt Oct 2005
- Not enough pre hunt information on the ammunition. An information sheet on ballistics and performance would have been helpful
- More emphasis on the need to protect the condor. What are the facts. To say they die of lead poisoning (other than being shot) raises skepticism. Once one uses the non-lead ammo there should be little hesitating to continue to use it
- Expand the available calibers to more types. In the past I have had trouble getting accuracy from my copper reloads but your ammo was great, I had a death in the family and could not use my AZ Tag, but I am going to use on a WY elk hunt! Thank you
- More caliber choices. I know this is somewhat limited by what manufacturer makes. I'd prefer 165 gr 30-06 over 180 gr.
- Program has merit. I probably would have never tried non-lead otherwise. I will experiment with this type of ammo since I am a reloader. I suggest the program be continued but other bullet weigh choices would help.
- All firearms are unique; some may like the non-lead, others will not. To obtain the best performance different load combinations may be necessary. Perhaps offering a box of bullets to a handloader may encourage more useage. It would have in my case. I suspect a different powder or bullet weight may have worked fine
- Program is good
- Provide comparative performance of this ammo with popular non-lead ammo in your mailing. Encourage the use of this ammo for all hunting in Arizona
- I shot one kill. Not enough hunts and kills to make a proper decision. A well placed shot makes all the difference. It depends on how the bullet performs
- If given a choice with bullet size, I have a .270 cal and would have chosen 150 grain bullets over 130 grain. Or offer both sizes so one could choose
- Important! This was provided for a youth hunt. However, my daughter could not fire the ammo. Please, if the program continues, provide ammo that kids would be likely to fire i.e. 243, etc
- Based on the perceived success of this program for this season's hunt, I would include that information in next year's mailing packet to illustrate the programs success
- More information on program
- Provide smaller cartridges for youth hunters who can not handle the recoil of the 270 or provide reloading bullets
- Provide it in lighter calibers more appropriate for youth hunters. My son used a Barnes Triple X bullet in 22-250 that I reloaded myself

- All depends on cost. If same or cheaper would buy. If really want to prevent lead in area – make it a requirement for non-lead ammunition
- Offer more bullet weights for each caliber. I carried heavier lead bullets with me on my hunt, just in case I needed them
- Although it did not seem to penetrate as well as lead. I would need to hunt more with it to make a better determination
- Information on performance relative to lead and the benefits will continue to be important. Being able to test and try for free was a big help. Liked the focus on youth hunts to promote awareness of condor issues to the young hunters
- I think research should be done to determine the extent free lead is metabolized by scavengers and waterfowl
- 3 boxes would give more to sight in, practice and experiment at different ranges and more detail on ballistics. Offer smaller calibers 30-30 and .243
- To save \$ I would issue one box to shoot, if it groups better, have them call back for the other to use hunting. If it groups about the same or better they probably will. I'm curious on how condors contract the lead? Bullets, soil areas, other animals known to have lead
- More information on how we know condors are receiving lead through hunting
- I don't know how many hunters use the system, but It might not hurt to supply the PBZ (Point blank zero) range on the Barnes ammunition as it applies to the number you list for the giveaway
- Additional calibers available: 243, 6mm, 257 or similar for youth hunters
- Suggest that pump actions be tested with rounds in magazine as we experience in field jamming we didn't experience when trading single rounds during sighting in process and stress sighting more
- Federal fails to indicate a phone # or address on most packages and advertising. Contacts are difficult
- I use a .270 cal rifle, I also have a 22-250 cal. Can you offer the .270 cal in both 130 gr and 150 gr. Bullets. Do you make ammo for 22-250?
- I gave my free ammo to my dad. They did not offer my caliber but was concerned about my lead shot – as stated, bullet was deep into dead tree after shot. Only shot once
- I think it was done very well. I did not use 2 boxes of amm. Because I did not have to make adjustments to my rifle, but if I had, then I would have needed both boxes. My deer was hot from ground 220 yards and walked about 10 steps before he went down. That is very good ammunition performance
- Provide Barnes bullets to hand loaders to work up favorite loads
- I thought the program worked rather well. Thank you! I still have enough ammo for several seasons
- Stress the importance to protect health of wildlife such as ducks, condors and other nongame or unharvested game
- I think it is a very good program. Maybe another box or two. I would guess a lot of people shot it in practice and then used cheaper ammo when they had to buy it.
- Give more shells to the kids so they can re-sight in their guns and shoot it. 1+ boxes to get confident about the new ammo!!! Make more calibers available – especially 6mm!!!
- I thought it was a good, well organized test program. I was hoping to view a couple of condors in flight while I was up in 12A, but, unfortunately I didn't see any
- Offer more info on the ammo and its effects on our rifles and maybe tips on removing or keeping the copper fouling down
- Thank you for offering this chance to use this ammo – I probably would not have experimented with this style/brand otherwise

