

LARAMIE RIVER VALLEY PRONGHORN HERD MANAGEMENT PLAN

Data Analysis Unit PH-36
Game Management Units 7 & 8



2020

Created for
 COLORADO
Parks and Wildlife
Department of Natural Resources

By:
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Wildlife Biologist

EXECUTIVE SUMMARY

Laramie River Valley Pronghorn Herd (DAU PH-36)

GMUs: 7 & 8

Post-hunt Population:

Previous objective: 550-650 2019 Estimate: 623

Approved Objective: 550-650

Post-hunt Sex Ratio (Bucks: 100 Does):

Previous post-hunt Objective: 20 -25 2019 Post-hunt Modeled: 48.8

Approved Objective: 30-35

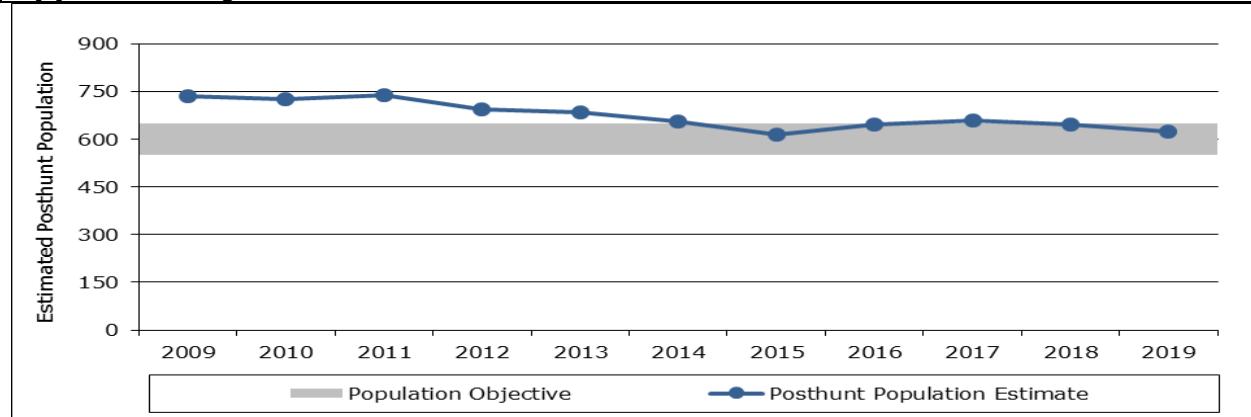


Figure 1. Laramie River Valley DAU modeled post-hunt population and objective 2009-2019.

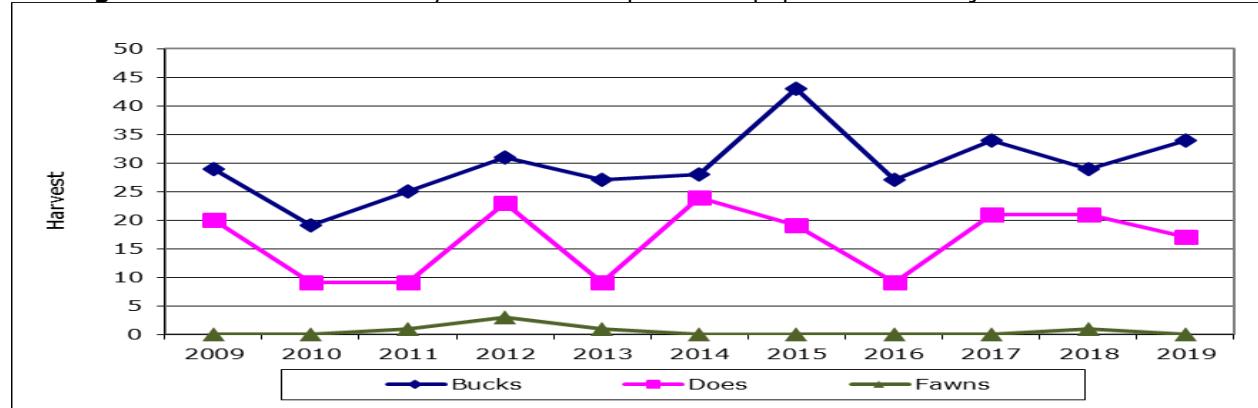


Figure 2. Laramie River Valley DAU buck, doe, and fawn harvest estimates from 2009-2019.

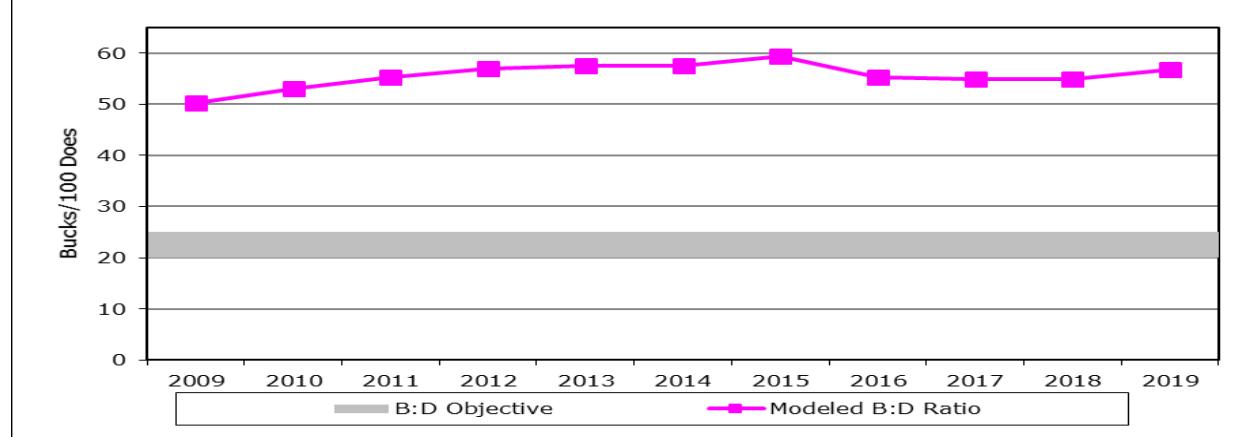


Figure 3. Laramie River Valley DAU buck:doe ratio from 2009-2019.

