Northern New Mexico Stockman's Association
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The Future of Livestock Grazing on New Mexico's National Forests
Northern New Mexico Stockman's Association

2025 Rangeland Assessment: YOUNGSVILLE ALLOTMENT

Project Team:

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Qualitative data was collected using ethnographic methods. Including participant observation, structured and unstructured interviews, photos, and participatory mapping exercises during range monitoring, at grazing association meetings, annual feast days, fiestas, local county fair events, and meetings between producers and land management agencies. Qualitative data was analyzed using ethnographic methods focusing on producers' descriptions, interpretations, and explanations of climate and rangeland conditions and impacts on livestock operations.

Conditions on the Youngsville allotment in 2025 were characterized by a very dry year and limited precipitation, with most rainfall occurring late in the season. Early in the grazing period, cold soil temperatures slowed forage growth, and minimal forage production persisted through much of the season. Stockwater availability was uneven, with low levels in tanks and earthen dams—such as Lookout tanque, which was nearly dry mid-season—while springs like Pavo Spring were flowing but did not offset broader stockwater limitations. Heavy elk presence was documented across the allotment, including in Cañada de Grants and along all monitored transects, with grazing occurring prior to and throughout livestock use. Some areas, such as Punta de la Sierra, showed localized heavy use. Overall, conditions reflected limited forage availability, constrained stockwater distribution, and sustained wildlife grazing pressure.

Figure 1 Minimal forage growth at mid-season. El Valle August 7 2025.

Conditions

- Very dry year; lack of precipitation
- Delayed precipitation, with most rainfall occurring late in the season
- Cold soil temperatures early in the season slowing forage growth
- Minimal forage growth through most of the grazing season
- Low water levels in tanks and earthen dams; some nearly dry
- Uneven water availability across pastures
- Springs flowing, but not sufficient to offset overall water limitations
- Heavy elk presence across the allotment
- Elk grazing occurring prior to and throughout the grazing season
- Localized overgrazing in some areas (e.g., Punta de la Sierra)
- Grasshopper presence affecting forage

These conditions resulted in direct impacts to livestock operations. Reduced forage availability led to livestock moving earlier than planned. Limited and uneven stockwater availability restricted use of portions of the allotment and reduced grazing distribution, as livestock movement remained closely tied to available stockwater. Elk grazing further reduced available forage, increasing competition with livestock. The late timing of precipitation shortened the effective grazing period, as forage production did not occur when needed during the primary grazing season.

Figure 2 Low stream flow. Pavo Spring August 7 2025.

Impacts of Conditions on Livestock Operations

- Reduced forage availability across the allotment
- Livestock moved earlier than planned due to lack of forage
- Shortened effective grazing period due to delayed precipitation and late forage growth
- Restricted use of portions of the allotment due to limited water availability
- Limited access to water in key pastures as tanks and dams dried or nearly dried
- Reduced grazing distribution due to uneven water availability
- Reduced available forage due to elk grazing prior to and during livestock use

Management responses centered on adjusting livestock use in relation to forage availability and stockwater distribution. Producers voluntarily reduced herd size, including selling livestock, in response to limited forage. Use of the allotment was adjusted by increasing distribution where stockwater was available, while some areas were not used, concentrating grazing in accessible locations. Maintenance of stockwater infrastructure, including cleaning and maintaining ponds, was undertaken to support available use. At the same time, management was constrained by the inability to condition cattle to new areas, limited implementation of rotational systems due to stockwater availability, and external factors such as high hay costs and the lack of a second hay cutting.

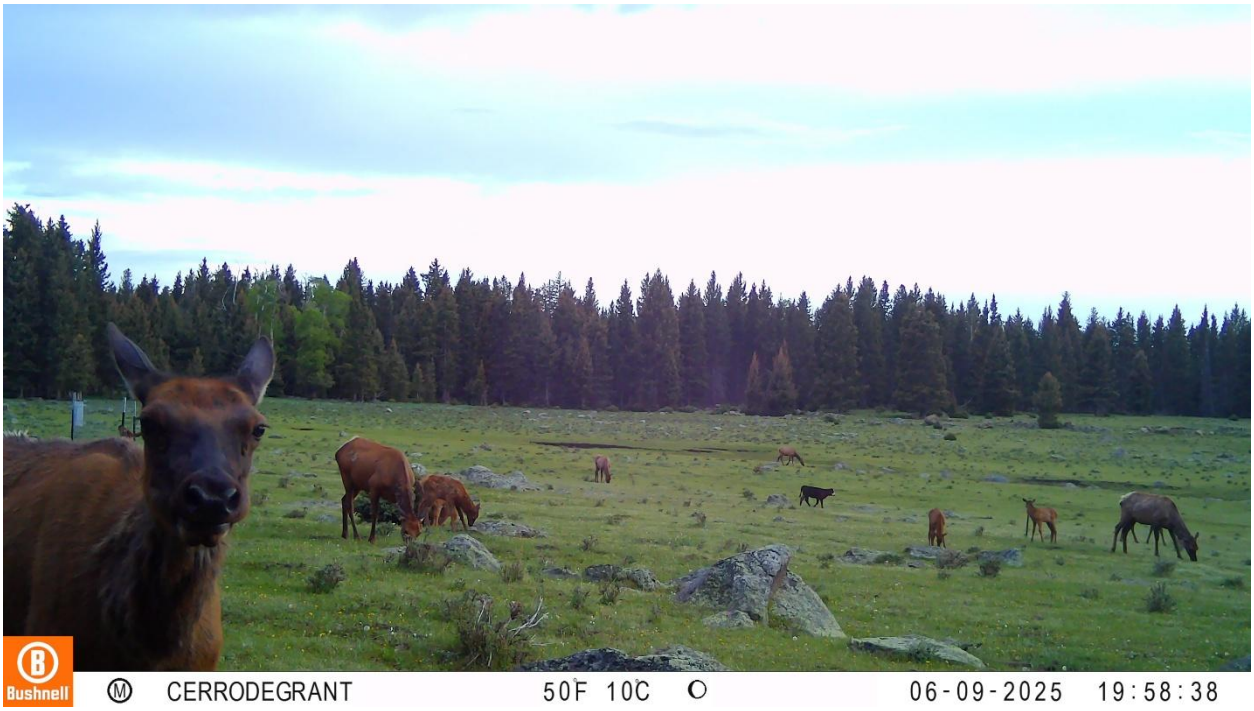

Figure 3 Elk outnumbering and beating livestock to forage in Cerro de Grants.

Management Practices and Best Practices

- Voluntary reduction in herd size, including selling livestock, in response to limited forage
- Increasing livestock distribution and adjusting use of the allotment based on available water
- Not using some areas of the allotment, concentrating use in accessible areas
- Cleaning and maintaining ponds to support water availability

Decision-making was driven primarily by forage availability, stockwater availability and distribution, precipitation conditions, and market factors. Limited forage and drought conditions—evidenced by the lack of a second hay cutting—directly influenced decisions regarding livestock numbers and management practices. Stockwater availability further constrained how and where the allotment could be used. Market conditions also played a role, particularly in decisions to reduce herd size. The most useful data for making rangeland assessments included forage and stockwater measurements, supported by first-hand visual observation, which remained central to interpreting conditions on the ground.