Gender: (n=923)

88.6% Male

11.4% Female

Age: (n=910)

28.4% 24 or under
27.1% 25-44
35.8% 45-64
8.7% 65 or over

Education: (n=780)

30.1% High School
31.9% Some college
27.6% College degree
10.4% Graduate degree

**Appendix D:
 Survey Results for Program Non-participants**

Arizona Game and Fish Department Free Non-Lead Ammunition Survey

Results for Non-participants

**We would like to know why hunters like you did not participate in the
 Free Non-Lead Ammunition Program.**

1. How important were the following factors in causing you to NOT redeem the coupon for free non-lead ammunition?

(Please check one response per row.)	Very Important	Slightly Important	Not Important
a. Non-lead ammunition was not available in my caliber. (n=127) <i>Please list caliber here:</i> <ul style="list-style-type: none"> • .243 (26) • .243 Wssm (2) • .257 • .27 • .264 • .270 (3) • .280 Rem (2) • .284 • .250-3000 (250 Savage) • .25-06 • .257 Weatherby • .30-06 (7) • .30.7 • .30 cal • .300 (3) • .300 savage • .300 SAYM • .300 Ultra Mag(3) • .300 Weatherby (4) • .300 Weatherby Mag (3) • .300 Win • .300 WSM • .30-30 • .30-378 Weatherby (4) • .308 -- not available at Sports Ware House when I 	44.1%	8.7%	47.2%

<p>visited store.</p> <ul style="list-style-type: none"> • .30-90 • 6mm • 7 MM ultra mag • 7.21 Lazzeruvi • 7mm (2) • 7mm-08 (4) • 7mm Mag • 7mm Stw safari grade 40.00 per box • 7mm wbym • 7mmX57 • .45 cal muzzleloader • 7mm WBYM • .270 • 300 WM • 264 • 243 • 30-378 WBY • .243 • 6.5 mm • .243 			
<p>b. Non-lead ammunition was not available in my preferred bullet weight. (n=114)</p> <p>Please list weight here:</p> <ul style="list-style-type: none"> • 95 grains • 100 (11) • 110 • 120 (2) • 125 • 130 (2) • 140 (4) • 145 • 150 (7) • 160 (2) • 165 (3) • 168 • 180(8) • 185 Grain • 190gr • 300 (2) • 160 gr. • 140 gr. • 150 gr. • 100 gr. • 190 gr. • 100 gr. 	24.6%	12.3%	63.2%

