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TO: Members of the Colorado Parks and Wildlife Commission
FROM: Katie Lanter, Policy and Planning Supervisor; Matt Eckert, Terrestrial Programs Supervisor; Danielle Isenhart, License, Reservations and Customer Operations Manager
RE: License Distribution Problem Statements and Alternatives
DATE: August 25, 2022

On August 23, 2022, the Colorado Parks and Wildlife Commission (Commission) participated in a workshop covering various facets of how Colorado Parks and Wildlife (CPW) distributes big game hunting licenses. As the workshop concluded, the Commission requested that CPW staff provide information on the issues that big game hunters have raised with big game license distribution, captured in this memo as "problem statements" and alternatives for addressing the problems, including staff's recommendations.

There are two primary problems that have surfaced related to big game license distribution:

- Problem #1: Resident opportunity
  - Resident hunters would like to draw more licenses. Resident hunters have concerns that nonresident hunters are allocated licenses at a higher rate in Colorado than other western states.
- Problem #2: Crowding
  - Big game hunters have concerns regarding increasing crowding in the early seasons—especially archery season—due to other hunters and other recreation user groups. Many resident hunters in particular feel that crowding from nonresident hunters in OTC archery elk units has become a major concern.

There are three major areas where changes could be made to big game license distribution—allocation, preference points, and over-the-counter (OTC). Alternatives within each of these areas are discussed below. In all cases, retaining the status quo is also an alternative. The only alternatives that could be implemented for the 2023 big game seasons are alternatives C-E below. Any other changes would be for the 2024 big game season or later, depending on the complexity of the change and time needed for IPAWS programming and testing, educating hunters about the change, etc.

At the end of this memo, an appendix is provided with estimated financial loss to CPW from various alternatives. Generally speaking, any alternative that decreases nonresident licenses decreases CPW's revenue because nonresident licenses cost more than resident licenses. These figures do not capture potential financial impacts to local communities or outfitting businesses that host big game hunters and may see changes if nonresident hunting opportunities decrease based on adopting one or more of these alternatives. As part of the last Statewide Comprehensive Outdoor Recreation Plan (SCORP), CPW hired Southwick Associates to do a study on the economic contribution of outdoor recreation to Colorado. The study showed that hunting contributes $843 million annually to the state, supporting $280

million in salaries and wages and 7,937 jobs. The following table, taken from the SCORP study, shows the economic contributions of big game hunting specifically:

Table 6. Total Economic Contributions of Big Game Hunting in Colorado

	Output ($millions)	Labor Income ($millions)	GDP Contribution ($millions)	State/Local Taxes ($millions)	Federal Taxes ($millions)	Jobs
Resident	$374.3	$124.5	$197.4	$21.3	$29.1	2,999
Non-resident	$228.2	$95.1	$138.6	$13.0	$21.3	3,305
Total	$602.4	$219.6	$336.0	$34.4	$50.4	6,304

As discussed at the workshop, financial losses to CPW from decreasing nonresident licenses could potentially be offset by increasing resident license prices. However, license prices are set by the Colorado General Assembly and the Commission only has the authority to adjust those prices annually for inflation. Accordingly, there is no guarantee that resident license prices could be increased to offset any financial losses to CPW.

Alternatives

LICENSE ALLOCATION

Amending license allocation regulations would address problem #1: resident opportunity.

Staff Preferred Alternative: Single Across-the-Board Split of 75/25 or 80/20
Moving to one across-the-board allocation split would simplify CPW operations and regulations. It would no longer be required to assess which hunt codes fall within the current high demand 80/20 split based on a rolling or static three-year average or specified preference point threshold. An across-the-board split of either 75/25 or 80/20 for elk, deer, bear and pronghorn would increase resident opportunity to draw these licenses in the primary draw. Applying the same allocation split to bear and pronghorn in addition to elk and deer would make big game license distribution more consistent across species. Additionally, having a set allocation where specific hunt code allocations do not adjust annually or periodically, would maintain a higher level of predictability for the draw.

A. Change the limited license draw allocation splits for elk and deer to a single across-the-board split **of 75% resident allocation and 25% nonresident allocation** applicable to all limited licenses for deer, elk, bear and pronghorn regardless of preference points required. (Continue using the current soft cap approach.)