Decision-Making Factors and Useful Data

- Forage availability
- Forage measurements
- Stockwater availability and distribution
- Stockwater measurements
- Precipitation conditions, including lack of second hay cutting
- Market conditions influencing herd reduction decisions
- First-hand visual observation

Understanding of conditions and impacts evolved primarily through increasing recognition of the role of limited precipitation and wildlife grazing in shaping forage availability. Producers identified lack of precipitation as a central driver of reduced forage production and overall allotment conditions. Over time, there was also greater recognition of the impact of elk grazing on available forage and grazing pressure across the allotment.

Changes in Understanding Over Time

- Increased recognition of the effects of limited precipitation on forage production
- Increased recognition of the impact of elk grazing on forage availability and allotment conditions

Producers identified several gaps in available information needed to fully assess rangeland conditions. Additional monitoring of snowfall and the amount of stockwater in tanks was identified as important for understanding seasonal water availability. Producers also indicated that assessments should consider measures beyond forage production to better capture overall conditions. There was a need for more representative data across the allotment, including additional transects, as well as support in analyzing collected data and establishing baseline conditions. Producers emphasized the value of assessment meetings where quantitative data is interpreted alongside rancher expertise, and they noted that participation from New Mexico Department of Game and Fish would improve management of wildlife impacts on allotment conditions.

Missing Information

- Monitoring snowfall
- Monitoring amount of stockwater in tanks
- Measures beyond forage production for assessment
- More representative data across the allotment (additional transects)

- Support in analyzing data and establishing baseline conditions
- Integration of quantitative data with rancher expertise in assessment meetings
- Participation of New Mexico Department of Game and Fish in monitoring

Producer-derived recommendations centered on improving stockwater availability and adjusting livestock numbers in response to forage conditions. Producers described cleaning and maintaining ponds and supporting stockwater developments to improve access across the allotment. They also emphasized voluntary reduction of livestock numbers during periods of limited forage, increasing livestock distribution where stockwater is available, and utilizing additional areas of the allotment when conditions allow.

Recommendations from extended analysis emphasized broader management strategies. These included improving stockwater availability to enable fuller use of the allotment, maintaining and rehabilitating existing stockwater infrastructure, and adjusting stocking levels in response to forage production and precipitation conditions. The synthesis also highlighted the importance of using stockwater availability to guide livestock distribution and incorporating wildlife grazing pressure, particularly elk, into management planning.

Producer-Derived Recommendations

- Clean and maintain ponds to improve stockwater availability
- Improve and maintain stockwater developments completed by producers and agencies
- Voluntary reduction of livestock numbers during limited forage conditions
- Increase livestock distribution where stockwater is available
- Utilize additional areas of the allotment when stockwater allows

Recommendations from Extended Analysis

- Improve stockwater availability to enable fuller use of the allotment
- Maintain and rehabilitate existing tanks, ponds, and stockwater infrastructure
- Adjust stocking levels in response to forage production and precipitation conditions
- Use stockwater availability to guide livestock distribution across the allotment
- Incorporate wildlife grazing pressure, particularly elk, into management planning

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Dear Northern New Mexico Stockman's Association,

At the request of producers of the Youngsville allotment on the Santa Fe National Forest, I have compiled preliminary data to summarize their 2025 monitoring efforts. This is preliminary data and does not constitute an official report for WSARE Project SW23-953. Data was collected by producers, Northern New Mexico Stockmen Association members, and US Forest Service personnel, with New Mexico State University serving as a consultant to compile and summarize the collected data. The data herein does not constitute an official recommendation in grazing management by New Mexico State University or its personnel.

Five sites were monitored in August and again in October 2025 using the Rapid Assessment Methodology. Biomass (also referred to as standing crop) and annual production were the only data requested for this preliminary report. However, an allotment averages report is provided for each monitoring period. All summarized information was taken from data entered in the Rangeland Data Analysis and Records program (RaDAR; rangelandradar.app). The procedures for monitoring and the calculation tabulation can be found on the website. Additional calculations not described within the website are provided in the Table footnotes.

The estimated stocking rate in the second allotment averages report refers to the maximum number of animal units that can be grazed for an entire year (animal unit year; AUY) with a 40 percent forage allocation. To convert this to animal unit months (AUM), multiply 429 AUY by 12 months (5148 AUM). Alternatively, if an estimate of animal units for the duration of the grazing season (165 days; Table 3) is desired, multiply 429 AUY by 365 days, then divide that by the grazing duration (949 Animal Unit Equivalent; AUE). This can be compared to the permitted livestock in Table 3 (authorized numbers are 81 percent of the 2025 AUE estimate). It is recommended that three years of data be collected to establish short-term stocking rates (Holechek et al. 2011). The estimated stocking rate for 2025 decreased from the estimates in 2023 (1,135 AUE) and 2024 (1,152 AUE). The average estimated stocking rate over three years of data is 1069 ± 60 (authorized numbers are 71.9 percent of the three-year average).

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Table 1. Youngsville Allotment 2025 Production and Use

	Mid-Year Biomass (lbs/acre)	Year-End Biomass (lbs/acre)	Annual Production (lbs/acre	Utilization as a Percent
Cañada de Grants	510.0 ± 40.0	553.0 ± 160.0	1323.3 ± 280.0	58.2
Cerro de Grants	492.0 ± 40.0	420.0 ± 160.0	1860.0 ± 660.0	77.4
El Valle	248.0 ± 30.0	186.0 ± 50.0	586.7 ± 180.0	68.3
Riñcon	292.0 ± 30.0	192.0 ± 60.0	686.7 ± 200.0	72.0
Punta de la Sierra	150.0 ± 30.0	182.0 ± 60.0	363.0 ± 30.0	49.9
*Averages	338.4 ± 32.2	302.8 ± 53.2	966.0 ± 200.5	68.2 ± 4.9

*Averages are calculated from raw data

Table 2. Youngsville Allotment Physical Constraint of Cattle Intake

	Observed Utilization as a Percent[1]	Cattle Utilization as a Percent[2]	Other Utilization as a Percent	Cow Intake for Observed Utilization (pounds/day)[3]
Site Average*	68.2	18.3	49.9	97.0
Allotment Average†	68.2	32.5	35.7	54.6

$$\frac{(annual\ production - available\ biomass)}{annual\ production} \times 100 = percent\ utilization^{1}$$

$$\frac{(animal\ demand \times grazing\ duration \times permitted\ animals)}{(annual\ production \times grazable\ acres)} \times 100 = percent\ utilization^{2}$$

$$\frac{(annual\ production \times grazable\ acres \times observed\ utilization)}{(grazing\ duration \times permitted\ animals} = animal\ demand\ or\ daily\ intake^{3}$$

*based on 2024 GIS information correcting for slope and distance from water by monitoring site location (reductions; 71.6%), US Forest Service.

†based on 2008 US Forest Service Environmental Assessment.

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Table 3. Allotment summary for the 2025 grazing season.

Allotment	Cattle Intake Standard (lbs/day)	Grazing Duration (days)	[1,2]Permitted Livestock (AUE)	[2]Allotment Grazable Acres	[3]Monitoring Site Grazable Acres
Youngsville	26	165	769	10545	18729

[1] includes cow/calf at 1 AUE and bulls at 1.5 AUE;
[2]based on 2008 allotment Environmental Assessment, US Forest Service.
[3]based on 2024 GIS information correcting for slope and distance from water by monitoring site location (reductions; 71.6%), US Forest Service.

