



**2022-2023 Elk Quota Recommendation Forms
(Accompanies Commission Regulation 22-11)**

Elk Quota Recommendation Form

Unit Group: 051

Date Prepared: 2022

Population Objective: 200

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|---|---|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| 2019-2020 | 4 | 15 | 11 | 30 | 27 | 73 | 85 | 22 | | 0 | 50 | 100 | 1 |
| 2020-2021 | 4 | 21 | 16 | 41 | 19 | 76 | 100 | 67 | | 0 | 50 | 100 | 2 |
| 2021-2022 | 2 | 28 | 10 | 40 | 7 | 36 | 102 | 60 | | | 25 | 100 | 1 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|---|--------------------------|---|-----|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | A | M | ALW |
| 2020-2021 | | | | | 3 | | | | 3 | | | | | | | | | | |
| 2021-2022 | | | 2 | | 6 | | | | 0 | | | | | | | | | | |
| 2022-2023 | | | 1 | | 6 | | | | 0 | | | | | | | | | | |
| Tag Trend | = | = | DEC | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| 2020-2021 | | | | | 3 | | | | 5 | | | | | | | | | | |
| 2021-2022 | | | | | 0 | | | | 6 | | | | | | | | | | |
| 2022-2023 | | | | | 0 | | | | 4 | | | | | | | | | | |
| Tag Trend | = | = | = | = | = | = | = | = | DEC | = | = | = | = | = | = | = | = | = | = |

Quota Rationale

The population estimate over the last 5 years has remained constant. Winter conditions were very poor with only one major storm occurring in December. Elk earlier in the year stayed in the upper elevations, however, once snows started in December, they dropped down into their winter range in the lower elevations. With the lack of snow this year, elk moved back up towards the upper elevations by February. Since the Martin Fire, continued rehabilitation efforts have continued in this area which helps this population greatly in the future. This population is expected to see fluctuations in numbers depending on annual winter conditions. The objective is to maintain this herd below 200 animals. Currently, the Department is not seeing any growth in this population; it has remained stable for the last 5 years.

Reporting Biologist: Partee

Supervisor: Munson

Elk Quota Recommendation Form

Unit Group: 061, 071

Date Prepared: 4/11/2022

Population Objective: None - Habitat Based

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-------|-------|-------|------------------|------------------|------------------|------------------------|-------|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| | 2019-2020 | 496 | 1,042 | | | | | 433 | 1,971 | 48 | | | |
| 2020-2021 | 397 | 1,329 | 517 | 2,243 | 30 | 39 | 5,000 (1,700) | 62 | | 59 | 17 | 64 | 190 |
| 2021-2022 | 533 | 1,230 | 566 | 2,329 | 43 | 46 | 4,100 (1,400) | 69 | | 61 | 16 | 66 | 136 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|----|-----|--------------------------|---|-----|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | |
| | 2020-2021 | 30 | 3 | 20 | 3 | 40 | 5 | | | 50 | 6 | | | | 10 | | 10 | | |
| 2021-2022 | 30 | 3 | 16 | 2 | 30 | 4 | | | 40 | 4 | | | | 8 | | 8 | | | 8 |
| 2022-2023 | 25 | 3 | 8 | 1 | 18 | 2 | | | 25 | 3 | | | | 4 | | 4 | | | 7 |
| Tag Trend | DEC | = | DEC | DEC | DEC | DEC | = | = | DEC | DEC | = | = | = | DEC | = | DEC | = | = | DEC |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| | 2020-2021 | 65 | | | | 310 | 45 | | | 180 | 25 | | | | 0 | 0 | 0 | | |
| 2021-2022 | 60 | 6 | | | 235 | 35 | | | 195 | 30 | | | | 0 | 0 | 0 | | | |
| 2022-2023 | 45 | 7 | | | 125 | 18 | | | 110 | 16 | | | | 0 | 0 | 0 | | | |
| Tag Trend | DEC | INC | = | = | DEC | DEC | = | = | DEC | DEC | = | = | = | = | = | = | = | = | = |

Quota Rationale

The 061, 071 elk population estimate has been reduced from 2021 primarily based on recent aerial surveys and sample sizes indicating the likelihood that the previous estimate of 5,000 adult elk for the greater Nevada-Duck Valley Reservation-Idaho herd was an overestimate. The 2022 estimate accounts for changes in elk distribution among herds in Units 061,071 and 072-074. Movement dynamics, documented through collaring efforts, support the current adjusted population estimate for the greater Nevada-Duck Valley Reservation-Idaho herd at 4,100, and the Nevada portion of the 061,071 herd to be approximately 1,400 adult elk. In response to the new information pertaining to population size, antlerless harvest recommendations have been reduced; however with 3 years of relatively strong calf recruitment, current quota recommendations should slow population growth as well as continue to provide for hunter opportunity. Hunter harvest rates of bulls with 50-inch main beam or better remains well below the management objective of 25-35% of total bull harvest, at 16%, and is also below the previous 6-year average. Since 2019, a stepwise reduction in antlered elk quota recommendations has been instituted to move toward objective. For 2022 this strategy remains in place with even greater reductions designed to accelerate movement toward management objectives.