Background and Management Information

The Laramie River pronghorn herd is a small state line herd that occupies primarily private land in the Laramie River Valley and Sand Creek area. There are yearly migrations between the border of Colorado and Wyoming. The herd has been managed with a consistent level of buck and doe licenses over the past decade due to the small population size and the absence of conflicts.

There are no significant management issues for this herd. Game damage is not a concern.

CPW Recommendation to the Wildlife Commission:

Population Objective: The CPW recommendation is to extend the current PH-33 post-hunt population objectives of 550-650 pronghorn for the life of this plan.

Herd Composition-sex ratio Objective: The two alternatives for sex ratio objectives are independent of one another, and represent different biological issues, social aspects and hunting strategies in herd management.

Composition Alternative 1: Status Quo 20-25 bucks: 100 does

To manage for this objective there would be an increase in buck licenses. A majority of pronghorn are on private land during pronghorn season, which is not accessible to the public hunter. Increasing licenses may reduce hunter success and hunter satisfaction and the objective may never be met.

Composition Alternative 2 (preferred): 30-35 bucks: 100 does

This is an increase from the current objective. The increase allows for an attainable management objective based on large tracts of private lands within the DAU that act as a refuge for the pronghorn. This would maintain current level of buck hunting, buck maturity, and horn size.

This plan was approved by the Colorado Parks and Wildlife Commission on
July 16, 2020

Laramie River Valley
Pronghorn Herd Management Plan
DAU PH-36 (GMUs 7 & 8)

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Herd Management Plan for PH-36

INTRODUCTION AND PURPOSE

Colorado Parks and Wildlife (CPW) manages big game, including pronghorn, for the use, benefit, and enjoyment of the people of the state in accordance with the CPW's Strategic Plan (2010-2020). Pronghorn management is also determined by mandates from the Colorado Parks and Wildlife Commission (PWC) and the Colorado Legislature. Colorado's wildlife species require careful and increasingly intensive management to accommodate the many and varied public demands and growing human impacts. CPW uses a "Management by Objective" approach to manage the state's big game populations (Figure 4).

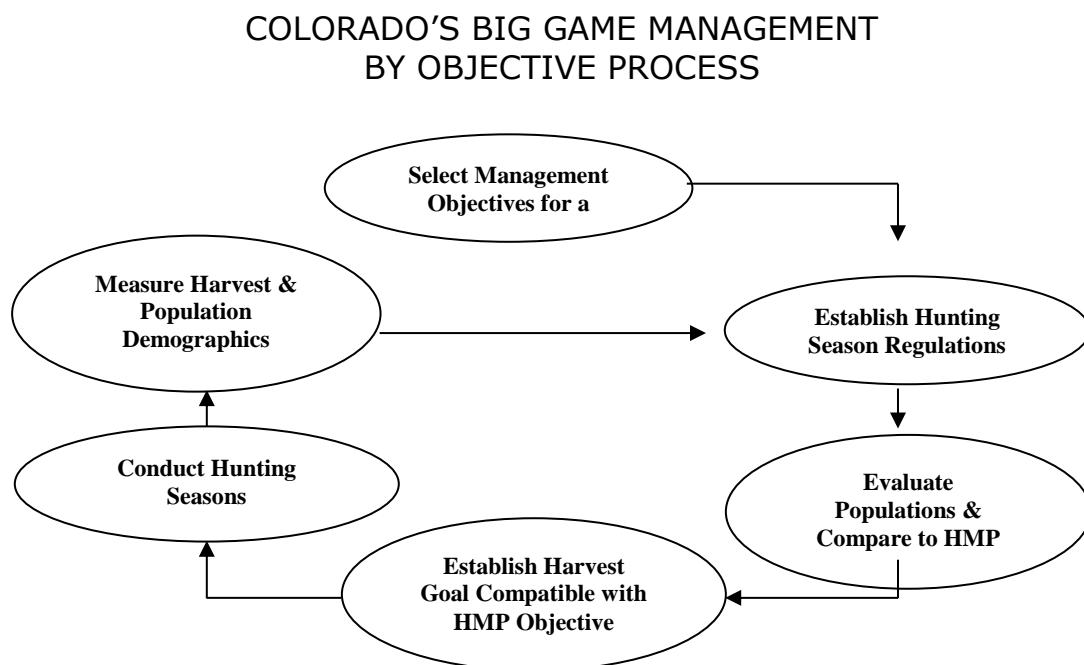


Figure 4. Management by objectives process used by the CPIW to manage big game populations on a HMP basis.

With the Management by Objective approach, big game populations are managed to achieve population objectives established for a Data Analysis Unit (DAU). A DAU is the geographic area that includes the year-round range of a big game herd. A DAU includes the area where most animals in a herd are born, live and die. DAU boundaries are delineated to minimize interchange of animals between adjacent DAUs. A DAU may be divided into several Game Management Units (GMUs) to distribute hunters and harvest within a DAU. Management decisions within a DAU are based on a herd management plan. The primary purpose of a herd management plan is to establish population and sex ratio (i.e., the number of males per 100 females) objectives for the DAU. The herd management plan also describes the strategies and techniques that will be used to reach these objectives. During the herd management planning process, public input is solicited and collected

through questionnaires, public meetings, and comments to CPW staff and the PWC. The intentions of CPW are integrated with the concerns and ideas of various stakeholders including the State Land Board (SLB), the Bureau of Land Management (BLM), city and county governments, hunters, guides and outfitters, private landowners, local chambers of commerce, and the public. In preparing a herd management plan, agency personnel attempt to balance the biological capabilities of Figure 4. Management by Objective process used by Colorado Parks and Wildlife to manage big game populations by Data Analysis Unit (DAU). Commission approves Herd Management Plan objectives Collect data on harvest and population demographics Assess population and compare to HMP objectives Conduct hunting seasons Set hunting regulations to achieve harvest goals 7 the herd and its habitat with the public's demand for wildlife recreational opportunities and public tolerance for game damage. Herd management plans are approved by the PWC and are reviewed and updated approximately every 10 years. The herd management plan serves as the basis for the annual herd management cycle. In this cycle, the size and composition of the herd is assessed and compared to the objectives defined in the herd management plan and removal goals are set. Based on these goals, specific removal strategies are made for the coming year to either maintain the population or move it towards the established objectives (e.g., license numbers and allocation are set, translocation plans are made). Hunting seasons and/or translocations are then conducted and evaluated. The annual management cycle then begins again.