–OR–

B. Change the limited license draw allocation splits for elk and deer to a single across-the-board split **of 80% resident allocation and 20% nonresident allocation** applicable

to all limited licenses for deer, elk, bear and pronghorn regardless of preference points required. (Continue using the current soft cap approach.)

Second Alternative: Updating the 3-year average and potentially increasing the preference point threshold
Updating the 3-year average used to determine high-demand hunt codes that are 80/20 instead of 65/35 from the current 2007-2009 average to a rolling 3-year average (updated annually with a one-year lag), ensures the draw is using the most current data and incorporates all existing hunt codes. The Commission could continue categorizing high-demand hunt codes as those that use 6 or more preference points to draw, or adjust up the preference point threshold to a higher level. CPW analyzed the financial impact of 6 points, 8 points and 10 points as a threshold.

C. Update the 3-year average used to determine high-demand hunt codes that are allocated 80% to residents and 20% to nonresidents to a rolling 3-year average (updated annually with a one-year lag) for all limited licenses for deer, elk, bear and pronghorn that required **6 or more resident preference points to draw.** (Continue using the current soft cap approach.)

–OR–

D. Update the 3-year average used to determine high-demand hunt codes that are allocated 80% to residents and 20% to nonresidents to a rolling 3-year average (updated annually with a one-year lag) for all limited licenses for deer, elk, bear and pronghorn that required **8 or more resident preference points to draw.** (Continue using the current soft cap approach.)

–OR–

E. Update the 3-year average used to determine high-demand hunt codes that are allocated 80% to residents and 20% to nonresidents to a rolling 3-year average (updated annually with a one-year lag) for all limited licenses for deer, elk, bear and pronghorn that required **10 or more resident preference points to draw.** (Continue using the current soft cap approach.)

PREFERENCE POINTS

Amending preference point regulations may benefit some hunters depending on the change and the amount of preference points held by the hunter. Some changes would benefit high-point holders and some changes would benefit low-point holders, regardless of residency status. Crowding would not be directly reduced by a change to the preference point system. Preference point creep, which is cited by some hunters as a reason they did not draw a desired tag, is limited to a small proportion of hunt codes and licenses. Changes to the preference point system could have unintended consequences that exacerbate point creep and affect additional hunt codes.

Staff Preferred Alternative: Status Quo
95% (nonresident) to 99% (resident) of the 2021 limited licenses for deer, elk, pronghorn and bear required 5 or fewer preference points.

F. Maintain **status quo** for preference points.

Second Alternative: Averaging Group Points
Currently, when hunters apply as a group, the point value of the lowest point holder of the group is used for the entire group in the limited license draw. A change that could be made is to average points held by each member of the group and use the point average in the limited license draw.

G. Use the **average of all group members' points** (rounded down to the nearest whole number) in the primary limited license draw. Additional changes would also be necessary to refund regulations to ensure that individuals could not apply as a part of a group to increase the group's average and then turn their license in for a restoration of preference points.

Third Alternative: Point Banking
Currently when a limited license is drawn, all points held by the hunter for that species are used to draw that license. Under a point-banking system, an applicant may use only a portion of their accumulated preference points to draw a limited license. The remainder of their points can then be saved or "banked" to put toward future hunts. A banking system may increase preference point creep in lower- and middle-point hunt codes. This is because applicants with a high number of points could draw licenses every year for several years, displacing others who were not banking points. Stipulating a minimum number of points to be used per license drawn would reduce the impact banking would have on the lower-point hunt codes.

H. Establish a preference point banking system and use the system for at least 5 years. Use a 3 point penalty for banking to protect the lower hunt codes from point creep.

LIMITING OTC

Limiting or capping OTC archery elk licenses for only nonresidents could address both problems of resident opportunity and crowding. Limiting OTC archery elk licenses for both nonresidents and residents would address only crowding and may negatively impact resident opportunity.