Reporting Biologist: Allen

Supervisor: Donham

Elk Quota Recommendation Form

Unit Group: 062, 064, 066-068

Date Prepared: 4/11/2022

Population Objective: 500

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|---|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| 2019-2020 | 102 | 158 | 38 | 298 | 65 | 24 | 600 (350) | 33 | | 39 | 17 | 68 | 55 |
| 2020-2021 | 78 | 298 | 116 | 492 | 26 | 39 | 700 (400) | 52 | | 33 | 32 | 72 | 22 |
| 2021-2022 | 161 | 443 | 160 | 764 | 36 | 36 | 700 (450) | 27 | | 33 | 27 | 83 | 30 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|-----|--------------------------|---|---|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | |
| 2020-2021 | 4 | 1 | 7 | 1 | 20 | 2 | | | 15 | 1 | | | | 5 | 5 | 5 | | | |
| 2021-2022 | 2 | 1 | 4 | 1 | 14 | 2 | | | 13 | 1 | | | | 3 | 0 | 3 | | | |
| 2022-2023 | 1 | 1 | 2 | 1 | 13 | 1 | | | 12 | 1 | | | | 2 | | 2 | | | |
| Tag Trend | DEC | = | DEC | = | DEC | DEC | = | = | DEC | = | = | = | = | DEC | = | DEC | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| 2020-2021 | 20 | | | | 70 | 10 | | | 20 | 3 | | | | 0 | 0 | 0 | | | |
| 2021-2022 | 10 | 1 | | | 65 | 9 | | | 0 | 0 | | | | 0 | 0 | 0 | | | |
| 2022-2023 | 10 | 2 | | | 75 | 8 | | | 0 | 0 | | | | 0 | 0 | 0 | | | |
| Tag Trend | = | INC | = | = | INC | DEC | = | = | = | = | = | = | = | = | = | = | = | = | = |

Quota Rationale

The 062, 064, 066-068 elk herd remains within population objective. The closure of antlerless elk hunts in Units 064, 066-068 for 2022 is designed to direct harvest pressure to the northern sub-herd that summers in Unit 062 and winters on private lands, Idaho, and the Duck Valley Indian Reservation, and decrease pressure on the southern sub-herd, in order to work toward returning to a more even distribution of elk across the unit group. Due to the fact that elk from the northern sub-herd move north into Idaho and can mix with resident Idaho elk, the total sample size obtained from survey can exceed the population estimate of elk considered residents of Nevada and may give the impression the "Big 6" elk herd is being underestimated. The early antlered elk ALW hunter success rate for the 2021 season was the lowest recorded since since 2015 at 27%. The 3-year average harvest percentage of 50-inch main beam or better bulls is within, although at the low end, of management objectives. In order to continue providing a quality antlered elk hunting experience, bull quota recommendations have once again been decreased slightly. Spike harvest remains necessary to assist with management of sex ratios while still allowing for population growth.

Reporting Biologist: Allen

Supervisor: Donham

Elk Quota Recommendation Form

Unit Group: 072,073,074

Date Prepared: 4/8/2022

Population Objective: 1,420

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|---|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| 2019-2020 | 476 | 404 | 146 | 1,026 | 118 | 36 | 1,200 | 32 | | 21 | 22 | 67 | 172 |
| 2020-2021 | 140 | 217 | 140 | 497 | 65 | 65 | 1,100 | 30 | | 18 | 21 | 61 | 73 |
| 2021-2022 | 88 | 121 | 62 | 271 | 73 | 51 | 1,200 | 37 | | 33 | 21 | 68 | 49 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|-----|--------------------------|---|-----|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | |
| 2020-2021 | 110 | 15 | 55 | 7 | 180 | 18 | | | 180 | 18 | | | | 20 | | 20 | | | 16 |
| 2021-2022 | 60 | 8 | 30 | 4 | 100 | 10 | | | 100 | 10 | | | | 20 | | 20 | | | 15 |
| 2022-2023 | 35 | 4 | 10 | 1 | 55 | 6 | | | 55 | 6 | | | | 12 | | 12 | | | 13 |
| Tag Trend | DEC | DEC | DEC | DEC | DEC | DEC | = | = | DEC | DEC | = | = | = | DEC | = | DEC | = | = | DEC |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| 2020-2021 | 25 | 3 | 10 | 1 | 140 | 15 | | | 120 | 15 | | | | 0 | 0 | 0 | 20 | | |
| 2021-2022 | 10 | 1 | 7 | 1 | 65 | 7 | | | 50 | 5 | | | | 0 | 0 | 0 | 5 | | |
| 2022-2023 | 8 | 2 | 9 | 2 | 50 | 5 | | | 40 | 4 | | | | | | | 3 | | |
| Tag Trend | DEC | INC | INC | INC | DEC | DEC | = | = | DEC | DEC | = | = | = | = | = | = | DEC | = | = |

Quota Rationale

An abbreviated survey was flown in this unit this year to allow for more aerial time in surrounding units. Survey emphasis is planned for this unit group during the next round of surveys. The 3-year average antlered elk harvest metric of 50-inch main beam or better length has been below the management objective of 25-35% for 4 years in a row. As a result, bull tags will be lowered again with the intent of moving toward objective and increasing the average age of bulls harvested. The population estimate for this unit group (which includes the population objective of 100 in Unit 075) is below population objective. As a result, antlerless elk quota recommendations are being reduced to allow this herd to move toward population objective.