The purpose of this herd management plan is to set population and sex ratio objectives for the Laramie River Valley pronghorn herd (PH-36). The herd management plan will be in place from 2020- 2030 with the expectation that it will be reviewed and updated in 2030.

DESCRIPTION OF DAU

Geography

Pronghorn DAU PH-36 is located in Larimer County in north central Colorado. It consists of GMU 7 and 8. PH-36 is bounded on the north by the Wyoming state line, on the east by Larimer County Roads 69, 68C, 74E (Red Feather Lakes Road), 179, 80C, (Cherokee Peak Road), and 59, on the south by Colorado Highway 14, and on the west by the Larimer-Jackson County line (Figure 5).

Elevations range from 12,950 feet on Clark Peak in the southwest to 7,500 feet on the north end of the unit. Pronghorn habitat is delineated by the lower Laramie River valley (below Glendevey) and surrounding uplands (Figure 7).

Habitat and Climate

The overall topography in PH-36 is a mixture of mountains, foothills, and plains that experience a variety of climate conditions (Figure 5). The high elevation areas to the west have a harsher climate, with long, cold winters, abundant snowfall, and short, cool summers. The weather to the north in the plains of the Laramie River Valley is typically milder and drier than the surrounding mountains.

Coniferous forest occupies the majority of PH-36 while the plains are characteristic of rangeland shrub habitat. Pronghorn summer range is an extension of the winter range, with portions of Bull Mountain and areas south of Four Corners used only during seasons that are more temperate. Snow accumulations on winter range are usually moderate due to strong winds and direct sunlight that keep snow depths within pronghorn tolerances. Accumulations from the occasional spring and late winter storms usually melt off quickly at the lower elevations.

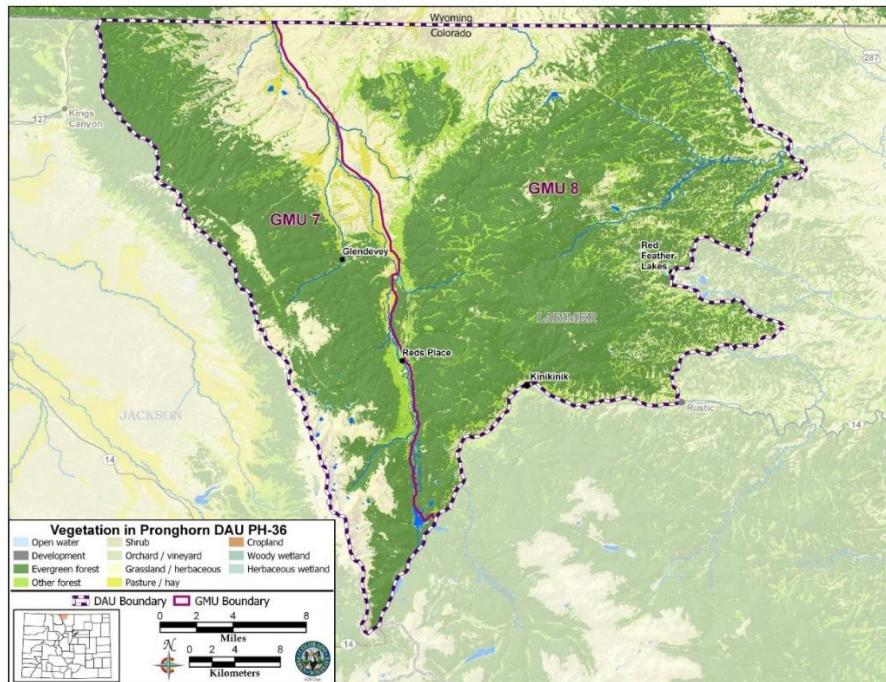


Figure 5. Geography, GMU boundaries, and habitat.

Land Ownership and Use

The DAU surface area covers 681 square miles. The majority of the surface area (78%) is public land, of which 70% is managed by the United States Forest Service (USFS). Much of the public land is heavily timbered and is not considered pronghorn habitat. Private landowners own the greatest amount of the pronghorn habitat in the Laramie River Valley (20%). Bureau of Land Management (BLM) manages 6% of the DAU, most of which is pronghorn habitat. State lands, including State Wildlife Areas (CPW) and State Land Board property manage the remaining lands, 23.7 square miles (4%). Half of the state lands is considered pronghorn habitat.

Human occupation is limited in PH-36, particularly in the Laramie River valley. However, in the eastern portion of GMU 8 rural developments are more common. The main landscape use in the western part of the DAU is irrigated hay and livestock ranching.

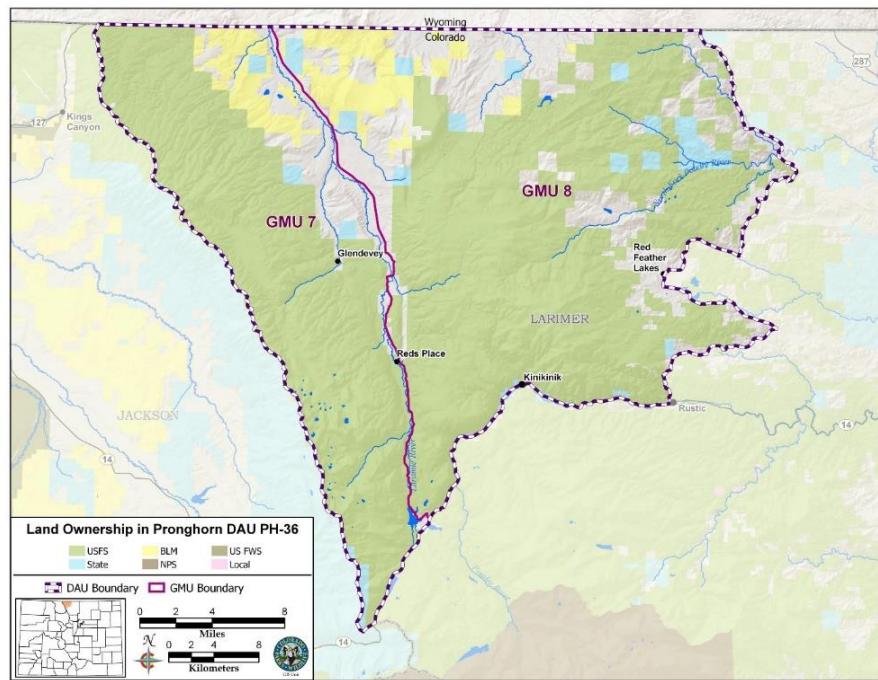


Figure 6. Laramie River Valley DAU Land ownership.