c. I handload hunting ammunition, and non-lead bullets were not provided by the program. (n=124)	16.9%	8.9%	74.2%
d. It takes too long to sight-in new ammunition. (n=125)	20.0%	18.4%	61.6%
e. Redeeming the coupon was too complicated or too much hassle. (n=121)	17.4%	14.0%	68.6%
<p>Why?</p> <ul style="list-style-type: none"> • already had purchased • box closed • Busy Schedule/just didn't get to it (5) • Caliber selection incomplete • Coupon was not received in the mail (2) • I do not remember getting a coupon (2) • Did not get to store in time, repair oven but not hunt • Didn't want to take the time and I forgot about the offer • Family, school, and other activities • How to redeem • I came from San Diego to 12AE • I could not reach a store in time of the hunt, store was too far. • I didn't end up going on the hunt due to other commitments • I didn't go on the hunt for personal reasons • I reload 100-200 rounds at a time. I guess I didn't need the free ammo. • I was traveling and just didn't get to a place to get the ammo • I'd sent form in and was given no reply from Cabela's • In Flagstaff/no time • It wasn't -- I make my own ammo • It wouldn't have been • More stores should have this ammunition available • My address is a PO Box. I have to go to Phoenix to get ammo. • Never got mailed- sportsman's warehouse part took too long for Cabela's to have by hunt date • Not available in my community, had to order thru mail • Not aware of this program. Perhaps could have paid more attention to first mailing • There was plenty of time to receive the ammo • Too far to drive- 100+ miles for a box of ammo • we already had the bullets and didn't want to go through the paperwork • Caliber selection incomplete • Not in general terms, but specifically for me this 			

<p>year - for a lot of reasons I had too little time to properly prepare for this hunt – including redeeming these coupons</p> <ul style="list-style-type: none"> • I had all my info i.e. tag, license, mail out, but did not have 1 very important piece! The coupon • I'd sent form in and was given no reply from Cabela's • I reload 100-200 rounds at a time. I guess I didn't need the free ammo 			
<p>f. I have <i>tried</i> non-lead ammunition, and it doesn't meet my expectations. (n=115)</p>	10.4%	2.6%	87.0%
<p>g. I have <i>heard</i> that non-lead ammunition doesn't perform as well as lead. (n=118)</p>	15.3%	5.9%	78.8%
<p>Where did you hear this? Please be specific:</p>			
<ul style="list-style-type: none"> • Barnes Bullets are good, lead or not • Barnes X has an excellent reputation in Africa • Bullet expansion is not the same with non-lead ammo. Could lead to wounded animal. • I'm concerned the bullet will not expand. • Didn't hear anything • Field and Stream magazine • from an AZ Guide • Gun Show • Hunting friends, hunting TV shows • I have never heard anything bad • I have tried Barnes X Bullets any rifle does not shoot them well. • I heard from hunters with recent kills this year complain that non lead ammo destroyed much of their deer meat. • I heard steel shot for shotguns damages the barrel (friends) • Jr. Hunter, thought he got the kill zone twice, deer did not drop - could not find. Used regular ammo - deer dropped. • Mag. Petersons -- Outdoor Life • My friend tried it and it was not accurate this is my main reason • My uncle Tom -- been hunting for years • Never heard anything about non-lead • Other hunters • Barnes X has an excellent reputation in Africa • Mag. Petersons – Outdoor life • Other hunters • Never heard anything about non-lead • I have done expansion tests on "Premium" bullets, Barnes X Triple Shock fail safe. None of these bullets expand very well. I have shot deer with Barnes X bullets, not impressed. I feel you will 			

have more wounded and not recovered animals shot with these bullets.			
h. I'm not convinced that lead from spent ammunition is a problem for condors. (n=122)	17.2%	19.7%	63.1%
i. I think this program is an effort by anti-hunters to ban the use of lead. (n=118)	16.9%	14.4%	68.6%
j. OTHER REASONS OR COMMENTS? <ul style="list-style-type: none"> • already had purchased plenty of ammo-already use non-lead ammo... • At this time I don't have enough information about the potential harm to condors, more education would be helpful • Ballistics of the lead-free ammo did not meet my expectations • did not have an opportunity to actually hunt this year. • Did not receive gift certificate/coupon (8) • Didn't have my son gun caliber • Forgot about it (4) • Great idea, not sure how many bullets end up in ground in condor area?? It may need more investigation. • I already had non-lead ammo. Program was not necessary for me. • I already use non-lead bullets so I did not participate in your program • I also stopped at Cabela's to redeem and they had no information or idea of. • I'm 11 yrs old. First time hunting. Used my guide's gun. Just learning. • I am not positive of the killing effect of nontoxic bullets. The controversy over waterfowl is still out. I would go back to lead on waterfowl if given the chance. • I did not see a survey. It may have come, but I may have thrown it out along with junk mail. I will pay more attention next time. • I did participate in the lead free program I got them from Sportsman's Warehouse in Meridian, Idaho • I didn't go on the hunt, or I would have redeemed the coupon! • I didn't kill a deer but me and my dad would have buried the gut pile. • I didn't see my .243 caliber bullets. Not unless I made a mistake in not seeing it, in the offers. • I don't believe this bird should be in Arizona. I will not go out of my way to protect it. I would never knowingly kill one, but I will not protect it! • I feel all the agencies that spend time and money 	55.6%	4.8%	39.7%