Reporting Biologist: Huebner

Supervisor: Donham

Elk Quota Recommendation Form

Unit Group: 075

Date Prepared: 4/8/2022

Population Objective: 100

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|-----|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| | 2019-2020 | 21 | 55 | | | | | 27 | 103 | 38 | | | |
| 2020-2021 | 43 | 59 | 28 | 130 | 73 | 47 | 1,100 | 60 | | 29 | 24 | 86 | 6 |
| 2021-2022 | | | | 0 | -- | -- | 1,200 | 75 | | 29 | 29 | 75 | 7 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|---|--------------------------|---|---|---|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | | |
| | 2020-2021 | 2 | | 2 | | 10 | 1 | | | 10 | 1 | | | | | | | | | |
| 2021-2022 | 3 | | 2 | | 9 | 1 | | | 9 | 1 | | | | | | | | | | 9 |
| 2022-2023 | 3 | | 1 | | 6 | 1 | | | 5 | 1 | | | | | | | | | | 9 |
| Tag Trend | = | = | DEC | = | DEC | = | = | = | DEC | = | = | = | = | = | = | = | = | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| | 2020-2021 | 1 | | 3 | | 6 | | | | 120 | 15 | | | | 0 | 0 | 0 | | |
| 2021-2022 | 2 | | 4 | | 4 | | | | 50 | 5 | | | | 0 | 0 | 0 | | | |
| 2022-2023 | 2 | | 2 | | 6 | | | | 40 | 4 | | | | 0 | 0 | 0 | | | |
| Tag Trend | = | = | DEC | = | INC | = | = | = | DEC | DEC | = | = | = | = | = | = | = | = | = |

Quota Rationale

A survey was not conducted in this unit this year. The 3-year average harvest metric of 50+ inch main beam length remains below objective. This has resulted in a decrease in the total recommended antlered elk tags. Antlerless quotas are designed to keep this herd stable and within the individual Unit 075 population objective of 100 elk. Although Unit 075 is managed to maintain the resident herd within the 100 adult elk objective, due to movement of elk into and out of Unit 075 seasonally it is necessary to model Unit 075 along with Unit Group 072-074 for estimation purposes. The population estimate in this form of 1,200 adult elk is a combined population estimate including both unit groups.

Reporting Biologist: Huebner

Supervisor: Donham

Elk Quota Recommendation Form

Unit Group: 076,077,079,081

Date Prepared: 4/8/2022

Population Objective: 1,195

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|-------|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| | 2019-2020 | 184 | 783 | | | | | 297 | 1,264 | 23 | | | |
| 2020-2021 | | | | 0 | -- | -- | 1,100 | 80 | | 58 | 36 | 80 | 72 |
| 2021-2022 | 298 | 649 | 317 | 1,264 | 46 | 49 | 1,200 | 67 | | 57 | 24 | 72 | 80 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|----|----|--------------------------|---|-----|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | |
| | 2020-2021 | 20 | 2 | 9 | 1 | 55 | 6 | | | 55 | 6 | | | | 10 | | 10 | | |
| 2021-2022 | 25 | 3 | 15 | 2 | 65 | 8 | | | 65 | 8 | | | | 10 | | 10 | | | 36 |
| 2022-2023 | 12 | 1 | 12 | 1 | 60 | 7 | | | 60 | 7 | | | | 10 | | 10 | | | 39 |
| Tag Trend | DEC | DEC | DEC | DEC | DEC | DEC | = | = | DEC | DEC | = | = | = | = | = | = | = | = | INC |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|-----|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| | 2020-2021 | 6 | 1 | 15 | 1 | 40 | | | | 20 | | 10 | 10 | 30 | 0 | 0 | 0 | | |
| 2021-2022 | 10 | 1 | 15 | 1 | 45 | | | | 30 | | 10 | 16 | 30 | 0 | 0 | 0 | | | |
| 2022-2023 | 8 | 2 | 11 | 2 | 70 | | | | 40 | | 12 | 18 | 35 | 0 | 0 | 0 | | | |
| Tag Trend | DEC | INC | DEC | INC | INC | = | = | = | INC | = | INC | INC | INC | = | = | = | = | = | = |

Quota Rationale

This herd was not surveyed last year, so survey effort was increased in this unit group this year. The observed bull and calf ratios were both higher than the previous survey effort in 2019. Based on past collar data, approximately 200 of the elk found on survey spend most of the year in Idaho, so that portion of the sample is removed from the population estimate. This population is slightly above objective so the total combined antlerless quota recommendation is increasing. Bull harvest in 2019 and 2021 showed 50+ inch beam lengths below objective. In contrast, in 2020 they were above the objective of 25-35%. This variability coupled with an increase in landowner elk incentive tags have resulted in slightly lower bull quotas recommendations for the 2022-23 season.