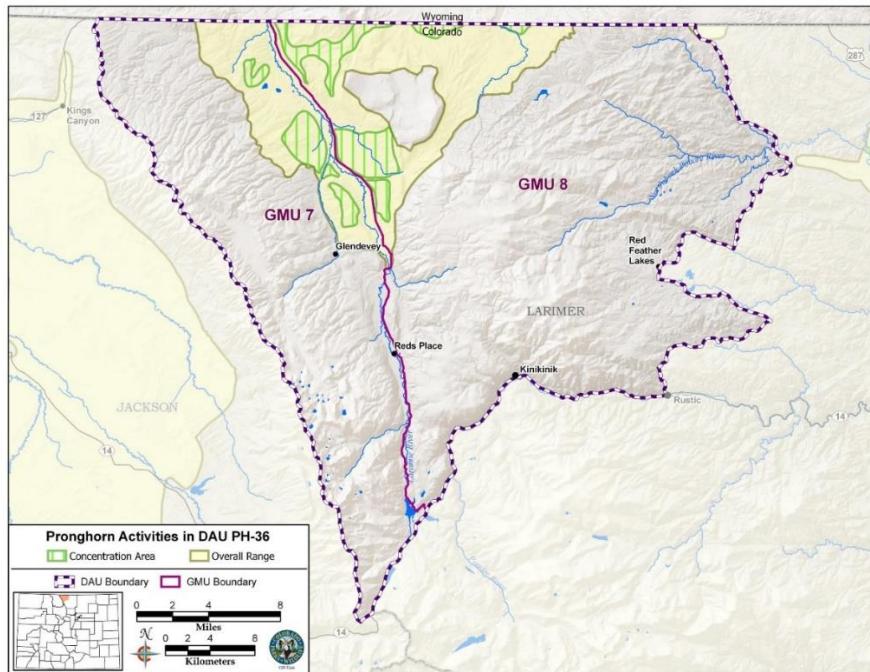


Figure 7. Laramie River Valley pronghorn range.

HERD MANAGEMENT AND BACKGROUND

Population and Sex Ratio

Currently, PH-36 is managed for a population objective of 550-650 animals. From the 1990s through present, the population has been maintaining around 600-650 animals. As a state-line herd, it is difficult to standardize minimum counts from classification flights in August to herd numbers that hunters see in the early fall and then to herd numbers observed by landowners during winter conditions. There is migration movements between PH-36 and Wyoming during winter and summer, particularly along the northwestern border in GMU 8. The number of pronghorn moving across the state-line varies greatly year to year. The modeled 2019 post-hunt population estimate is 623 (Figure 1).

Herd composition ratio data is collected from fixed-wing aircraft or by coordinated ground counts. Usually, pronghorn surveys are flown along predetermined transect lines. However, due to the rugged nature of the pronghorn habitat in PH-36, pockets of habitat occur on mountainsides and other odd terrain features, a considerable portion of effort is focused on surveying entire pieces of habitat rather than flying line transects. Classification flights are conducted prior to the pronghorn rut. Observed aerial classification of male: female ratios in PH-36 may be biased low. This is due to the habit of males often standing/bedding at some distance from a herd of does and/or not being detected as singles and small bachelor groups. In cases, such as these, the detection probability for the large group of does and fawns is greater than the buck standing alone. The last classification flight for PH-36 was conducted in 2012. Due to the small herd size, the difficult terrain, sight-ability during aerial classification, and seasonal state-line movements CPW no longer performs aerial surveys in this DAU. Coordinated ground counts began in 2018 and the survey data has since been informing the population model. The 2019 modeled pre-hunt composition ratio is 57 bucks: 100 does and 36 fawns: 100 does (Figure 3).

Licenses

License setting has been conservative due to the small herd size and lack of public access. From 2009-2019, the number of specified licenses issued for both buck and doe rifle hunting in the DAU has ranged from 65 to 100. In 2012 antlerless private land only (PLO) rifle licenses were increased from 10 to 20. In 2015, both buck and antlerless regular rifle licenses increased by five for a total of 10 licenses each. Archery licenses are available on a statewide, unlimited basis. Buck muzzleloader licenses increased by five in 2015 bringing the total up to 10 licenses available. The license increases over the past decade were made to keep the herd within management objectives.

Harvest

Harvest in PH-36 has been consistent over the years (Figure 8). The small population size of the herd and private land access contribute to maintaining the

number of bucks and does harvested each year comparable. The majority of pronghorn in PH-36 are harvested on private property with nearly all harvest from the rifle season. The 10-year average harvest for buck rifle is 22 and 16 for antlerless rifle. The 10-year average harvest for archery is six, two for muzzleloader buck and one for muzzleloader antlerless.