Respectfully,

Casey Spackman
Extension Rangeland Management Specialist

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Radar - Youngsville 2025 Aug

Producer Name:	Youngsville	**Pasture Name:**	Composite
Date:	11-Nov-2025	**Collector Name:**	NNMSA, USFS
Transect Number:	Composite (5 reports)	**GPS Coordinates:**	Multiple Locations
Notes:	Composite analysis using average method from 5 reports		

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
338.40 ± 32.22 lbs per acre	10545.00 acres	0 AUY	0.00 ± 0.00 lbs per acre

Percent Cover		Vegetation Cover - Grasses			Other Vegetation Cover	
Cover Name	**Percent**	**Common Name**	**Symbol**	**Percent**	**Common Name**	**Percent**
Vegetation	67.4	Sedge	Carex	46.4	Unknown	6.8
Bare ground	19.2	Kentucky Bluegrass	POPR	18.4	Buckwheat	4.2
Litter	13.0	Rush	JUNCU	1.8	Clover	0.8
Rock	5.0	Arizona Fescue	FEAR	0.6	Plumajillo	0.6
-	-	Timothy		0.2	-	-

Forage Composition

Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Sedge	Carex	73.2	2.6	1.5	-
Kentucky Bluegrass	POPR	22.8	3.9	2.5	-
Rush	JUNCU	2.4	4.3	2.5	-
Arizona Fescue	FEAR	1.0	2.3	4	Below Minimum Height
Timothy		0.4	8	0	-

Fecal Counts

Horse	0	Elk	5	Cattle	4	Deer	1	Others	0

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Composite Analysis Details

Analysis Method:	Average	**Reports Analyzed:**	5
Analysis Date:	11-Nov-2025	**Source Date Range:**	07-Aug-2025 to 07-Aug-2025

Source Reports

Report Name	Producer	Pasture	Date
Youngsville Lookout 2025-1	Youngsville	Lookout	07-Aug-2025
Youngsville El Valle 2025-1	Youngsville	El Valle	07-Aug-2025
Youngsville Rincon 2025-1	Youngsville	Rincon	07-Aug-2025
Youngsville Cerro de Grants 2025-1	NNMSA	Cerro de Grants	07-Aug-2025
Youngsville Cañada de Grants 2025-1	NNMSA	Cañada de Grants	07-Aug-2025

Analysis Methodology

Average Analysis Method:
All numerical values (biomass availability, stocking rates, vegetation percentages, etc.) have been averaged across the selected 5 reports. This provides a mean representation of the data across all source reports.

Species and Vegetation Data Processing: Similar species and vegetation types across reports have been grouped together and their values aggregated using the selected average method. Only the top 5 most significant entries are displayed in each category to maintain report clarity.

Fecal Count Data Processing: Animal fecal counts have been averaged across all source reports to provide composite wildlife usage indicators for the analyzed area.

Data Quality Notes: This composite report represents aggregated data from multiple field measurements. Individual report variations have been smoothed through the aggregation process. For detailed individual measurements, refer to the source reports listed above.

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Radar - Youngsville 2025 Oct

Producer Name:	Youngsville	**Pasture Name:**	Composite
Date:	11-Nov-2025	**Collector Name:**	NNMSA
Transect Number:	Composite (5 reports)	**GPS Coordinates:**	Multiple Locations
Notes:	Composite analysis using average method from 5 reports		

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
302.80 ± 53.19 lbs per acre	10545.00 acres	429 AUY	966.00 ± 200.52 lbs per acre

Percent Cover		Vegetation Cover - Grasses			Other Vegetation Cover	
Cover Name	**Percent**	**Common Name**	**Symbol**	**Percent**	**Common Name**	**Percent**
Litter	41.8	Kentucky Bluegrass	POPR	24.2	Clover	5.4
Vegetation	37.0	Sedge	Carex	9.2	Ptoe	2.4
Bare ground	21.0	Mountain Muhly		2.6	Dand	0.4
Rock	1.0	Brome spp.		0.8	Gmal	0.2
-	-	Arizona Fescue	FEAR	0.2	Yarrow	0.2

Forage Composition

Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Kentucky Bluegrass	POPR	57.4	2	2.5	Below Minimum Height
Sedge	Carex	32.0	3	1.5	-
Mountain Muhly		7.6	1.7	0	-
Brome spp.		2.4	2.5	0	-
Arizona Fescue	FEAR	0.6	2.5	4	Below Minimum Height

Fecal Counts

Horse	0	Elk	6	Cattle	2	Deer	0	Others	0

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Composite Analysis Details

Analysis Method:	Average	**Reports Analyzed:**	5
Analysis Date:	11-Nov-2025	**Source Date Range:**	17-Oct-2025 to 17-Oct-2025

Source Reports

Report Name	Producer	Pasture	Date
Youngsville Lookout 10-2025	Youngsville	Lookout	17-Oct-2025
Youngsville El Valle 10-2025	Youngsville	El Valle	17-Oct-2025
Youngsville Rincon 10-2025	Youngsville	Rincon	17-Oct-2025
Youngsville Cerro de Grants 10-2025	Youngsville	Cerro de Grants	17-Oct-2025
Youngsville Canada de Grants 10-2025	NNMSA	Canada de Grants	17-Oct-2025

Analysis Methodology

Average Analysis Method:
All numerical values (biomass availability, stocking rates, vegetation percentages, etc.) have been averaged across the selected 5 reports. This provides a mean representation of the data across all source reports.

Species and Vegetation Data Processing: Similar species and vegetation types across reports have been grouped together and their values aggregated using the selected average method. Only the top 5 most significant entries are displayed in each category to maintain report clarity.

Fecal Count Data Processing: Animal fecal counts have been averaged across all source reports to provide composite wildlife usage indicators for the analyzed area.

Data Quality Notes: This composite report represents aggregated data from multiple field measurements. Individual report variations have been smoothed through the aggregation process. For detailed individual measurements, refer to the source reports listed above.

Radar - Youngsville Cañada de Grants 2025-1

Producer Name:	NNMSA	**Pasture Name:**	Cañada de Grants
Date:	07-Aug-2025	**Collector Name:**	NNMSA, USFS
Transect Number:	-	**GPS Coordinates:**	36.01.14 N 106.34.15 W **(90°)**
Notes:			

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
510.00 ± 40.00 lbs per acre	10545 acres	0 AUY	0.00 ± 0.00 lbs per acre

Percent Cover

Cover Name	Percent
Vegetation	92.0
Bare ground	7.0
Rock	1.0
-	-
-	-

Vegetation Cover - Grasses

Common Name	Symbol	Percent
Sedge	Carex	61.0
Kentucky Bluegrass	POPR	30.0
Unknown	UNKNOWN	1.0
-	-	-
-	-	-

Other Vegetation Cover

Common Name	Percent
-	-
-	-
-	-
-	-
-	-

Forage Composition

Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Sedge	Carex	68.0	2.8	1.50	-
Kentucky Bluegrass	POPR	32.0	4.8	2.50	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Fecal Counts

Horse	-	Elk	-	Cattle	-	Deer	-	Others	-

Ground Photo

Lanscape Photo

Radar - Youngsville Canada de Grants 10-2025

Producer Name:	NNMSA	**Pasture Name:**	Canada de Grants
Date:	17-Oct-2025	**Collector Name:**	NNMSA
Transect Number:	-	**GPS Coordinates:**	36.020832, -106.570939 **(22°)**
Notes:			

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
534.00 ± 160.00 lbs per acre	10545 acres	588 AUY	1323.33 ± 370.00 lbs per acre