Reporting Biologist: Huebner

Supervisor: Donham

Elk Quota Recommendation Form

Unit Group: 078, 105-107, and 109

Date Prepared: 4/5/2022

Population Objective: 340 +/- 10%

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|---|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| 2019-2020 | 93 | 270 | 79 | 442 | 34 | 29 | 460 | 80 | | 64 | 48 | 92 | 44 |
| 2020-2021 | 122 | 251 | 105 | 478 | 49 | 42 | 580 | 75 | | 92 | 55 | 79 | 30 |
| 2021-2022 | 91 | 317 | 124 | 532 | 29 | 39 | 730 | 69 | | 64 | 39 | 88 | 52 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|---|--------------------------|---|---|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | |
| 2020-2021 | 11 | 1 | 9 | 1 | 13 | 2 | | | 13 | 2 | | | | 10 | | | | | |
| 2021-2022 | 10 | 1 | 12 | 1 | 16 | 3 | | | 16 | 2 | | | | 15 | | | | | |
| 2022-2023 | 10 | 1 | 13 | 1 | 19 | 3 | | | 19 | 2 | | | | 19 | | | | | |
| Tag Trend | = | = | INC | = | INC | = | = | = | INC | = | = | = | = | INC | = | = | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| 2020-2021 | 15 | | 15 | | 95 | | | | | | | | | | | | | | |
| 2021-2022 | 20 | 2 | 15 | 2 | 70 | | | | 40 | | | | | | | | | | |
| 2022-2023 | 20 | 3 | 15 | 3 | 80 | | | | 55 | | | | | | | | | | |
| Tag Trend | = | INC | = | INC | INC | = | = | = | INC | = | = | = | = | = | = | = | = | = | = |

Quota Rationale

This population was again modeled up to account for the high number of adult cows observed on survey this year. There was a large group of elk included in the survey sample that included elk (including 2 collared cows) that spent the entirety of the hunting season in adjacent Unit 121. It is impossible to know to what degree that group represented Unit 121 or Unit 109 elk, so all were included in this survey sample. The proposed quotas are intended to begin dropping the population in the unit group. The 2021 harvest was the highest ever in this unit group and these quota recommendations should again result in an increase the total harvest. The 3-year harvest metrics continue to be above guidelines and are cause for the modest increases in the antlered quota recommendations.

Reporting Biologist: Roberts

Supervisor: Donham

Elk Quota Recommendation Form

Unit Group: 091

Date Prepared: 4/8/2022

Population Objective: 125 (NV side)

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|---|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| | 2019-2020 | | | | | | | | 0 | -- | | | |
| 2020-2021 | 5 | 52 | 33 | 90 | 10 | 63 | 430 | 90 | | | 44 | 100 | 14 |
| 2021-2022 | 38 | 66 | 20 | 124 | 58 | 30 | 390 | 73 | | | 22 | 63 | 19 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|---|--------------------------|---|---|---|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | | |
| | 2020-2021 | | | | | 11 | | | | | | | | | | | | | | |
| 2021-2022 | 4 | | | | 12 | | | | | | | | | | | | | | | 2 |
| 2022-2023 | 4 | | | | 12 | | | | | | | | | | | | | | | 2 |
| Tag Trend | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| | 2020-2021 | | | | | 5 | | | | 5 | | | | | | | | | |
| 2021-2022 | | | | | 5 | | | | 5 | | | | | | | | | | |
| 2022-2023 | | | | | 5 | | | | 5 | | | | | | | | | | |
| Tag Trend | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = |

Quota Rationale

This unit was surveyed in partnership with Utah DWR in summer 2021. The observed calf ratio was lower than average and as a result the population experienced a slight decrease. Because the herd is within population objective, the antlerless harvest will remain the same. The 3-year average 50+ inch main beam length remains within the alternative unit management objective, which is 35-45%. Because of this, bull quota recommendations will remain the same as last year as well.

Reporting Biologist: Huebner

Supervisor: Donham

Elk Quota Recommendation Form

Unit Group: 104, 108 and 121

Date Prepared: 4/11/2022

Population Objective: Up to 912

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|-----|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| | 2019-2020 | 42 | 431 | | | | | 79 | 552 | 10 | | | |
| 2020-2021 | 88 | 260 | 113 | 461 | 34 | 43 | 900 | 63 | | | 46 | 76 | 96 |
| 2021-2022 | 62 | 172 | 75 | 309 | 36 | 44 | 900 | 59 | | | 32 | 64 | 69 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|----|---|--------------------------|---|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | |
| | 2020-2021 | 10 | 1 | 6 | 1 | 65 | 8 | | | | | | | | NA | | | |
| 2021-2022 | 11 | 1 | 20 | 2 | 70 | 8 | | | | | | | | 15 | | | | 2 |
| 2022-2023 | 11 | 1 | 8 | 1 | 45 | 6 | | | 45 | 6 | | | | 15 | | | | 2 |
| Tag Trend | = | = | DEC | DEC | DEC | DEC | = | = | INC | INC | = | = | = | = | = | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|----|-----|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| | 2020-2021 | 8 | | 10 | | 90 | 10 | | | 20 | 2 | 25 | 10 | 10 | | | | | |
| 2021-2022 | 10 | 1 | 10 | 1 | 50 | 5 | | | 20 | 2 | 25 | 10 | 15 | | | | | | |
| 2022-2023 | 4 | 2 | 5 | 2 | 40 | 4 | | | 25 | 3 | 25 | 10 | 10 | | | | | | |
| Tag Trend | DEC | INC | DEC | INC | DEC | DEC | = | = | INC | INC | = | = | DEC | = | = | = | = | = | = |