OTC licenses are valued by both residents and nonresidents who view OTC license hunting as a way to ensure they can go hunting even if they did not obtain a limited license. Many hunters expressed concern about possibly limiting OTC archery elk licenses and the negative impact it would have on not only current hunters but also novice and youth hunters who might first engage in hunting through an OTC license opportunity. For nonresidents hunters, OTC licenses make Colorado an appealing place to visit during hunting season because of the ease of purchase and ability to buy a license without navigating the limited license draw process or having to plan several months in advance. Although concerns regarding crowding during archery elk season have been raised, not all hunters feel that crowding negatively impacts their hunting experience. Issues with overcrowding in areas during archery elk season can also be addressed through limiting OTC licenses at the DAU level as is currently done when necessary, recognizing that some hunters feel this pushes hunters into other units that then

become crowded. Finally, limiting OTC archery elk licenses statewide could be reassessed at the next Big Game Season Structure planning process if desired by the Commission.

Staff Preferred Alternative: Status Quo
Knowing that OTC licenses are valued by resident and nonresident hunters, CPW staff recommends the status quo. However, recognizing that limitation unit by unit can push issues like crowding into neighboring units, CPW recommends continuing to monitor field conditions and revisit this topic during the next Big Game Season Structure.

I.   Maintain the status quo and reassess during the next Big Game Season Structure

License Distribution Financial Analysis Summary

We conducted analyses to estimate the financial implications of the following 3 potential license distribution changes:

- o Adjusting Nonresident Allocation Soft Caps
- o Updating Eligibility Criteria for 80/20 Hunt Codes
- o Limiting Archery Elk Licenses (Eliminating OTC)

Each of these analyses were based on the 2021 applicants, draw, and license sales data and applied soft caps of our current system.

NONRESIDENT CAP ADJUSTMENT

We have heard from the public that resident hunters would like to draw more licenses and that resident hunters have concerns that nonresident hunters are allocated licenses at a higher rate in Colorado than other western states. These concerns could be addressed by adjusting nonresident caps.

Currently nonresident caps are applied to all deer and elk hunt codes that go through the draw except RFW and PLO hunt codes. These caps are set at 35% for all hunt codes except for those on the 80/20 list. 80/20 hunt codes required 6 or more preference points for a resident adult to draw on average from 2007-2009 and have a nonresident cap of 20%.

In this analysis, we compared the status quo to scenarios in which the nonresident cap was set at a straight 35%, 25%, and 20%. We also considered applying nonresident caps to pronghorn and bear. The results of each scenario are shown in Table 1 and Table 2. The total number of licenses drawn does not change from the status quo. What does change is the number of licenses going to resident and nonresident applicants. As the nonresident cap decreases, licenses shift from nonresidents to residents and revenue decreases.

Table 1: Draw results and revenue from nonresident cap adjustment analysis scenarios (deer and elk only)

	Nonresident Caps for Deer and Elk			
	Status Quo - 35% or 20%	35%	25%	20%
Resident Licenses Drawn	89,230	89,100	92,190	94,080
Nonresident Licenses Drawn	33,390	33,520	30,420	28,540
Total Licenses Drawn	122,620	122,620	122,620	122,620
Revenue	$21,305,000	$21,376,000	$19,902,000	$19,029,000
Difference from Status Quo		$71,000	-$1,403,000	-$2,347,000

Table 2: Draw results and revenue from nonresident cap adjustment analysis scenarios (deer, elk, pronghorn, and bear)

	Nonresident Caps for Deer, Elk, Pronghorn and Bear				
	Status Quo - 35% or 20% cap for deer and elk, no cap for bear and pronghorn	35% or 20% cap for deer and elk, 35% cap for bear and pronghorn	35% Cap	25% Cap	20% Cap
Resident Licenses Drawn	108,070	108,100	107,970	111,120	113,070
Nonresident Licenses Drawn	36,210	36,180	36,310	33,160	31,210
Total Licenses Drawn	144,280	144,280	144,280	144,280	144,280
Revenue	$22,445,000	$22,440,000	$22,511,000	$21,030,000	$20,147,000
Difference from Status Quo		-$5,000	$66,000	-$1,425,000	-$2,311,000

80/20 Hunt Code List Update

The 80/20 hunts are those deer and elk hunt codes that required 6 or more preference points for a resident adult to draw on average from 2007-2009. The nonresident soft cap for these hunt codes is 20%. The hunt codes on the 80/20 list were defined in 2009 and have not been updated since.

We have heard a desire from the public to update the 80/20 hunt code list. Since the list was established, the number of preference points needed to draw these hunt codes has changed. There are currently hunt codes on the list that no longer require 6 points to draw, and hunt codes that take more preference points to draw than they did in 2007-2009. There have also been a number of new hunt codes established since the list was created. None of these newer hunt codes are on the list regardless of how many preference points they currently require to be drawn.