<p>on Condors is a TOTAL waste of taxpayers money, for it doesn't promote one thing for the hunter. The program of non-lead ammo is an expense that could be spent on getting rid of coyotes to help the deer and antelope populations in the state.</p> <ul style="list-style-type: none">• I had a large quantity of lead ammo I wanted to use up first.• I hand load Barnes solid copper bullets for all hunting!• I hand loaded Barnes X Bullets and used these bullets on the hunt. Thanks for the free offer but I elected to use my own• I have shot Noslor for 30 years. Not about to change now.• I just was not able to find the time to accomplish the task.• I live about 100 miles from any store that sells ammo• I live out of town and didn't have the opportunity to travel to the valley. I would have picked up the ammo if I was in the area.• I lost my form information to get the non-lead ammunition. (3)• I never received the coupons for the bullets or the survey. My brother received his.• I put the info on my desk and forgot about it. Sorry!• I really was just very busy and ended up forgetting about it.• I requested my ammunition to be mailed to my home address and they told me they could not mail it to me.• I scouted the area just before hunt date. Deer numbers were so low I chose not to waste my time there. I saw 2 condors and no deer.• I sent the coupon in to Cabela's and never received the ammunition• I think it is a great program and if ammo was available in my caliber I definitely would have participated. If bullets were provided to handload I could have had a friend handload for me.• I think the non-lead ammo is a good thing.• I think this is a great program to save other animals and birds from lead poisoning. Unfortunately my paperwork for these bullets was inadvertently filed in wastebasket. Unfortunately I did not get to shoot my weapon this season. Unsuccessful...the ammunition I could have used was listed on the coupon. Program very important!• I thought the request had to be postmarked before deadline, they returned it saying the P.O. Box was			
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<p>closed. I assume it had to be there by deadline?</p> <ul style="list-style-type: none">• I tried to redeem the coupon. It was mailed back stating there was no such mail box.• I used hand loads sighted in for my rifle• I was using my dad's 7mm which he bought for Managed Recoil Ammo, which does not come with a non-lead bullet.• I will not use this caliber rifle again, thus a larger caliber would be available for me to use.• I would rather spend this wasted \$ on big game than to something I never would hunt. Heritage fund should be \$ used in general not non-game specifics• I'm not convinced the lead from ammo could cause harm. If condors are being affected by lead, maybe there is another source.• In the process of moving and lost the information on non-lead ammo.• Junk Science!• Main reason: did not redeem coupon because the non lead ammo was not available in .243 caliber.• Non-lead ammo fouls your barrel and cannot be cleaned• People who hunt have to adapt to new bullets if we expect to promote the safety of the endangered animals• Used reloads with Barnes triple shock all copper bullets• we did not receive our tags in the mail - therefore no coupons!• We just did not send it because when we wanted to send it something came up and it was just never sent. (2)• We redeemed the coupon at Cabela's and successfully used the ammunition with no issues.• We were very interested in the program. The coupon was accidentally thrown away!!!• As a Cabela's employee, I was able to get WBY ammunition in 150 gr. Barnes X which is also an all copper bullet (non-lead). The Owatonna MN Store wrote it off as a store expense• Each year there is a new cry of wolf, this year its lead. Incrementalism is the art of destroying an institution with causes that sound very sweet to the ear, after all, who would not be in favor of protecting the poor embattled condor? Give me a break! After lead is banned, there will be irrefutable evidence that copper and all alloys are destroying the Ugandan piss ant! Enough said. I'm not a freebie person.• Not in general terms, but specifically for me this			
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<p>year = for a lot of reasons I had too little time to properly prepare for this hunt – including redeeming these coupons</p> <ul style="list-style-type: none"> • Merle is only 10 years old so I (his Dad) am filling this out for him. As it was his first ever hunt I had to take him out several times to let him shoot and find a gun that he could handle. • I had my Damn Tag! Why couldn't they give my bullets! • I also stopped @ Cabela's! To redeem and they had no information or idea of • As a non-resident, I will have fired one or two shots in your state. I will recover bullet from carcass or it will pass through animal. Condors will not eat animal so how can they be hurt • Main reason – did not redeem coupon because the non lead ammo was not available in .243 caliber • I did not hunt or fire any firearm in Arizona and never have • I purchased my own bullets. 130 grain Barnes Tripple Shock bullets for hand loading. I used this ammo for hunting (6.5 X 55 imp) I still have concerns about the way these bullets fail to expand • We would have redeemed the coupon for (.308 caliber) elk hunting but misplaced the coupon. Showing the 12A tag at Sportsman's Warehouse was not sufficient. We have seen bald eagles feeding on elk gut piles and feel non-lead ammunition would be a benefit • I did not receive coupon due to lost or misplaced mail 			
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2. Which ONE reason from the above list BEST describes why you did not redeem the coupon?
 [Fill in the LETTER (a-j) of the best reason from the list above]:

- a= 25.3% Non-lead ammunition not available in my caliber.
- b= 2.5% Non-lead ammunition not available in my preferred bullet weight.
- c= 1.9% I handload hunting ammunition, and non-lead bullets were not provided by the program.
- d= 3.1% It takes too long to sight in new ammunition.
- e= 15.4% Redeeming the coupon was too complicated or too much hassle.
- f= 1.2% I have tried non-lead ammunition, and it doesn't meet my expectations.
- g= 1.2% I have heard that non-lead ammunition doesn't perform as well as lead.
- h= 3.7% I'm not convinced that lead from spent ammunition is a problem for condors.
- i= 2.5% I think this program is an effort by anti-hunters to ban the use of lead.
- j= 43.2% Other

3. How effective would each of the following be in encouraging you to participate in this program in the future:

(Please check one response per row.)	Very Effective	Slightly Effective	Not Effective
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a. Offer non-lead ammunition in my caliber or bullet weight. (n=132)	64.4%	11.4%	24.2%
b. Offer non-lead bullets for reloading. (n= 123)	31.7%	20.3%	48.0%
c. Have private sportsman's organizations endorse this program along with the Arizona Game and Fish Department. (n= 123)	30.9%	21.1%	48.0%
<p>Please list an organization you would trust:</p> <ul style="list-style-type: none"> • AZ Game & Fish (2) • AZ mule deer org. (2) • Cabela's • I have no distrust with any hunting assoc. • Make ammunition available at more stores Wal-Mart? • Mule Deer Foundation (3) • None • NRA (9) • Outfitters & Guides in AZ • RMEF (2) • SCI (2) • Sportsman • Sportsman for fish and wildlife • unfamiliar with w/ AZ organizations • NRA • AZ Mule Deer, NRA • Mule Deer Foundation • Unfamiliar with AZ organizations 			
d. Make it easier to get the non-lead ammunition. (n= 121)	31.4%	24.0%	44.6%
<p>How?</p> <ul style="list-style-type: none"> • Calling hunters or mailing and receiving • Did not get coupon • Education and information to the hunter and price • Eliminate flyers and use hunt tag ticket and list than Game&Fish • Flagstaff? • Have a seminar before the hunt, hand out ammo and bullets there • Have it available at every office of Game and Fish Department. • Have major retailers stock non-lead ammunitions (for example Wal-Mart). Have a lot more available bullet weights. • Have more stores that sell this ammo • I'm not convinced there is a lead problem -- give evidence! • It was easy 			