Quota Rationale

The 2021 quota was designed to maintain this population very near its population objective, and it was very successful to that end. Assuming average calf ratios, the 2022 quotas should again hold this population at a static level. The 2022 season will be the first to have a split ALW bull season in this unit group. The split was inevitable, as quotas have been increasing annually. The 3-year harvest metrics continue to be above guidelines, and are cause for the modest increases in the antlered quota recommendations.

Reporting Biologist: Roberts

Supervisor: Donham

Elk Quota Recommendation Form

Unit Group: 111-115

Date Prepared: 4/11/2022

Population Objective: 2250 +/-20% (1,800-2,700)

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|----|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| 2019-2020 | 453 | 923 | 253 | 1,629 | 49 | 27 | 2,800 | 66 | NA | 64 | 49 | 81 | 186 |
| 2020-2021 | 388 | 786 | 304 | 1,478 | 49 | 39 | 2,700 | 75 | NA | 59 | 49 | 77 | 232 |
| 2021-2022 | 348 | 713 | 191 | 1,252 | 49 | 27 | 2,500 | 68 | NA | 58 | 44 | 75 | 178 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|----|----|-----------------|----|-----|--------------------------|---|----|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | |
| 2020-2021 | 35 | 4 | 30 | 4 | 100 | 12 | NA | NA | 110 | 13 | NA | NA | NA | NA | NA | NA | | | 16 |
| 2021-2022 | 30 | 3 | 20 | 2 | 80 | 9 | NA | NA | 80 | 9 | NA | 25 | NA | 50 | NA | 50 | | | 16 |
| 2022-2023 | 25 | 3 | 10 | 1 | 80 | 9 | NA | NA | 90 | 10 | NA | 25 | NA | 20 | NA | 20 | | | 16 |
| Tag Trend | DEC | = | DEC | DEC | = | = | = | = | INC | INC | = | = | = | DEC | = | DEC | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|-----|---|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| 2020-2021 | 100 | 0 | 35 | 0 | 165 | 9 | NA | NA | 200 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021-2022 | 70 | 8 | 34 | 4 | 150 | 15 | NA | NA | 175 | 19 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022-2023 | 27 | 6 | 27 | 6 | 110 | 13 | NA | NA | 115 | 13 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tag Trend | DEC | DEC | DEC | INC | DEC | DEC | = | = | DEC | DEC | = | INC | = | = | = | = | = | = | = |

Quota Rationale

The antlered elk harvest metrics for Percent 6-pt and Percent 50" Main Beam or Better remain strong at 77% and 44%, respectively. The Percent 50" Main Beam or Better remains at the top end of guidelines objective of 35% - 45% (3-year average). Recommended quotas have minor fluctuations and are designed to maintain quality in Management Area 11. Spike quotas are reduced this year in response to high harvest success in 2021 and below average calf recruitment in 2021, resulting in fewer yearling bulls entering the population in 2022. Depredation bull quotas are remaining constant. All units are at or below population objective except Unit 115. The Unit 115 depredation antlerless hunt was expanded to 2 more properties in 2022 and will have an increased quota. In February 2021, 5 cow elk were collared in Unit 113. Between February 2021 and February 2022, the cow elk spent 40% of their time in Nevada. Antlerless elk quotas are being reduced in response to being at or below population objective, increased depredation quotas to address private land issues, and knowledge that elk are spending less time in Nevada.

Reporting Biologist: Menghini

Supervisor: Donham

Elk Quota Recommendation Form

Unit Group: 131,132,108B

Date Prepared: 4/11/2022

Population Objective: 300 +/- 20% Adults

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|-----|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| | 2019-2020 | 43 | 72 | | | | | 15 | 130 | 60 | | | |
| 2020-2021 | 34 | 81 | 23 | 138 | 42 | 28 | 230 | | 44 | | 38 | 60 | 17 |
| 2021-2022 | 39 | 112 | 21 | 172 | 35 | 19 | 310 | | 50 | | 33 | 70 | 5 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|---|--------------------------|---|---|---|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | | |
| | 2020-2021 | 8 | 1 | 10 | | | | 60 | 6 | | | | | | | | | | | |
| 2021-2022 | 7 | 1 | 7 | | | | 60 | 7 | | | | | | | | | | | | |
| 2022-2023 | 5 | 1 | 7 | | | | 60 | 7 | | | | | | | | | | | | |
| Tag Trend | DEC | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| | 2020-2021 | 3 | 1 | 5 | 1 | 20 | 2 | | | | | | | | 0 | 0 | 0 | | |
| 2021-2022 | 2 | 1 | 2 | 1 | 10 | 1 | | | | | | | | 0 | 0 | 0 | | | |
| 2022-2023 | 2 | 2 | 2 | 2 | 10 | 2 | | | | | | | | 0 | 0 | 0 | | | |
| Tag Trend | = | INC | = | INC | = | INC | = | = | = | = | = | = | = | = | = | = | = | = | = |