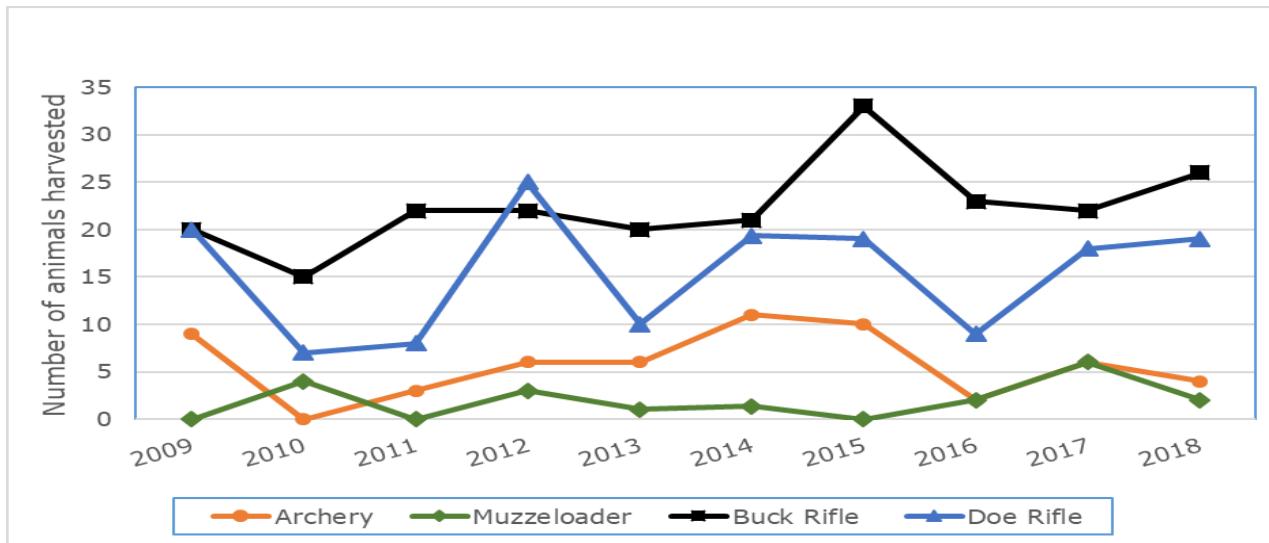


Figure 8. Laramie River Valley DAU harvest by method from 2009-2018.

Success Rates

Success rates for regular rifle seasons in PH-36 have varied over the last 10 years. (Figure 9). PH-36 saw its first year of successful muzzleloader hunters for both buck and antlerless in 2010, since then the 3-year average success rate for muzzleloader bucks is 26.7 % and for antlerless is 20 %. Rifle season has the highest success rate comparatively from archery and muzzleloader but there is still year-to-year variability in the proportion of hunters that harvest animals. This variability in rifle success rates between 20-100% is likely a relic of the small number of licenses available and the numerical impacts that just a few hunters can have on success rates in either direction. As previously described, this DAU has attributes of difficult topography and private property that may contribute to depressing rifle success rates slightly compared to more easily hunted DAUs with flat open landscapes and public land.

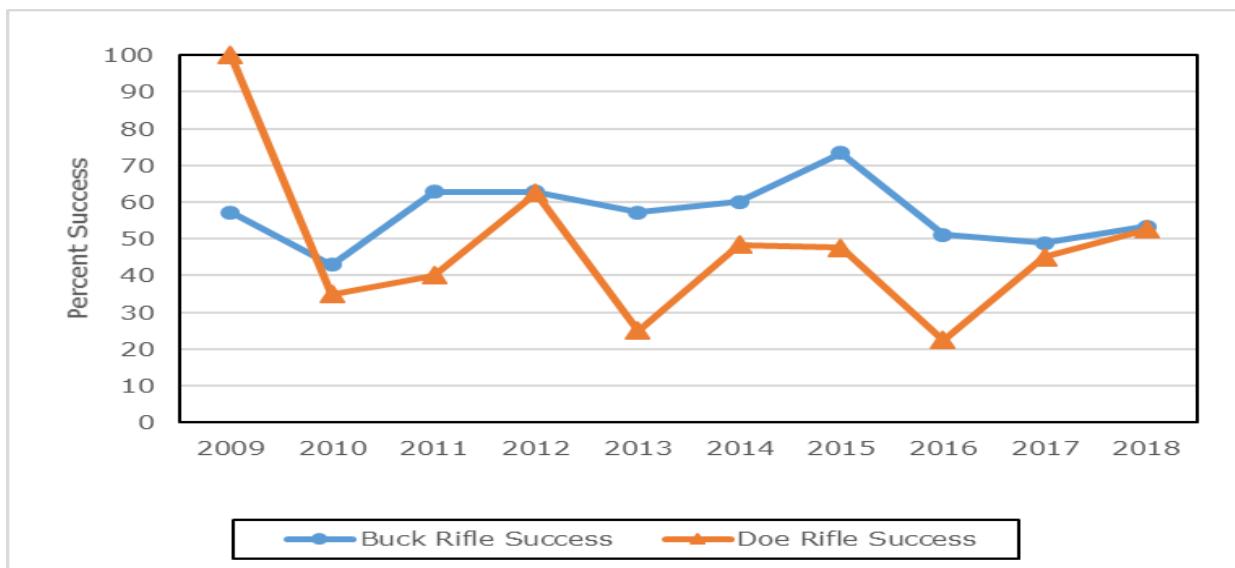


Figure 9. Laramie River Valley DAU rifle success rates 2009-2018.

Disease

Disease is not an issue in PH-36. While chronic wasting disease has been detected in deer, elk and moose within the DAU, to date it has not been diagnosed in pronghorn.

Game Damage

No pronghorn damage claims have been submitted in PH-36 from 2009-2020.

CURRENT HERD MANAGEMENT

Current Post-hunt Population

Based on the PH-36 population model the 2019 post-hunt population is estimated at 623 animals.

Current Sex/Age Composition

Annual computer modeling estimates a 2019 post-hunt ratio of 49 bucks: 100 does. The composition objective is 20-25 bucks: 100 does post-hunt.

Current Management Strategies

The current population size is near objective, the goal in management has been to continue to stabilize the population with consistent license levels. Buck: doe ratios have been problematic in recent years as the herd is over the post-hunt sex ratio objective. This may in part be due to little survey data over the past 10 years and large tracts of private land acting as a refuge for the animals.

Current Issues and Opportunities

There are no significant problems in PH-36. Increased hunter access to private property is desirable, but is not a problem in reaching population management objectives. Balancing competing desires for hunting opportunity from a large number of small acreage landowners and that of 3-4 large acreage landowners may be the biggest challenge.

ISSUES AND STRATEGIES

Issue Solicitation Process

A survey was sent out to landowners and hunters that selected for one of the hunt codes for PH-36 over the last 3 years. The survey was open online for 30 days.