In this analysis, we considered the implications of updating the years on which the 80/20 hunt code list is based from 2007-2009 to the most recent 3 years, 2019-2021. We also looked at increasing the number of preference points needed to qualify to 8 and 10 and adding pronghorn and bear hunt codes to the list. The hunt code level results are shown in Table 3 and the license level results are shown in Table 4. Table 7 contains detailed information on the specific hunt codes that would qualify for the 80/20 list under each of these scenarios along with the minimum number of preference points each required to draw by a resident adult.

Table 3: Number of hunt codes currently with nonresident cap and that would qualify for the 80/20 list under different scenarios.

Species	Hunt Codes with Nonresident Cap	Number of 80/20 Hunt Codes			
		Status Quo 6 PP (2007-2009)	6 PP (2019-2021)	8 PP (2019-2021)	10 PP (2019-2021)
Deer	781	12	38	25	19
Elk	639	24	38	32	22
Pronghorn	229	0	30	25	20
Bear	126	0	4	3	3
Total	1775	36	110	85	64

Table 4: Number of licenses in hunt codes currently with nonresident cap and that would qualify for the 80/20 list under different scenarios.

Species	Licenses with Nonresident Cap	Licenses in 80/20 Hunt Codes			
		Status Quo 6 PP (2007-2009)	6 PP (2019-2021)	8 PP (2019-2021)	10 PP (2019-2021)
Deer	86,693	327	795	535	380
Elk	100,495	732	1,522	977	532
Pronghorn	17,867	0	890	784	405
Bear	20,706	0	17	13	13
Total	225,761	1,059	3,224	2,309	1,330

Hunt codes on the 80/20 list are more restrictive to nonresidents, so as the number of licenses on the 80/20 list increases, licenses will shift from nonresidents to residents, leading to a loss in revenue. Updating the calculation years 80/20 list alone (leaving the preference point threshold at 6 points) would lead to a $75,000 loss. Including bear and pronghorn hunt codes in the list would lead to an $86,000 loss. As the preference point threshold increases, the number of affected licenses decreases, as does revenue losses. If the preference point threshold is increased to 10, there is a slight revenue gain in both scenarios.

Table 5: Revenue implications of the 80/20 list update analysis scenarios.

		Status Quo	6 PP (2019-2021)	8 PP (2019-2021)	10 PP (2019-2021)
80/20 Hunt Codes for Deer and Elk Only	Revenue	$22,445,000	$22,370,000	$22,419,000	$22,461,000
	Difference from Status Quo		- $75,000	- $26,000	$16,000
80/20 Hunt Codes for Deer, Elk, Pronghorn, and Bear	Revenue	$22,445,000	$22,359,000	$22,407,000	$22,450,000
	Difference from Status Quo		- $86,000	- $38,000	$5,000

LIMITING OVER-THE-COUNTER (OTC) ARCHERY ELK

Currently, there are 2 OTC archery elk hunt codes, EE000U1A and EF000U1A. Hunters are concerned about overcrowding during these hunts. To reduce crowding, these OTC hunt codes could be replaced by limited hunt codes with license numbers set at a level lower than license sales in the current OTC hunt codes. In this analysis we simulated a draw in which the license numbers were set at 90% and 75% of the 2021 license sales. We do not have any data on how people would apply for these new licenses, so for the purposes of this analysis we assumed that people would apply similarly to license sales in 2021. We then applied nonresident caps of 35%, 25%, and 20%.

The results are shown in Table 6. License reductions at the 10% and 25% levels lead to revenue losses of $2,255,295 and $5,638,238 respectively. Given the number and percentage breakdown by residency of license holders in 2021, the distribution of these licenses is not affected by the nonresident caps used in this analysis.

Table 6: Draw results and revenue from the OTC Archery Elk analysis scenarios.