<ul style="list-style-type: none"> • Just ask if we want non-lead bullets, and all we have to do is say yes or no • Mail-order online • Mail-UPS so I can sight in. I am out of state • Make it a requirement during rifle season • Make it available at locations in the hunt area along with representatives to explain why it's important to use it. • Make it more widely available at local firearm dealers (5) • Make the coupon redeemable at a local store so I don't have to wait on the mail. • Make this ammunition available in Flagstaff AZ. Maybe at the regional Game&Fish office in Flagstaff AZ. • Publish results in AZ Wildlife Views and Hunting Reg's • Redeem at ANY Cabela's or Sportsman's Warehouse • Simple already • Sporting goods stores and Retnic outlets • Through Wal-Mart and other convenience stores • Was easy to get • We live in Flagstaff -- no stores in Flag carried non-lead with coupon • Would not use. • Make the coupon redeemable at a local store so I don't have to wait on the mail • Forget the coupon crap! Walk in write down my tag number and be done • I'm not convinced there is a lead problem – give evidence • Thru local stores for those of us who live in rural communities – Kmart- Walmart 			
<p>e. Provide more information on how lead from spent ammunition is a problem for condors. (n=121)</p>	38.0%	24.0%	38.0%
<p>f. OTHER? (Please describe.)</p> <ul style="list-style-type: none"> • After I use up my lead ammo, I'll buy non-lead product. • Allow Sportsman Warehouse to send me the ammunition by mail. • Get a coupon for free ammunition • How much is being spent on this program and what is being gained by this expenditure? • I always use Copper Barnes Bullets on all my ammo 			

<ul style="list-style-type: none">• I had the best hunt with my dad!• I just don't care about condors, wolves, frogs, lizards or any of that stuff that takes away hunting.• I just needed a less busy schedule• I reload all my ammo and non-lead bullets do not meet expectations• I will continue to support this program I know you all have studied this program and it makes total sense.• I would have used non-lead if they were available. We tried to get ammo. I 100% agree with preserving wildlife.• If condors don't eat the animal I kill, how can they be affected by lead ammunition?• If there isn't decent numbers of deer in this unit why would anyone want to hunt hard all week and have little chance for success?• Now you put the Condors in our hunting country-let them survive the best they can. If they don't survive, they weren't meant to be here.• Offer ammo that wouldn't damage your barrel• Offer managed recoil rounds• Offer tag as coupon• Please send new coupons and we will be happy to respond.• Shot my deer at 40 yds- through the lungs and heart bullet went through. Condor would have to pick it off the ground- not in guts or crippled animal that was lost?• This is a good program but I don't think AZGFG should have to pay for it. It should just be required to use lead free• This problem on the Kaibab should require every hunter to use non-lead bullets same as waterfowl is required.• This program is worthwhile but the information has not yet reached the hunters and sportsmen• What does it do to the gun?• Phoenix is not the only city that exists in AZ although most act like it is. Make the ammo (non-lead) available and convenient in rural communities!! – Kmart, Walmart• There is a lot more to it than just changing ammo. I spend a lot of time, money, experimenting the best load, weight of bullet, Bullet co, bullet # densities and have			
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<p>my rifle shooting at peak. "I do not use store bought ammo....ever."</p> <ul style="list-style-type: none"> • If condors don't eat the animal I kill, how can they be affected by lead ammunition • I've tried Barnes Triple Shock and found copper fouling was greater. Also there are accuracy problems. • Have mfgs. bring ammo to the range, invite successful tag holders to listen to the bildge of the mfr and shoot some rounds side by side comparison 			
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4. Please offer any suggestions you have on how to improve this program in the future, or any additional comments you may have. (Attach a separate sheet, if necessary.)