Percent Cover

Cover Name	Percent
Vegetation	59.0
Litter	29.0
Bare ground	12.0
-	-
-	-

Vegetation Cover - Grasses

Common Name	Symbol	Percent
Kentucky Bluegrass	POPR	38.0
Sedge	Carex	7.0
Brome spp.	Brome	4.0
Mountain Muhly	MUMO	1.0
-	-	-

Other Vegetation Cover

Common Name	Percent
Clover	8.0
Yarrow	1.0
-	-
-	-
-	-

Forage Composition

Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Kentucky Bluegrass	POPR	76.0	1.5	2.50	Below Minimum Height
Sedge	Carex	13.0	2.7	1.50	-
Brome spp.	Brome	10.0	2.6	4.00	Below Minimum Height
Mountain Muhly	MUMO	1.0	1.0	2.50	Below Minimum Height
-	-	-	-	-	-

Fecal Counts

Horse	0	**Elk**	10	**Cattle**	3	**Deer**	0	**Others**	0

Ground Photo

Lanscape Photo

Radar - Youngsville Cerro de Grants 2025-1

Producer Name:	NNMSA	**Pasture Name:**	Cerro de Grants
Date:	07-Aug-2025	**Collector Name:**	NNMSA, USFS
Transect Number:	-	**GPS Coordinates:**	36.00.50 N 106.32.22 W **(140°)**
Notes:			

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
492.00 ± 40.00 lbs per acre	10545 acres	0 AUY	0.00 ± 0.00 lbs per acre

Percent Cover

Cover Name	Percent
Vegetation	86.0
Bare ground	9.0
Litter	4.0
Rock	1.0
-	-

Vegetation Cover - Grasses

Common Name	Symbol	Percent
Sedge	Carex	39.0
Kentucky Bluegrass	POPR	29.0
Unknown	UNKNOWN	14.0
-	-	-
-	-	-

Other Vegetation Cover

Common Name	Percent
Clover	4.0
-	-
-	-
-	-
-	-

Forage Composition

Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Sedge	Carex	52.0	2.3	1.50	-
Kentucky Bluegrass	POPR	48.0	2.9	2.50	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Fecal Counts

Horse	-	**Elk**	1	**Cattle**	2	**Deer**	-	**Others**	-

Ground Photo

Lanscape Photo

Radar - Youngsville Cerro de Grants 10-2025

Producer Name:	Youngsville	**Pasture Name:**	Cerro de Grants
Date:	17-Oct-2025	**Collector Name:**	NNMSA
Transect Number:	-	**GPS Coordinates:**	36.013886, -106.539526 **(130°)**
Notes:			

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
420.00 ± 160.00 lbs per acre	10545 acres	826 AUY	1860.00 ± 660.00 lbs per acre

Percent Cover

Cover Name	Percent
Vegetation	48.0
Litter	42.0
Bare ground	10.0
-	-
-	-

Vegetation Cover - Grasses

Common Name	Symbol	Percent
Kentucky Bluegrass	POPR	22.0
Mountain Muhly	MUMO	6.0
Sedge	Carex	1.0
-	-	-
-	-	-

Other Vegetation Cover

Common Name	Percent
Clover	19.0
-	-
-	-
-	-
-	-

Forage Composition

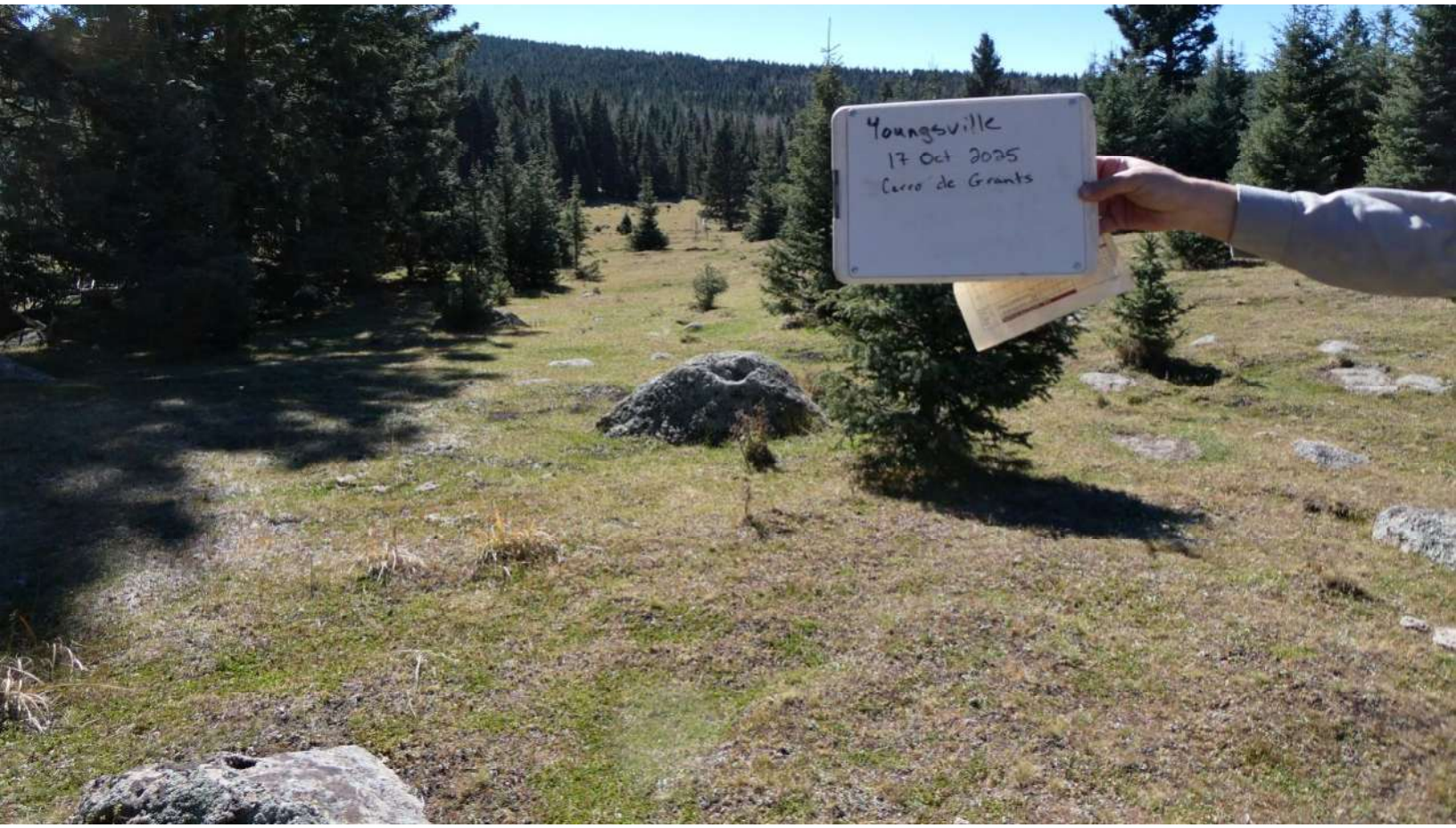
Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Kentucky Bluegrass	POPR	74.0	1.8	2.50	Below Minimum Height
Mountain Muhly	MUMO	19.0	2.0	2.50	Below Minimum Height
Sedge	Carex	6.0	2.6	1.50	-
Brome spp.	Brome	1.0	2.0	4.00	Below Minimum Height
-	-	-	-	-	-