The draft plan was posted from April 13, 2020 to May 8, 2020 on the CPW website for additional public comments. Copies of the draft plan were made available to the USFS, BLM, and Larimer County HPP committee.

Issue Identification

One hundred and forty-one surveys were completed for PH-36 (see Appendix A). The majority of the respondents are from Colorado and have either hunted or put in for a limited draw license in PH-36. In summary, respondents want management objectives to remain status quo, concerns over the number of mature bucks available for harvest and concerns about an increase in development within the DAU were expressed. For complete results and respondents, comments see Appendix A.

RECOMMENDED OBJECTIVES

Colorado Parks and Wildlife recommends the following extension objectives for PH-36:

- 1) Maintain the current post-hunt population objective of 550-650 pronghorn. This maintains the current population objective since the 1990's. Given no other changes in herd status, this provides current levels of hunting recreation and continuation to manage for a stable herd.

Herd Composition-Sex Ration Management Objective Alternatives:

The two alternatives for sex ratio objectives are independent of one another, and represent different biological issues, social aspects and hunting strategies in herd management.

Composition Alternative 1: 25-30 bucks: 100 does

To manage for this objective there would be an increase in buck licenses. A majority of pronghorn are on private land during pronghorn season, which is not accessible to the public hunter. Increasing licenses may reduce hunter success and hunter satisfaction and the objective may never be met.

Composition Alternative 2 (preferred): 30-35 bucks: 100 does

This is an increase from the current objective. The increase allows for an attainable management objective based on large tracts of private lands within the DAU that act as a refuge for the pronghorn. This would maintain current level of buck hunting, buck maturity, and horn size.

Appendix A- Public Survey and Results

1. Are you currently a resident of Colorado

Answer Choices	Responses
Yes	96.45%
No	3.55%
Answered	141
Skipped	2

2. Do you currently live within any of the Laramie River Valley Pronghorn herd GMUs?

Answer Choices	Responses
Yes	6.34%
No	93.66%
Answered	142
Skipped	1

3. Which of the following best describes how you interact with pronghorn in the Laramie River Valley Herd GMUs? (Please check all that apply)

Answer Choices	Responses
As a viewer/ wildlife watcher	39.86% 57
As a landowner	14.69% 21
As a hunter	93.01% 133
As a livestock producer	0.70% 1
As an outdoor recreationist (e.g., hiker, mountain biker, horseback riding, etc...)	25.17% 36
As a guide/outfitter	1.40% 2
Other (please specify)	3.50% 5
Answered	143
Skipped	0

Other (please specify)

I have never hunted in these units for pronghorn
 Hunting deer
 Shed hunting, fly fishing. I spend a LOT of time there.
 None of the above, I applied for the unit in the past, but have never drawn or been in the area.
 Haven't hunted them but might someday.

4. Have you ever hunted pronghorn in any of the Laramie River Valley pronghorn herd GMUs?

Answer Choices	Responses
Yes	67.61%
No	32.39%
Answered	142
Skipped	1

5. If you have hunted pronghorn did you hunt on:

Answer Choices	Responses
Public	59.65%
Private	23.68%
Both	16.67%
Answered	114
Skipped	29

6. If you hunt private land: (Please check all that apply)

Answer Choices	Responses
Do you own the land you hunt	35.59% 21
Pay trespass	10.17% 6
Have permission to hunt without a fee	64.41% 38
Answered	59
Skipped	84

7. Do you hunt primarily in:

Answer Choices	Responses
GMU 7	56.10%
GMU 8	43.90%
Answered	123
Skipped	20

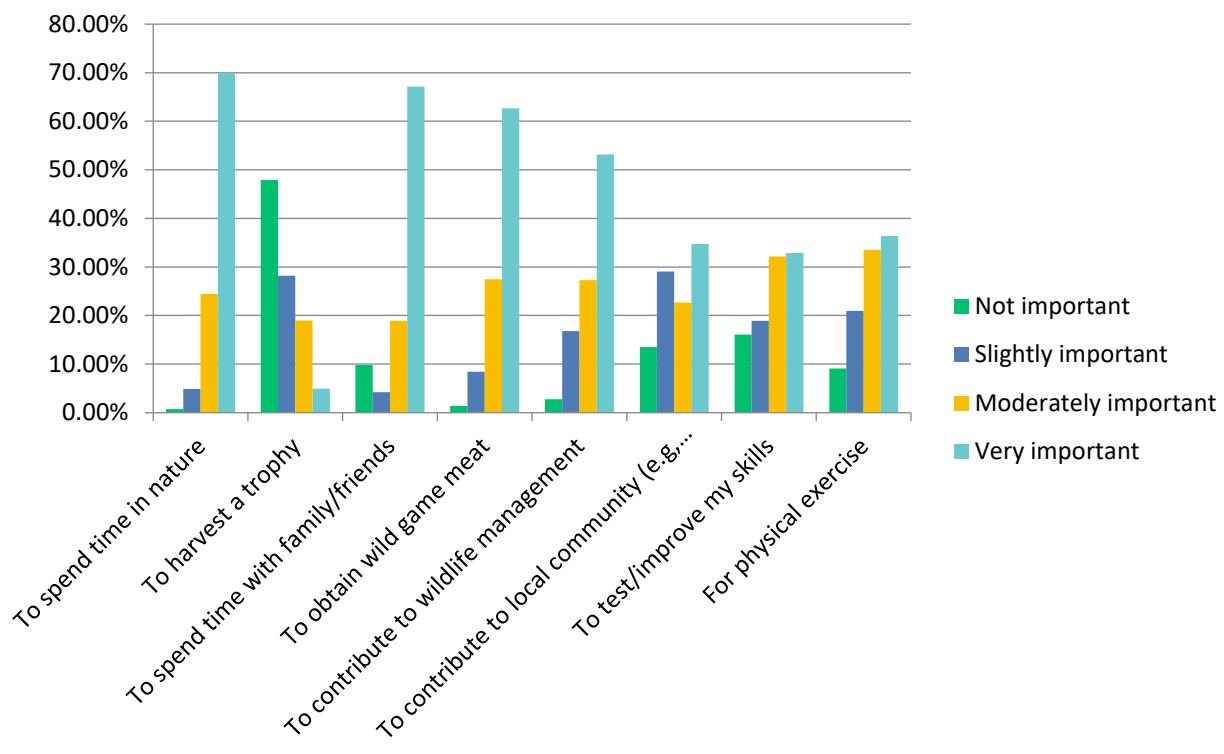
8. Overall, how satisfied were you with your pronghorn hunting experience in any of the Laramie River Valley pronghorn herd GMUs during the previous 10 years?