- Can I still request my ammunition from Cabela's or is it too late?
- Did not see any condors in unit 12A East
- Did not set mailer. No ammo in my caliber would have participate
- Don't have time to stop and pick up or I would have done so.
- For all new and old hunters in 12-A - 12-B, be required to use non-lead bullets
- Get rid of the condor!
- Have kids go to Wal-Mart, take survey, get ammo -- instead of in the mail.
- How to improve the program is quit spending time and money in trying to bring back condors & wolves in our state, which has no place or good for the people. It promotes idealistic ventures of animals, which are not compatible with time changes and population of people in our state. It is an example of all government bureaucracy wasting time and money on projects of no real value and is a TOTAL lack of common sense. This type of mentality will want to bring back the dinosaur.
- How was this survey supposedly distributed? Maybe a mail problem, or someone forgot to stuff an envelope.
- I already use non-lead ammo.
- I do have concern that this program will lead to the mandatory non-toxic bullet within the whole state.
- I know several hunters who reload, making non lead bullets available for this segment of the hunting population would be a great incentive.
- I support the program, but do not like the ammo
- I thought it was a great program, just waited too long.
- I truly feel you have a great program in place.
- I was very impressed by the departments efforts in this matter.
- Make non-lead ammunition available throughout the state.
- Make offer available through Bass Pro Shops also.
- Program worked fine and ammo performed very well.
- Purchased on own
- Responsible hunters don't leave spent ammunition for wildlife (condors) to eat. Educate hunters about the importance of recovering any animal they shoot.
- Vastly lower the number of deer tags available until the deer herd can recover. There is way to many hunters in the unit for very few deer.
- I applied for the bullets, with no response. No information on lead poisoning was given

- Just need to know more about the ammo. How it react to the deer, stopping power, can you shoot a deer at 250 yards? More info on the ammo
- I feel the program was run very well. I bought my own bullets and will do so in the future. I have concern about the effectiveness of these "Premium" type bullets in deer size game. Yes they penetrate very well but they don't expand well enough. I feel we are heading down the road to ban lead ammo. Better buy stock in Barnes bullets.
- Even though I did not get the original survey, I have used non-lead ammo for hunting for several years now. I have had excellent results and firmly believe that it is better than lead core ammo. In truth, I do question some of the info related to 2nd hand lead poisoning of any species, but do hope that State game departments are sincere in their efforts to protect the game.

Gender: (n=158)

86.7% Male

13.3% Female

Age: (n=153)

35.3% 24 or under

22.2% 25-44

36.6% 45-64

5.9% 65 or over

Education: (n=124)

30.6% High School

33.1% Some college

22.6% College degree

13.7% Graduate degree

**Appendix E:
Letters Sent to Contest Winners**

January 23, 2006

Jeremy J. Fait
[Address]

Dear Mr. Fait:

CONGRATULATIONS!

On behalf of the Arizona Game and Fish Department, I would like to congratulate you for winning a \$250 gift certificate to Cabela's!

In 2005 you completed a survey giving us your opinions about the free non-lead ammunition program that Arizona Game and Fish Department implemented to help conserve California condors. Because you completed the survey and submitted it before the deadline, your name was entered into a random drawing, and you won!

The enclosed package contains a gift card and the Master Fall Catalog. You can place a catalog order, order on-line, or use the gift certificate at any Cabela's store nationwide (a new store in Glendale is scheduled to open this fall).

We greatly appreciate your participation in the program, and for taking the time to tell us what you thought of it.

Happy shopping and good hunting!

Sincerely,

Phil T. Seng
Contest Coordinator

Enclosures

January 23, 2006

Jacob Frisbie
[Address]

Dear Mr. Frisbie:

CONGRATULATIONS!

On behalf of the Arizona Game and Fish Department, I would like to congratulate you for winning a \$250 gift certificate to Sportsman's Warehouse!

In 2005 you completed a survey giving us your opinions about the free non-lead ammunition program that Arizona Game and Fish Department implemented to help conserve California condors. Because you completed the survey and submitted it before the deadline, your name was entered into a random drawing, and you won!

Enclosed is a gift card for \$250 that can be used at any Sportsman's Warehouse store nationwide.

We greatly appreciate your participation in the program, and for taking the time to tell us what you thought of it.

Happy shopping and good hunting!

Sincerely,

Phil T. Seng
Contest Coordinator

Enclosure