Fecal Counts

Horse	0	Elk	5	Cattle	3	Deer	5	Others	0

Ground Photo

Lanscape Photo



Radar - Youngsville Rincon 2025-1

Producer Name:	Youngsville	**Pasture Name:**	Rincon
Date:	07-Aug-2025	**Collector Name:**	NNMSA, USFS
Transect Number:	-	**GPS Coordinates:**	36.02.59 N 106.33.11W **(357°)**
Notes:	All forbs are entered as UNKNOWN-UNKNOWN		

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
292.00 ± 30.00 lbs per acre	10545 acres	0 AUY	0.00 ± 0.00 lbs per acre

Percent Cover

Cover Name	Percent
Vegetation	71.0
Bare ground	26.0
Litter	3.0
-	-
-	-

Vegetation Cover - Grasses

Common Name	Symbol	Percent
Sedge	Carex	38.0
Kentucky Bluegrass	POPR	11.0
Rush	JUNCU	5.0
Arizona Fescue	FEAR	3.0
Timothy	PHPR	1.0

Other Vegetation Cover

Common Name	Percent
Unknown	13.0
-	-
-	-
-	-
-	-

Forage Composition

Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Sedge	Carex	57.0	2.7	1.50	-
Kentucky Bluegrass	POPR	23.0	4.9	2.50	-
Rush	JUNCU	12.0	4.3	2.50	-
Arizona Fescue	FEAR	5.0	2.3	4.00	Below Minimum Height
Timothy	PHPR	2.0	8.0	4.00	-

Fecal Counts

Horse	-	Elk	7	Cattle	5	Deer	-	Others	-

Ground Photo

Lanscape Photo

Radar - Youngsville Rincon 10-2025

Producer Name:	Youngsville	**Pasture Name:**	Rincon
Date:	17-Oct-2025	**Collector Name:**	NNMSA
Transect Number:	-	**GPS Coordinates:**	36.049962, -106.553224 **(325°)**
Notes:			

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
192.00 ± 60.00 lbs per acre	10545 acres	305 AUY	686.67 ± 200.00 lbs per acre

Percent Cover

Cover Name	Percent
Vegetation	38.0
Litter	31.0
Bare ground	30.0
Rock	1.0
-	-

Vegetation Cover - Grasses

Common Name	Symbol	Percent
Kentucky Bluegrass	POPR	17.0
Sedge	Carex	11.0
Mountain Muhly	MUMO	3.0
Arizona Fescue	FEAR	1.0
-	-	-

Other Vegetation Cover

Common Name	Percent
Ptoe	6.0
-	-
-	-
-	-
-	-

Forage Composition

Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Kentucky Bluegrass	POPR	57.0	1.6	2.50	Below Minimum Height
Sedge	Carex	30.0	3.5	1.50	-
Mountain Muhly	MUMO	10.0	1.2	2.50	Below Minimum Height
Arizona Fescue	FEAR	3.0	2.5	4.00	Below Minimum Height
-	-	-	-	-	-

Fecal Counts

Horse	0	Elk	2	Cattle	2	Deer	0	Others	0

Ground Photo

Lanscape Photo

Radar - Youngsville El Valle 2025-1

Producer Name:	NNMSA	**Pasture Name:**	El Valle
Date:	07-Aug-2025	**Collector Name:**	NNMSA, USFS
Transect Number:	-	**GPS Coordinates:**	36.04.28 N 106.33.51 W **(44°)**
Notes:	Heavy grasshopper presence. Plumajillo is Yarrow ACHIL. Unknown Forbs are entered as UNK-UNKNOWN.		

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
248.00 ± 30.00 lbs per acre	10545 acres	0 AUY	0.00 ± 0.00 lbs per acre

Percent Cover

Cover Name	Percent
Vegetation	74.0
Bare ground	25.0
Litter	1.0
-	-
-	-

Vegetation Cover - Grasses

Common Name	Symbol	Percent
Sedge	Carex	40.0
Kentucky Bluegrass	POPR	5.0
Unknown	UNKNOWN	5.0
-	-	-
-	-	-

Other Vegetation Cover

Common Name	Percent
Buckwheat	21.0
Plumajillo	3.0
-	-
-	-
-	-

Forage Composition

Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Sedge	Carex	93.0	2.6	1.50	-
Kentucky Bluegrass	POPR	7.0	2.9	2.50	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Fecal Counts

Horse	-	**Elk**	8	**Cattle**	5	**Deer**	1	**Others**	-

Ground Photo

Lanscape Photo

Radar - Youngsville El Valle 10-2025

Producer Name:	Youngsville	**Pasture Name:**	El Valle
Date:	17-Oct-2025	**Collector Name:**	NNMSA
Transect Number:	-	**GPS Coordinates:**	36.074619, -106.564414 **(38°)**
Notes:			

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
186.00 ± 50.00 lbs per acre	10545 acres	265 AUY	596.67 ± 180.00 lbs per acre

Percent Cover

Cover Name	Percent
Litter	59.0
Vegetation	21.0
Bare ground	20.0
-	-
-	-

Vegetation Cover - Grasses

Common Name	Symbol	Percent
Sedge	Carex	12.0
Kentucky Bluegrass	POPR	4.0
Mountain Muhly	MUMO	1.0
-	-	-
-	-	-

Other Vegetation Cover

Common Name	Percent
Dand	2.0
Ptoe	2.0
-	-
-	-
-	-

Forage Composition

Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Sedge	Carex	75.0	2.8	1.50	-
Kentucky Bluegrass	POPR	19.0	2.3	2.50	Below Minimum Height
Mountain Muhly	MUMO	5.0	1.6	2.50	Below Minimum Height
Brome spp.	Brome	1.0	3.0	4.00	Below Minimum Height
-	-	-	-	-	-

Fecal Counts

Horse	0	**Elk**	3	**Cattle**	1	**Deer**	0	**Others**	0

Ground Photo

Lanscape Photo

Radar - Youngsville Lookout 2025-1

Producer Name:	NNMSA	**Pasture Name:**	Lookout
Date:	07-Aug-2025	**Collector Name:**	NNMSA, USFS
Transect Number:	-	**GPS Coordinates:**	- (49°)
Notes:	Forbs recorded as UNKNOWN-UNKNOWN		

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
150.00 ± 30.00 lbs per acre	10545 acres	0 AUY	0.00 ± 0.00 lbs per acre

Percent Cover		Vegetation Cover - Grasses			Other Vegetation Cover	
Cover Name	**Percent**	**Common Name**	**Symbol**	**Percent**	**Common Name**	**Percent**
Litter	44.0	Sedge	Carex	11.0	-	-
Bare ground	29.0	Kentucky Bluegrass	POPR	2.0	-	-
Vegetation	14.0	Unknown	UNKNOWN	1.0	-	-
Rock	13.0	-	-	-	-	-
-	-	-	-	-	-	-

Forage Composition

Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Sedge	Carex	96.0	2.6	1.50	-
Kentucky Bluegrass	POPR	4.0	3.9	2.50	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Fecal Counts

Horse	-	**Elk**	-	**Cattle**	2	**Deer**	-	**Others**	-

Ground Photo

Lanscape Photo

Radar - Youngsville Lookout 10-2025

Producer Name:	Youngsville	**Pasture Name:**	Lookout
Date:	17-Oct-2025	**Collector Name:**	NNMSA
Transect Number:	-	**GPS Coordinates:**	36.125811, -106.548790 **(75°)**
Notes:			