Answer Choices	Responses
Very dissatisfied	7.63% 9
Somewhat dissatisfied	16.10% 19
Neither dissatisfied or satisfied	19.49% 23
Somewhat satisfied	30.51% 36
Very satisfied	26.27% 31
Answered	118
Skipped	25

9. To what extent have you felt crowded by other hunters while pronghorn hunting in any of the Laramie River Valley pronghorn herd GMUS?

Answer Choices	Responses
Not at all crowded	45.69% 53
Slightly crowded	30.17% 35
Moderately crowded	17.24% 20
Very crowded	6.90% 8
Answered	116
Skipped	27

10. How important to you is each of the following reasons to hunt pronghorn in Colorado? (Please check one response for each statement)



Other (please specify)

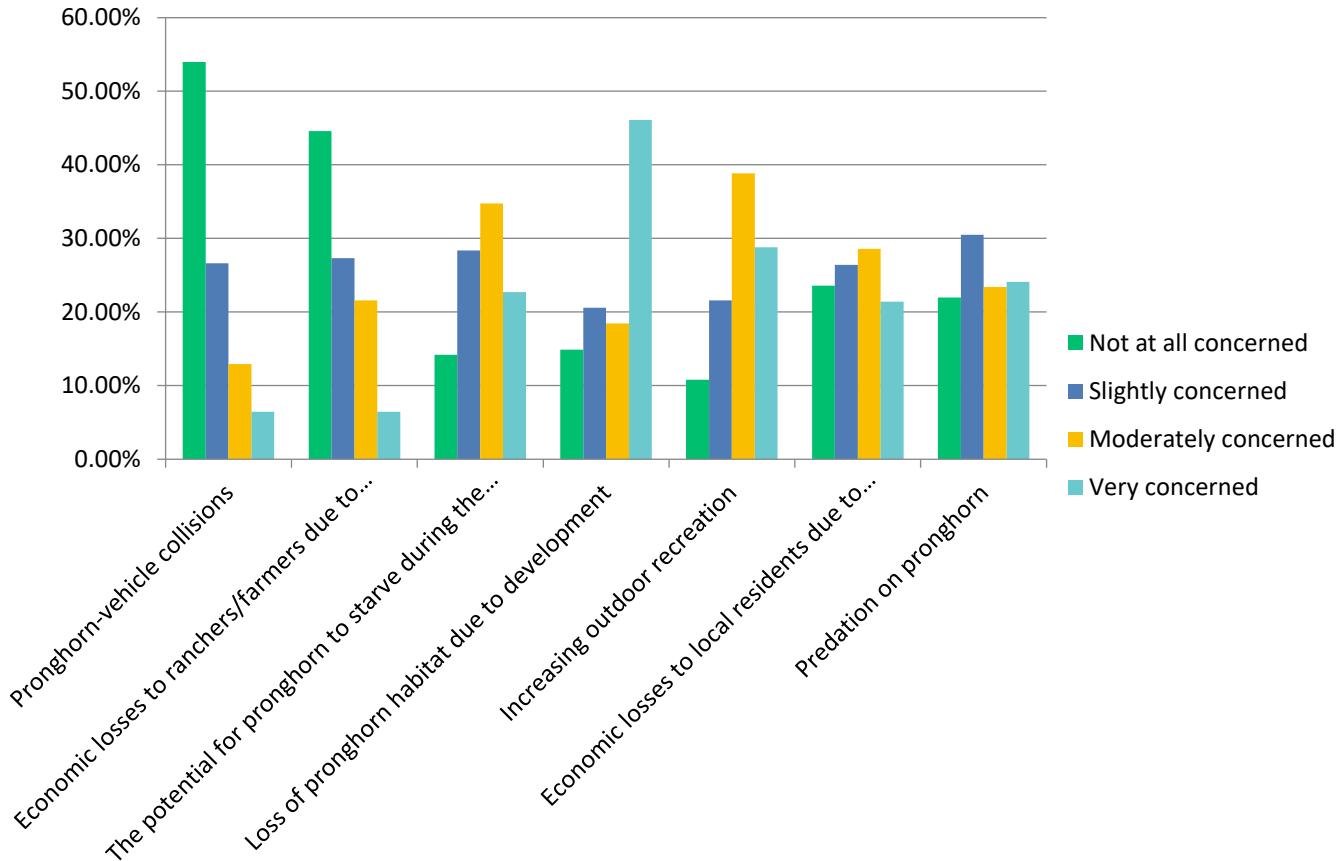
I certainly enjoy these beautiful animals in their habitat

To exercise our rights to do so.

to save antelope from lions

To help manage the heard

11. Please indicate how concerned you are about each of the following in the Laramie River Valley pronghorn herd GMUs:
(Please check one response for each statement)



Other (please specify)

1. I'm concerned about the possibility of wolves being introduced to the state on the ballot this year and the impact it will have on wildlife if the measure is passed
2. Almost all the pronghorn run on private property in GMU 8. During the season, they were run off of what little public land there is to hunt on early on the first day. The animals didn't come back during the 3 days that I hunted there. All one could do is look at them over on the private land.
3. Fences and yes there is a lion and coyote issue there.
4. Wolf predation of pronghorn has been high in our area (GMU8) in the past
5. wolves
6. No wolf reintroduction

12. How, if at all, has the Laramie River Valley pronghorn herd changed during the previous 10 years?

Answer Choices	Responses	
The number of pronghorn has increased	15.49%	22
The number of pronghorn has decreased	14.08%	20
The pronghorn herd has not changed	13.38%	19
I'm not sure	57.04%	81
	Answered	142
	Skipped	1