Quota Rationale

The current population estimate is within objective. The percent 50+-in main beam harvest metric is within 2% of objective, so antlered elk quota recommendations remain equal to 2021 with the exception of a small decrease in resident antlered elk archery due to an increase in the 3-year average success rate. More elk were observed on survey than in past years, however, the calf:cow ratio was below average, likely due to poor environmental conditions in recent years. Despite the poor calf recruitment, survey data indicates the population had been underestimated recently, so an adjustment to the population estimate was made.

Reporting Biologist: Fino

Supervisor: Donham

Elk Quota Recommendation Form

Unit Group: 221-223

Date Prepared: 4/11/2022

Population Objective: 1600 +/-20% (1,280-1,920)

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|----|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| 2019-2020 | 232 | 464 | 116 | 812 | 50 | 25 | 1,600 | 63 | NA | 40 | 39 | 79 | 94 |
| 2020-2021 | 165 | 288 | 125 | 578 | 57 | 43 | 1,800 | 63 | NA | 66 | 34 | 68 | 85 |
| 2021-2022 | 141 | 428 | 90 | 659 | 33 | 21 | 1,700 | 71 | NA | 45 | 43 | 73 | 78 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|----|----|-----------------|----|-----|--------------------------|---|-----|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | |
| 2020-2021 | 25 | 3 | 7 | 1 | 70 | 8 | NA | NA | 70 | 8 | Na | NA | NA | NA | NA | NA | | | 12 |
| 2021-2022 | 25 | 2 | 15 | 2 | 60 | 6 | NA | NA | 60 | 7 | NA | NA | NA | 25 | NA | 25 | | | 13 |
| 2022-2023 | 30 | 3 | 6 | 1 | 65 | 8 | NA | NA | 80 | 9 | NA | NA | NA | 21 | NA | 20 | | | 18 |
| Tag Trend | INC | INC | DEC | DEC | INC | INC | = | = | INC | INC | = | = | = | DEC | = | DEC | = | = | INC |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|-----|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| 2020-2021 | 45 | 0 | 25 | 0 | 90 | 0 | NA | NA | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 |
| 2021-2022 | 25 | 3 | 25 | 3 | 80 | 8 | NA | NA | 70 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 |
| 2022-2023 | 25 | 2 | 13 | 2 | 70 | 8 | NA | NA | 60 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 |
| Tag Trend | = | DEC | DEC | DEC | DEC | = | = | = | DEC | DEC | = | = | = | = | = | = | DEC | = | DEC |

Quota Rationale

The antlered elk harvest metrics for Percent 6-pt and Percent 50" Main Beam or Better remain strong at 73% and 39%, respectively. The Percent 50" Main Beam or Better is above the guideline objective of 25%-35% (3-year average). Recommended quotas for antlered elk are increasing this year in an attempt to move harvest metrics toward guideline objectives. Recommended spike quotas are being reduced in response to low calf recruitment in 2021 and fewer yearling bulls entering the population. This population is currently within population objective, and the slight reduction in recommended antlerless quotas are designed to maintain the population at the current level.

Reporting Biologist: Menghini

Supervisor: Donham

Elk Quota Recommendation Form

Unit Group: 161-164

Date Prepared: 3/26/2022

Population Objective: 850

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|-----|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| | 2019-2020 | 93 | 260 | | | | | 71 | 424 | 36 | | | |
| 2020-2021 | | | | 0 | -- | -- | 750 | 100 | 45 | 34 | 33 | 49 | 38 |
| 2021-2022 | 81 | 338 | 42 | 461 | 24 | 12 | 650 | 100 | 50 | 42 | 38 | 64 | 39 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|---|--------------------------|---|---|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | |
| | 2020-2021 | 20 | 2 | 20 | 2 | 7 | 1 | 35 | 4 | 35 | 4 | | | | | | | | |
| 2021-2022 | 15 | 2 | 15 | 2 | 7 | 1 | 35 | 4 | 35 | 4 | | | | 15 | | | | | |
| 2022-2023 | 13 | 1 | 6 | 1 | 6 | 1 | 35 | 3 | 35 | 4 | | | | 10 | | | | | |
| Tag Trend | DEC | DEC | DEC | DEC | DEC | = | = | DEC | = | = | = | = | = | DEC | = | = | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|----|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| | 2020-2021 | 25 | 2 | 20 | | 60 | 7 | | | 70 | 8 | | | | | | | 20 | |
| 2021-2022 | 20 | 2 | 20 | 2 | 70 | 7 | | | 75 | 7 | | | | | | | 10 | | |
| 2022-2023 | 5 | 2 | 4 | 2 | 40 | 4 | | | 55 | 6 | | | | | | | 2 | | |
| Tag Trend | DEC | = | DEC | = | DEC | DEC | = | = | DEC | DEC | = | = | = | = | = | = | DEC | = | = |

Quota Rationale

Population estimates have dropped well below the population objective set by the Central Nevada Elk Plan. Aerial surveys observed a record low calf ratio of 12. Drought conditions are the likely cause of poor recruitment rates. Quality metrics (50 in main beam) on the upper end of objective and success rates warrant a bull quota similar to last year. A reduction in antlerless quota recommendations is warranted. The demand success formula and population cap is driving the antlerless quotas. The Department will redistribute tags from the wilderness hunt, where higher success is achieved, to the ALW hunts for antlerless quotas.