Biomass Availability	Pasture Size	Estimated Stocking Rate	Annual Forage Production
182.00 ± 60.00 lbs per acre	10545 acres	161 AUY	363.33 ± 30.00 lbs per acre

Percent Cover

Cover Name	Percent
Litter	48.0
Bare ground	33.0
Vegetation	19.0
-	-
-	-

Vegetation Cover - Grasses

Common Name	Symbol	Percent
Kentucky Bluegrass	POPR	8.0
Sedge	Carex	6.0
-	-	-
-	-	-
-	-	-

Other Vegetation Cover

Common Name	Percent
Ptoe	4.0
Gmal	1.0
-	-
-	-
-	-

Forage Composition

Common Name	Symbol	Percent	Avg. Height (inches)	Minimum Stubble Height Guidline	
Kentucky Bluegrass	POPR	61.0	2.8	2.50	-
Sedge	Carex	36.0	3.0	1.50	-
Mountain Muhly	MUMO	3.0	1.7	2.50	Below Minimum Height
-	-	-	-	-	-
-	-	-	-	-	-

Fecal Counts

Horse	0	Elk	0	Cattle	0	Deer	0	Others	0

Ground Photo

Lanscape Photo

Youngsville Allotment
2025

Elevation	Key Area	Date	Amount	Reported by
9,822 ft.	Punta de la Sierra	8/7/2025	1.95	field day
		10/17/2025	4.51	Field day
			6.46	
9,866 ft.	Rincon			
		6/10/2025	1	Cornelio Salazar
		7/4/2025	1.54	Carlos Salazar
		8/13/2025	0.04	Carlos Salazar
		9/9/2025	2.66	Carlos Salazar
		9/15/2025	0.6	Cornelio Salazar
		10/17/2025	2.51	Field Day
			8.35	
9,559 ft.	Valle Sur	8/7/2025	2.08	Field day
		10/17/2025	4.31	Field day
			6.39	
9,652 ft.	Cañada de Grants	6/10/2025	1.1	Cornelio Salazar
		8/4/2025	2.31	Carlos Salazar
		8/13/2025	0.04	Carlos Salazar
		8/29/2025	2.06	Cornelio Salazar
		9/9/2025	1.6	Carlos Salazar
		10/17/2025	2.58	Field day
			9.69	
10,158 ft.	Cerro de Grants	6/10/2025	1.73	Cornelio Salazar
		8/4/2025	4.21	Carlos Salazar
		8/13/2025	0.15	Carlos Salazar
		8/29/2025	2.9	Cornelio Salazar
		9/9/2025	1.85	Carlos Salazar
		10/17/2025	2.3	Field Day
			13.14	

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Lab No.: 3811

LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Cattle

		Excellent	Good	Fair	Poor	Very Poor
		1000	2000	4000	6000	10000
Total Dissolved Solids (Calc) (TDS), mg/L	70					
		Very Low	Low	Medium	High	Very High
		10.0	30.0	70.0	100	300
Nitrate Nitrogen (NO3-N), mg/L	<0.1					
		200	500	1000	2500	4000
Sulfate (SO4), mg/L	<0.6					
		65	170	340	670	1300
Sulfate-Sulfur (SO4-S), mg/L	<0.2					
		35	130	250	500	1000
Chloride (Cl), mg/L	4.3					
		25	75	150	300	500
Total Sodium (Na), mg/L	2					
		40	100	200	400	600
Total Calcium (Ca), mg/L	14					
		25	50	120	250	500
Total Magnesium (Mg), mg/L	5					
		40	80	100	160	200
Total Potassium (K), mg/L	10					
		0.10	0.20	0.40	0.80	1.20
Total Iron (Fe), mg/L	0.90					
		0.010	0.025	0.050	0.075	0.150
Total Manganese (Mn), mg/L	0.070					
		Soft	Moderately Hard	Hard	Very Hard	Brackish
		60	120	180	270	480
Hardness (CaCO3), mg/L	55					
		3.5	7.0	11	16	24
Hardness (CaCO3), grains/gal	3.2					

Additional Tests

Electrical Conductivity (EC @ 25C), µmho/cm	110

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LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Cattle

		Acidic			Neutral			Alkaline
		5.0		6.0		7.0		8.0		9.0
pH, unit	8.1							

INTERPRETATIONS for MATURE BEEF CATTLE ..... The following interpretations are considered appropriate for cows, bulls, and finishing cattle. The actual effect of a particular water source on health or performance depends on many factors, including diet, animal activity, air temperature, animal size, and condition. *(Interpretations for beef calves or dairy cattle are available on requrest.)*

TOTAL DISSOLVED SOLIDS, CONDUCTIVITY: **EXCELLENT QUALITY ("fresh" water):** Should have no effect on health or performance.

NITRATE-NITROGEN: This water should have no effect on animal health or performance.

CHLORIDE: Chloride by itself poses little risk, but is considered a dissolved solid. See Total Dissolved Solids comments.

SODIUM: Sodium by itself poses little risk but is considered a dissolved solid. See Total Dissolved Solids comments.

CALCIUM: This concentration is not expected to affect animal health or performance.

MAGNESIUM: Should not have significant long-term effects on animal health or performance, but is considered part of dissolved solids (see Total Dissolved Solids comments)

POTASSIUM: Not expected to affect health or performance.

IRON: No specific production or health problems are expected from using this water as a drinking water source..

IRON: May impart off-taste to meat of young animals (e.g., veal calves).

MANGANESE: No specific production problems expected from using this water.

MANGANESE: May impart off-taste to meat of young animals (e.g., veal calves).

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LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

HARDNESS: Hardness has no direct effect on drinking water safety or animal health.

AVERAGE DAILY WATER CONSUMPTION (gallons per head per day)

Feeder, finishing ..... 10 to 12 gal. Cow, dry or mature ..... 10 gal.
Bulls ..... 12 gal. Cow with calf ..... 12 gal.

(Note: Water consumption may increase by 1½ to 2 times when temperatures exceed 80°F.)

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LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Calves

		Excellent	Good	Fair	Poor	Very Poor
		500	1000	2000	3500	5000
Total Dissolved Solids (Calc) (TDS), mg/L	70					
		Very Low	Low	Medium	High	Very High
		10.0	20.0	40.0	70.0	100
Nitrate Nitrogen (NO3-N), mg/L	<0.1					
		100	200	450	1200	2000
Sulfate (SO4), mg/L	<0.6					
		35	65	150	400	670
Sulfate-Sulfur (SO4-S), mg/L	<0.2					
		20	70	140	300	500
Chloride (Cl), mg/L	4.3					
		20	50	100	200	350
Total Sodium (Na), mg/L	2					
		30	60	120	240	450
Total Calcium (Ca), mg/L	14					
		20	35	80	170	350
Total Magnesium (Mg), mg/L	5					
		10	25	50	100	150
Total Potassium (K), mg/L	10					
		0.10	0.20	0.40	0.80	1.20
Total Iron (Fe), mg/L	0.90					
		0.010	0.025	0.050	0.075	0.150
Total Manganese (Mn), mg/L	0.070					
		Soft	Moderately Hard	Hard	Very Hard	Brackish
		60	120	180	270	400
Hardness (CaCO3), mg/L	55					
		3.5	7.0	11	16	24
Hardness (CaCO3), grains/gal	3.2					

Additional Tests

Electrical Conductivity (EC @ 25C), µmho/cm	110

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LABORATORY ANALYSIS RESULTS

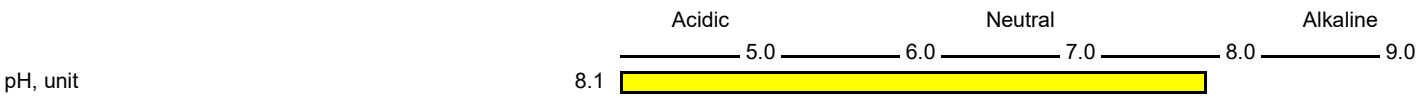
Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Calves



INTERPRETATIONS for BEEF CALVES ..... The following interpretations are considered appropriate for weaned, yearling, or growing cattle. The actual effect of a particular water source on health or performance depends on many factors, including diet, animal activity, air temperature, animal size, and condition. *(Interpretations for mature beef cattle or dairy cattle are available on requrest.)*

TOTAL DISSOLVED SOLIDS, CONDUCTIVITY: **EXCELLENT QUALITY ("fresh" water):** Should have no effect on health or performance.