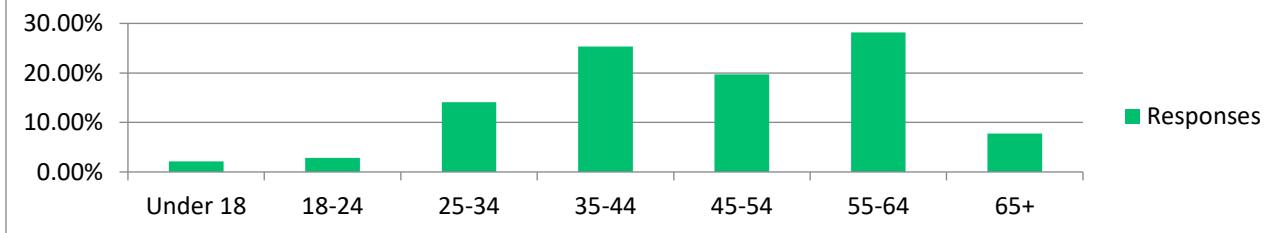
13. How important to you is that the population of the Laramie River Valley herd...

	Not at all important to me	Somewhat important to me	Moderately important to me	Very important to me
...stay the same (i.e.,the current population range is maintained)	3.82%	19.85%	43.51%	32.82%
...increase somewhat	3.79%	17.42%	41.67%	37.12%
...decrease somewhat	50.00%	14.52%	16.13%	19.35%

14. How important to you are the following...

	Not at all important to me	somewhat important to me	Moderately important to me	Very important to me
Being able to hunt pronghorn in Laramie River Valley pronghorn herd most years (either sex)	4.93%	16.20%	30.99%	47.89%
Being able to hunt mature bucks in the Laramie River Valley pronghorn herd	9.29%	28.57%	33.57%	28.57%

15. How old are you?



16. With what gender do you identify?

Answer Choices	Responses	
Male	93.71%	134
Female	5.59%	8
Prefer not to say	0.70%	1
Other (please specify)	0.00%	0
	Answered	143

Appendix B- Letters of Support, Agency Comments, & Public Comment



April 30, 2020

Angelique Curtis
Colorado Parks and Wildlife
317 W Prospect Rd.
Fort Collins, CO 80526

RE: Larimer County Habitat Partnership Program Comments - DAU PH-36

Dear Angelique:

One of the initial reasons for creating the Habitat Partnership Program was to provide local landowners and other interests an opportunity to give input into big game management in their areas. The diverse makeup of local HPP committees (3 livestock growers, Forest Service, BLM, CPW and sportsmen representatives) provide a good cross section of local interests to review DAU proposals and respond accordingly for CPW consideration.

HPP has two purposes; to resolve big game wildlife (deer, elk, pronghorn, moose) conflicts with agricultural landowners and to assist CPW to meet game management objectives for those same species. From those perspectives, the Larimer County HPP committee has discussed your presentation, reviewed the draft alternatives, and offers these comments for consideration.

The Larimer County HPP committee is in agreement with the following comments pertaining to proposals for the population range and sex ratio objectives for the above DAU plan.

The Larimer County HPP committee supports the draft alternative to keep the current population objective. We believe this alternative responsibly balances local range and habitat conditions with sportsmen desires and landowner concerns. We have not heard of any concerns about the current population or any desires to increase the local herd size and so we believe the current levels are where they should be. Any issues we have are more likely related to distribution of the herds in the area and not the overall population size.

The Larimer County HPP committee also discussed the proposed sex ratio alternative. We support raising the current sex ratio objective to provide larger bucks for sportsmen to pursue. We agree that this objective aligns with current management capabilities considering the restrictions for hunting on private land in this area.

As stated above, HPP is also directed by statute to assist the Division to meet game management objectives. The Larimer County HPP committee has worked with both public land managers and private landowners to improve the quality and quantity of the habitat in DAU PH-36. Adequate

habitat is critical to meeting game management objectives and we remain committed to maintaining and improving habitat in this area.

Our committee is confident about CPW being able to achieve the proposed objectives. We have not heard any major complaints from landowners, and we have heard that hunter satisfaction in this DAU is high. We feel that the proposed management objectives are the most attainable and make the most sense for this area.

The Larimer County HPP committee feels there is adequate habitat with adequate protections in place, such as seasonal closures and use restrictions, to achieve the desired objectives. While the committee has confidence in the plan's objectives over the next ten years, beyond that they are concerned residential growth and increased recreation demands could hinder future population objectives.

Thank you for the presentation and the opportunity to provide these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Lars Larson".

Lars Larson, Chair
Larimer County HPP Committee

Oberlag, Dale F -FS <dale.oberlag@usda.gov>

Wed, Apr 29, 4:16

to Katie, Dale, me

Hi Angelique, just replying to your message below for the USFS/CLRD. I discussed these 2 Draft pronghorn herd management plans briefly with our District Ranger Katie Donohue also. As I said Monday on our Larimer County HPP video call, we support the CPW preferred alternatives for both herds for post-hunt population objective (status quo from previous 10-year plans) and the CPW preferred alternative for post-hunt sex-ratio for both herd plans as well (slight increase for both). According to the plan and CPW herd data, both of these herds have very limited habitat or use occurring on FS lands, especially the Cherokee Park herd, and we are not aware of any current resource issues or concerns with either of these herds on USFS lands. Thank you for the opportunity to comment on these draft pronghorn herd management plans for PH-33 and PH-36. -Dale-

**Dale Oberlag
District Wildlife Biologist**

**Forest Service
Arapaho & Roosevelt NFs and Pawnee NG
Canyon Lakes Ranger District**

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2150 Centre Ave., Bldg E
Fort Collins, CO 80526
www.fs.fed.us

Caring for the land and serving people

Jeff Shamley <jeffshamley@gmail.com>

Tue, Apr 14,
7:58 AM

to me

Hi Angelique,

I am writing to voice my support for the proposal to build up the pronghorn herds in northern Larimer county, specifically in GMUs 7,8,9,191. I'd also like to see efforts to build up herds in southern Larimer county at some point too but I understand that may not be possible at this time.

Please add my contact information to the notification lists.

Thank you for all your hard work!

-Jeff

Jeff Shamley
1048 Harrison Ave,
Loveland, CO 80537
970-430-0698
jeffshamley@gmail.com