Reporting Biologist: Burkett

Supervisor: Bennett

Elk Quota Recommendation Form

Unit Group: 231

Date Prepared: 4/7/2022

Population Objective: 550

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|---|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| 2019-2020 | 38 | 86 | 34 | 158 | 44 | 40 | 600 | 76 | | 38 | 34 | 54 | 84 |
| 2020-2021 | | | | 0 | -- | -- | 600 | 82 | | 53 | 34 | 61 | 90 |
| 2021-2022 | 57 | 72 | 14 | 143 | 79 | 19 | 600 | 69 | | 61 | 25 | 60 | 76 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|----|--------------------------|---|---|-----|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | | |
| 2020-2021 | 20 | 2 | 6 | 1 | 40 | 5 | | | 45 | 5 | | | | | | | | | | 19 |
| 2021-2022 | 20 | 2 | 6 | 1 | 40 | 5 | | | 45 | 5 | | | | 10 | | 10 | | | | 20 |
| 2022-2023 | 12 | 1 | 6 | 1 | 40 | 4 | | | 40 | 4 | | | | 10 | | 10 | | | | 24 |
| Tag Trend | DEC | DEC | = | = | = | DEC | = | = | DEC | DEC | = | = | = | = | = | = | = | = | = | INC |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| 2020-2021 | 20 | | 25 | | 55 | 6 | | | 60 | 7 | | | | | | | 35 | | |
| 2021-2022 | 20 | 1 | 10 | 1 | 45 | 5 | | | 50 | 5 | | | | | | | 30 | | |
| 2022-2023 | 5 | 2 | 5 | 2 | 30 | 3 | | | 40 | 4 | | | | | | | 25 | | |
| Tag Trend | DEC | INC | DEC | INC | DEC | DEC | = | = | DEC | DEC | = | = | = | = | = | = | DEC | = | = |

Quota Rationale

This unit has undergone a slight decline over the last year. Recruitment of calves into the adult population was low this year. The percentage of bull harvest with 50-inch or greater main beams decreased to the lowest end of our management objective. Due to the slight population-wide decrease and lower 50-inch main beam lengths, the department recommends a slight decrease in bull quota. The Department also recommends a slight decrease in cow quota due to recruitment.

Reporting Biologist: Sallee

Supervisor: Bennett

Elk Quota Recommendation Form

Unit Group: 241,242

Date Prepared: 4/7/2022

Population Objective: 200

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|---|---|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| 2019-2020 | 3 | 12 | 4 | 19 | 25 | 33 | 110 | 100 | | | 20 | 25 | 2 |
| 2020-2021 | | | | 0 | -- | -- | 110 | 100 | | | 20 | 80 | 6 |
| 2021-2022 | 1 | 24 | 5 | 30 | 4 | 21 | 110 | 75 | | | 50 | 40 | 4 |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|---|--------------------------|---|---|---|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | | |
| 2020-2021 | 2 | | 2 | | 3 | | | | | | | | | | | | | | | 1 |
| 2021-2022 | 2 | | 2 | | 4 | | | | | | | | | | | | | | | 1 |
| 2022-2023 | 2 | | 2 | | 4 | | | | | | | | | | | | | | | 1 |
| Tag Trend | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L | |
| 2020-2021 | 3 | | | | 10 | | | | | | | | | | | | | | | |
| 2021-2022 | 3 | | | | 10 | | | | | | | | | | | | | | | |
| 2022-2023 | 3 | | | | 10 | | | | | | | | | | | | | | | |
| Tag Trend | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = |

Quota Rationale

This elk population does not have a formal population model due to low elk numbers. The Department manages this population using harvest metrics from the previous 3 years. Quality of bull harvest, based on percent of harvest with main beams greater than 50 inches, has increased. Success has remained high. Cow harvest has remained stable, therefore the department recommends no change in quota from last year.