	Status Quo	10% License Reduction			25% License Reduction		
		35% Cap	25% Cap	20% Cap	35% Cap	25% Cap	20% Cap
Resident Licenses	16,492	16,235	16,235	16,235	15,850	15,850	15,850
Nonresident Licenses	19,250	15,933	15,933	15,933	10,957	10,957	10,957
Total Licenses	35,742	32,168	32,168	32,168	26,807	26,807	26,807
Revenue	$13,836,474	$11,581,179	$11,581,179	$11,581,179	$8,198,236	$8,198,236	$8,198,236
Difference from Status Quo		-$2,255,295	-$2,255,295	-$2,255,295	-$5,638,238	-$5,638,238	-$5,638,238

Table 7: Hunt codes that would qualify for the 80/20 list under each of these scenarios along with the minimum number of preference points each required to draw by a resident adult.

80/20 Hunt codes and Preference Points							
Status Quo-2007-2009 (6 PP)		**2019-2021 (6 PP)**		**2019-2021 (8 PP)**		**2019-2021 (10 PP)**	
Hunt Code	**Preference points**	**Hunt Code**	**Preference points**	**Hunt Code**	**Preference points**	**Hunt Code**	**Preference points**
DM001O3R	10	AM001O1M	17	AM001O1M	17	AM001O1M	17
DM002O1M	6	AM003O1R	9	AM003O1R	9	AM006O1R	15
DM002O2R	6	AM006O1R	15	AM006O1R	15	AM010O1R	22
DM002O3R	9	AM007O1R	7	AM010O1R	22	AM011O1R	15
DM021O3R	9	AM010O1R	22	AM011O1A	9	AM012O1R	10
DM044O4R	7	AM011O1A	9	AM011O1M	8	AM016O1R	14
DM074E1R	7	AM011O1M	8	AM011O1R	15	AM049O1R	11
DM082E1R	7	AM011O1R	15	AM012O1R	10	AM057O1R	10
DM103L1R	11	AM012O1R	10	AM016O1R	14	AM066O1R	17
DM142L1R	13	AM016O1R	14	AM049O1R	11	AM067O1R	18
DM201O2R	6	AM048O1R	6	AM057O1R	10	AM068O1M	10
DM201O3R	6	AM049O1M	6	AM066O1M	8	AM068O1R	17
EE001E1R	11	AM049O1R	11	AM066O1R	17	AM079O1R	17
EE001O1A	9	AM057O1R	10	AM067O1M	10	AM080O1R	11
EE002E1R	16	AM066O1M	8	AM067O1R	18	AM081O1R	14
EE002O1A	14	AM066O1R	17	AM068O1M	10	AM142O1R	11
EE010E1R	14	AM067O1M	10	AM068O1R	17	AM161O1R	15
EE010O1A	12	AM067O1R	18	AM079O1R	17	AM201O1A	19
EE040O1R	7	AM068O1M	10	AM080O1R	11	AM201O1R	21
EE061O1A	9	AM068O1R	17	AM081O1R	14	AM551O1R	15
EE201E1R	17	AM079O1R	17	AM142O1R	11	BE851O1R	18
EE201O1A	14	AM080O1R	11	AM161O1R	15	BE851O2R	15
EM001O1M	10	AM081O1R	14	AM201O1A	19	BE851O5R	11
EM002O1M	14	AM082O1R	7	AM201O1R	21	DM002O2R	12
EM010O1M	14	AM142O1R	11	AM551O1R	15	DM002O3R	16
EM061O1M	11	AM161O1R	15	BE851O1R	18	DM010O3R	15
EM061O1R	8	AM201O1A	19	BE851O2R	15	DM022O4R	13
EM061O2R	6	AM201O1R	21	BE851O5R	11	DM040O4R	11
EM061O3R	6	AM551O1M	7	DM001O3R	10	DM044O3R	15
EM061O4R	6	AM551O1R	15	DM002O2R	12	DM044O4R	18
EM076O1M	6	BE851O1A	6	DM002O3R	16	DM053O4R	13
EM201O1M	15	BE851O1R	18	DM006O4R	8	DM054O4R	11
EM851O1M	8	BE851O2R	15	DM010O2R	10	DM055O4R	11
EM851O1R	10	BE851O5R	11	DM010O3R	15	DM066O3R	11
EM851O2R	8	DM001O3R	10	DM021O3R	9	DM066O4R	18
EM851O3R	12	DM002O1M	6	DM022O4R	13	DM067O4R	12
		DM002O2R	12	DM040O4R	11	DM068O4R	10
		DM002O3R	16	DM044O3R	15	DM142L1R	12
		DM005O4R	8	DM044O4R	18	DM201O2R	11
		DM006O4R	8	DM053O4R	13	DM201O3R	15
		DM010O1A	8	DM054O4R	11	DM201O4R	20
		DM010O2R	10	DM055O4R	11	DM512S1R	10
		DM010O3R	15	DM063O4R	8	EE001E1R	18
		DM021O3R	9	DM066O3R	11	EE001O1A	16
		DM022O4R	13	DM066O4R	18	EE002E1R	24
		DM035O4R	7	DM067O4R	12	EE002O1A	22