NITRATE-NITROGEN: This water should have no effect on animal health or performance.

SULFATE: This water should have no effect on health or performance.

CHLORIDE: Chloride by itself poses little risk, but is considered a dissolved solid. See Total Dissolved Solids comments.

SODIUM: Sodium by itself poses little risk but is considered a dissolved solid. See Total Dissolved Solids comments.

CALCIUM: This concentration is not expected to affect animal health or performance.

MAGNESIUM: Should not have significant long-term effects on animal health or performance, but is considered part of dissolved solids (see Total Dissolved Solids comments)

POTASSIUM: Not expected to affect health or performance.

IRON: No specific production or health problems are expected from using this water as a drinking water source..

IRON: May impart off-taste to meat of young animals (e.g., veal calves).

MANGANESE: No specific production problems expected from using this water.

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LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

MANGANESE: May impart off-taste to meat of young animals (e.g., veal calves).

HARDNESS: Hardness has no direct effect on drinking water safety or animal health.

AVERAGE DAILY WATER CONSUMPTION (gallons per head per day)

Calf (2 to 4 mo.) ..... 2 to 3.5 gal.
Feeder, growing (400-800 lb.) ..... 6 to 9 gal.
(Note: Water consumption may increase by 1½ to 2 times when temperatures exceed 80°F.)

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Lab No.: 3812

LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	PAVO SPRING	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Cattle

		Excellent	Good	Fair	Poor	Very Poor
		1000	2000	4000	6000	10000
Total Dissolved Solids (Calc) (TDS), mg/L	55					
		Very Low	Low	Medium	High	Very High
		10.0	30.0	70.0	100	300
Nitrate Nitrogen (NO3-N), mg/L	1.03					
		200	500	1000	2500	4000
Sulfate (SO4), mg/L	3.3					
		65	170	340	670	1300
Sulfate-Sulfur (SO4-S), mg/L	1.1					
		35	130	250	500	1000
Chloride (Cl), mg/L	12					
		25	75	150	300	500
Total Sodium (Na), mg/L	7					
		40	100	200	400	600
Total Calcium (Ca), mg/L	8					
		25	50	120	250	500
Total Magnesium (Mg), mg/L	2					
		40	80	100	160	200
Total Potassium (K), mg/L	3					
		0.10	0.20	0.40	0.80	1.20
Total Iron (Fe), mg/L	1.56					
		0.010	0.025	0.050	0.075	0.150
Total Manganese (Mn), mg/L	0.020					
		Soft	Moderately Hard	Hard	Very Hard	Brackish
		60	120	180	270	480
Hardness (CaCO3), mg/L	28					
		3.5	7.0	11	16	24
Hardness (CaCO3), grains/gal	1.6					

Additional Tests

Electrical Conductivity (EC @ 25C), µmho/cm	85.5

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Lab No.: 3812

LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	PAVO SPRING	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Cattle

		Acidic			Neutral			Alkaline
		5.0	6.0	7.0	8.0	9.0		
pH, unit	7.2							

INTERPRETATIONS for MATURE BEEF CATTLE ..... The following interpretations are considered appropriate for cows, bulls, and finishing cattle. The actual effect of a particular water source on health or performance depends on many factors, including diet, animal activity, air temperature, animal size, and condition. *(Interpretations for beef calves or dairy cattle are available on requrest.)*

TOTAL DISSOLVED SOLIDS, CONDUCTIVITY: **EXCELLENT QUALITY ("fresh" water):** Should have no effect on health or performance.

NITRATE-NITROGEN: This water should have no effect on animal health or performance.

CHLORIDE: Chloride by itself poses little risk, but is considered a dissolved solid. See Total Dissolved Solids comments.

SODIUM: Sodium by itself poses little risk but is considered a dissolved solid. See Total Dissolved Solids comments.

CALCIUM: This concentration is not expected to affect animal health or performance.

MAGNESIUM: Should not have significant long-term effects on animal health or performance, but is considered part of dissolved solids (see Total Dissolved Solids comments)

POTASSIUM: Not expected to affect health or performance.

IRON: No specific health problems are expected from using this as a drinking water source. Performance is likely to be affected by improper equipment function, rather than health problems. High iron concentration may result in increased microbial growth and biofilm buildup in watering equipment. Dietary copper need may increase in certain cases.

IRON: May impart off-taste to meat of young animals (e.g., veal calves).

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Lab No.: 3812

LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	PAVO SPRING	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

MANGANESE: No specific production problems expected from using this water.

HARDNESS: Hardness has no direct effect on drinking water safety or animal health.

AVERAGE DAILY WATER CONSUMPTION (gallons per head per day)

Feeder, finishing ..... 10 to 12 gal. Cow, dry or mature ..... 10 gal.
Bulls ..... 12 gal. Cow with calf ..... 12 gal.

(Note: Water consumption may increase by 1½ to 2 times when temperatures exceed 80°F.)

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Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	PAVO SPRING	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Calves

		Excellent	Good	Fair	Poor	Very Poor
		500	1000	2000	3500	5000
Total Dissolved Solids (Calc) (TDS), mg/L	55					
		Very Low	Low	Medium	High	Very High
		10.0	20.0	40.0	70.0	100
Nitrate Nitrogen (NO3-N), mg/L	1.03					
		100	200	450	1200	2000
Sulfate (SO4), mg/L	3.3					
		35	65	150	400	670
Sulfate-Sulfur (SO4-S), mg/L	1.1					
		20	70	140	300	500
Chloride (Cl), mg/L	12					
		20	50	100	200	350
Total Sodium (Na), mg/L	7					
		30	60	120	240	450
Total Calcium (Ca), mg/L	8					
		20	35	80	170	350
Total Magnesium (Mg), mg/L	2					
		10	25	50	100	150
Total Potassium (K), mg/L	3					
		0.10	0.20	0.40	0.80	1.20
Total Iron (Fe), mg/L	1.56					
		0.010	0.025	0.050	0.075	0.150
Total Manganese (Mn), mg/L	0.020					
		Soft	Moderately Hard	Hard	Very Hard	Brackish
		60	120	180	270	400
Hardness (CaCO3), mg/L	28					
		3.5	7.0	11	16	24
Hardness (CaCO3), grains/gal	1.6					

Additional Tests

Electrical Conductivity (EC @ 25C), µmho/cm	85.5

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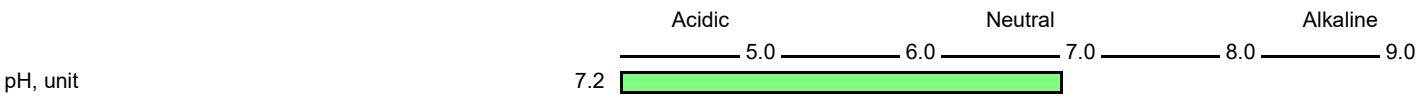
Ashleigh Laugesen
Signer

Sample ID:	PAVO SPRING	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Calves



INTERPRETATIONS for BEEF CALVES ..... The following interpretations are considered appropriate for weaned, yearling, or growing cattle. The actual effect of a particular water source on health or performance depends on many factors, including diet, animal activity, air temperature, animal size, and condition. *(Interpretations for mature beef cattle or dairy cattle are available on requrest.)*

TOTAL DISSOLVED SOLIDS, CONDUCTIVITY: **EXCELLENT QUALITY ("fresh" water):** Should have no effect on health or performance.