Reporting Biologist: Sallee

Supervisor: Bennett

Elk Quota Recommendation Form

Unit Group: 251

Date Prepared: 3/26/2022

Population Objective: 0

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|---|----|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| | 2019-2020 | | | | | | | | 0 | -- | | | |
| 2020-2021 | | | | 0 | -- | -- | | 75 | | | 33 | 67 | |
| 2021-2022 | | | | 0 | -- | -- | | 80 | | | 25 | 100 | |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|---|--------------------------|---|---|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | |
| | 2020-2021 | | | | | | | | | | | 5 | | | | | | | |
| 2021-2022 | | | | | | | | | | | 5 | | | | | | | | |
| 2022-2023 | | | | | | | | | | | 7 | | | | | | | | |
| Tag Trend | = | = | = | = | = | = | = | = | = | = | INC | = | = | = | = | = | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L |
| | 2020-2021 | | | | | 10 | | | | | | | | | | | | | |
| 2021-2022 | | | | | 10 | | | | | | | | | | | | | | |
| 2022-2023 | | | | | 10 | | | | | | | | | | | | | | |
| Tag Trend | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = |

Quota Rationale

The revised 2004 Central Nevada Elk Plan designated this unit as a non-establishment area for elk. No formal surveys have been conducted in Unit 251 recently because of low elk densities. Trail camera data, along with ancillary sightings, indicate that elk occur in Unit 251 year-round. To comply with the Central Nevada Elk Plan, an elk hunt was established. The Kawich Range is comprised of mainly pinyon and juniper woodlands at the low- to mid-elevations and open mountain sagebrush and mahogany communities at higher elevations. High pinyon and juniper densities make it difficult to hunt the elk that reside here. To date, elk densities in the Kawich Range are low. Elk and deer hunters continue to observe elk in Unit 251. Based off these ancillary observations, it is estimated that 20-30 bulls and 30-40 cows and calves reside in this unit. Bull depredation tag holders continue to have great success in this Unit, while antlerless elk tag holders do not. The department recommends an increase in the bull quota because of high harvest success.

Reporting Biologist: Burkett

Supervisor: Bennett

Elk Quota Recommendation Form

Unit Group: 262

Date Prepared: 3/26/2022

Population Objective: 250

Herd & Harvest Results

| Year | Survey Count | | | Total | Bull Ratio (Obs) | Calf Ratio (Obs) | Pop Est (August) | Bull Rifle Success (%) | | | 50-in Beam (%) | 6 Pt (%) | Total Antlerless Harvest |
|-----------|--------------|-----|------|-------|------------------|------------------|------------------|------------------------|---|---|----------------|----------|--------------------------|
| | Bull | Cow | Calf | | | | | E | M | L | | | |
| 2019-2020 | 6 | 5 | 1 | 12 | 120 | 20 | | 67 | | | 25 | 100 | -- |
| 2020-2021 | 1 | 16 | 1 | 18 | 6 | 6 | | 100 | | | 0 | 33 | -- |
| 2021-2022 | | | | 0 | -- | -- | | 100 | | | 40 | 40 | -- |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlered

| Year | Bull Archery | | Bull Muzzleloader | | Bull ALW Early | | Bull ALW Mid | | Bull ALW Late | | Bull Depredation Hunt 4102 | | | Spike Hunt 4651 | | | Landowner Incentive Tags | | | |
|-----------|--------------|------|-------------------|------|----------------|------|--------------|------|---------------|------|----------------------------|---|---|-----------------|---|---|--------------------------|---|---|---|
| | 4161 | 4261 | 4156 | 4256 | 4151 | 4251 | 4151 | 4251 | 4151 | 4251 | E | M | L | E | M | L | # of Tags | | | |
| 2020-2021 | 1 | | 1 | | 3 | | | | | | | | | | | | | | | |
| 2021-2022 | 1 | | 1 | | 3 | | | | | | | | | | | | | | | |
| 2022-2023 | 1 | | 1 | | 2 | | | | | | | | | | | | | | | |
| Tag Trend | = | = | = | = | DEC | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = |

Approved (Previous Year) and Recommended (Current Year) Tag Quota - Antlerless

| Year | Antlerless Archery | | Antlerless Muzzleloader | | Antlerless ALW Early | | Antlerless ALW Mid | | Antlerless ALW Late | | Antlerless Depredation Hunt 4107 | | | Antlerless Mgmt Hunt (DELK) | | | Antlerless Wilderness Hunt 4181 | | | |
|-----------|--------------------|------|-------------------------|------|----------------------|------|--------------------|------|---------------------|------|----------------------------------|---|---|-----------------------------|---|-----|---------------------------------|---|---|---|
| | 4111 | 4211 | 4176 | 4276 | 4181 | 4281 | 4151 | 4251 | 4151 | 4251 | E | M | L | A | M | ALW | E | M | L | |
| 2020-2021 | | | | | | | | | | | | | | | | | | | | |
| 2021-2022 | | | | | | | | | | | | | | | | | | | | |
| 2022-2023 | | | | | | | | | | | | | | | | | | | | |
| Tag Trend | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = | = |

Quota Rationale

In 2022, 4 bull elk tags are recommended to be apportioned across three weapon classes: Archery - 1, ALW - 2 and muzzleloader - 1. Bull elk quota recommendations were 5 in 2020 and 2021. The paucity of aerial survey data obtained in 2020 and 2021 limits the ability to model any recent population fluctuations relative to the population estimate of 170 in 2019. The 2021 elk population estimate is 160 and represents a slight contraction. A minor population contraction was deemed reasonable due to unfavorable environmental conditions brought about by protracted drought. Population level contractions coupled with quality of harvest warrants a slight quota reduction.

Reporting Biologist: Bennett

Supervisor: Scott