80/20 Hunt codes and Preference Points							
Status Quo-2007-2009 (6 PP)		2019-2021 (6 PP)		2019-2021 (8 PP)		2019-2021 (10 PP)	
Hunt Code	Preference points	Hunt Code	Preference points	Hunt Code	Preference points	Hunt Code	Preference points
		DM040O4R	11	DM068O4R	10	EE010E1R	22
		DM044O3R	15	DM142L1R	12	EE010O1A	20
		DM044O4R	18	DM201O2R	11	EE040O1R	11
		DM048E1R	6	DM201O3R	15	EE061E1R	19
		DM053O4R	13	DM201O4R	20	EE061O1A	14
		DM054O4R	11	DM512S1R	10	EE201E1R	25
		DM055O4R	11	DM851O2R	8	EE201O1A	23
		DM063O4R	8	EE001E1R	18	EM001O1M	13
		DM065E1R	6	EE001O1A	16	EM002O1M	22
		DM066O3R	11	EE002E1R	24	EM010O1M	22
		DM066O4R	18	EE002O1A	22	EM061O1M	16
		DM067O3R	6	EE010E1R	22	EM061O1R	11
		DM067O4R	12	EE010O1A	20	EM076E1R	18
		DM068O4R	10	EE040O1M	8	EM201O1M	24
		DM074E1R	6	EE040O1R	11	EM851O1R	17
		DM079O4R	7	EE040O2R	9	EM851O2R	15
		DM082E1R	6	EE040O3R	8	EM851O3R	21
		DM142L1R	12	EE040O4R	8	EM851O4R	19
		DM201O1M	7	EE061E1R	19		
		DM201O2R	11	EE061O1A	14		
		DM201O3R	15	EE201E1R	25		
		DM201O4R	20	EE201O1A	23		
		DM512S1R	10	EE851O1A	9		
		DM551O4R	7	EM001O1M	13		
		DM851O1R	7	EM002O1M	22		
		DM851O2R	8	EM010O1M	22		
		EE001E1R	18	EM049O1R	8		
		EE001O1A	16	EM061O1M	16		
		EE002E1R	24	EM061O1R	11		
		EE002O1A	22	EM061O2R	9		
		EE010E1R	22	EM061O3R	9		
		EE010O1A	20	EM061O4R	9		
		EE040O1A	8	EM076E1R	18		
		EE040O1M	8	EM076O1M	9		
		EE040O1R	11	EM201O1M	24		
		EE040O2R	9	EM851O1R	17		
		EE040O3R	8	EM851O2R	15		
		EE040O4R	8	EM851O3R	21		
		EE061E1R	19	EM851O4R	19		
		EE061O1A	14				
		EE076O1A	7				
		EE201E1R	25				
		EE201O1A	23				
		EE851O1A	9				
		EM001O1M	13				
		EM002O1M	22				
		EM010O1M	22				
		EM020L2R	6				
		EM049O1M	6				

80/20 Hunt codes and Preference Points							
Status Quo-2007-2009 (6 PP)		2019-2021 (6 PP)		2019-2021 (8 PP)		2019-2021 (10 PP)	
Hunt Code	Preference points	Hunt Code	Preference points	Hunt Code	Preference points	Hunt Code	Preference points
		EM049O1R	8				
		EM061O1M	16				
		EM061O1R	11				
		EM061O2R	9				
		EM061O3R	9				
		EM061O4R	9				
		EM076E1R	18				
		EM076O1M	9				
		EM076O1R	7				
		EM201O1M	24				
		EM851O1M	6				
		EM851O1R	17				
		EM851O2R	15				
		EM851O3R	21				
		EM851O4R	19				
Average preference points	10		12		14		16