NITRATE-NITROGEN: This water should have no effect on animal health or performance.

SULFATE: This water should have no effect on health or performance.

CHLORIDE: Chloride by itself poses little risk, but is considered a dissolved solid. See Total Dissolved Solids comments.

SODIUM: Sodium by itself poses little risk but is considered a dissolved solid. See Total Dissolved Solids comments.

CALCIUM: This concentration is not expected to affect animal health or performance.

MAGNESIUM: Should not have significant long-term effects on animal health or performance, but is considered part of dissolved solids (see Total Dissolved Solids comments)

POTASSIUM: Not expected to affect health or performance.

IRON: No specific health problems are expected from using this as a drinking water source. Performance is likely to be affected by improper equipment function, rather than health problems. High iron concentration may result in increased microbial growth and biofilm buildup in watering equipment. Dietary copper need may increase in certain cases.

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LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	PAVO SPRING	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

IRON: May impart off-taste to meat of young animals (e.g., veal calves).

MANGANESE: No specific production problems expected from using this water.

HARDNESS: Hardness has no direct effect on drinking water safety or animal health.

AVERAGE DAILY WATER CONSUMPTION (gallons per head per day)

Calf (2 to 4 mo.) ..... 2 to 3.5 gal.
Feeder, growing (400-800 lb.) ..... 6 to 9 gal.
(Note: Water consumption may increase by 1½ to 2 times when temperatures exceed 80°F.)

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LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	OJO DE LENCHE	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Cattle

		Excellent	Good	Fair	Poor	Very Poor
		1000	2000	4000	6000	10000
Total Dissolved Solids (Calc) (TDS), mg/L	131					
		Very Low	Low	Medium	High	Very High
		10.0	30.0	70.0	100	300
Nitrate Nitrogen (NO3-N), mg/L	<0.1					
		200	500	1000	2500	4000
Sulfate (SO4), mg/L	1.6					
		65	170	340	670	1300
Sulfate-Sulfur (SO4-S), mg/L	0.52					
		35	130	250	500	1000
Chloride (Cl), mg/L	10					
		25	75	150	300	500
Total Sodium (Na), mg/L	4					
		40	100	200	400	600
Total Calcium (Ca), mg/L	18					
		25	50	120	250	500
Total Magnesium (Mg), mg/L	5					
		40	80	100	160	200
Total Potassium (K), mg/L	25					
		0.10	0.20	0.40	0.80	1.20
Total Iron (Fe), mg/L	1.40					
		0.010	0.025	0.050	0.075	0.150
Total Manganese (Mn), mg/L	0.070					
		Soft	Moderately Hard	Hard	Very Hard	Brackish
		60	120	180	270	480
Hardness (CaCO3), mg/L	65					
		3.5	7.0	11	16	24
Hardness (CaCO3), grains/gal	3.8					

Additional Tests

Electrical Conductivity (EC @ 25C), µmho/cm	204

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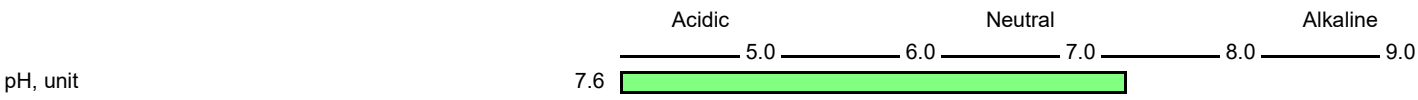
Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	OJO DE LENCHE	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Cattle



INTERPRETATIONS for MATURE BEEF CATTLE ..... The following interpretations are considered appropriate for cows, bulls, and finishing cattle. The actual effect of a particular water source on health or performance depends on many factors, including diet, animal activity, air temperature, animal size, and condition. *(Interpretations for beef calves or dairy cattle are available on requrest.)*

TOTAL DISSOLVED SOLIDS, CONDUCTIVITY: **EXCELLENT QUALITY ("fresh" water):** Should have no effect on health or performance.

NITRATE-NITROGEN: This water should have no effect on animal health or performance.

CHLORIDE: Chloride by itself poses little risk, but is considered a dissolved solid. See Total Dissolved Solids comments.

SODIUM: Sodium by itself poses little risk but is considered a dissolved solid. See Total Dissolved Solids comments.

CALCIUM: This concentration is not expected to affect animal health or performance.

MAGNESIUM: Should not have significant long-term effects on animal health or performance, but is considered part of dissolved solids (see Total Dissolved Solids comments)

POTASSIUM: Not expected to affect health or performance.

IRON: No specific health problems are expected from using this as a drinking water source. Performance is likely to be affected by improper equipment function, rather than health problems. High iron concentration may result in increased microbial growth and biofilm buildup in watering equipment. Dietary copper need may increase in certain cases.

IRON: May impart off-taste to meat of young animals (e.g., veal calves).

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LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102	Ashleigh Laugesen Signer

Sample ID:	OJO DE LENCHE	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

MANGANESE: No specific production problems expected from using this water.

MANGANESE: May impart off-taste to meat of young animals (e.g., veal calves).

HARDNESS: Hardness has no direct effect on drinking water safety or animal health.

AVERAGE DAILY WATER CONSUMPTION (gallons per head per day)

Feeder, finishing	10 to 12 gal.	Cow, dry or mature	10 gal.
Bulls	12 gal.	Cow with calf	12 gal.

(Note: Water consumption may increase by 1½ to 2 times when temperatures exceed 80°F.)

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LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	OJO DE LENCHE	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Calves

		Excellent	Good	Fair	Poor	Very Poor
		500	1000	2000	3500	5000
Total Dissolved Solids (Calc) (TDS), mg/L	131					
		Very Low	Low	Medium	High	Very High
		10.0	20.0	40.0	70.0	100
Nitrate Nitrogen (NO3-N), mg/L	<0.1					
		100	200	450	1200	2000
Sulfate (SO4), mg/L	1.6					
		35	65	150	400	670
Sulfate-Sulfur (SO4-S), mg/L	0.52					
		20	70	140	300	500
Chloride (Cl), mg/L	10					
		20	50	100	200	350
Total Sodium (Na), mg/L	4					
		30	60	120	240	450
Total Calcium (Ca), mg/L	18					
		20	35	80	170	350
Total Magnesium (Mg), mg/L	5					
		10	25	50	100	150
Total Potassium (K), mg/L	25					
		0.10	0.20	0.40	0.80	1.20
Total Iron (Fe), mg/L	1.40					
		0.010	0.025	0.050	0.075	0.150
Total Manganese (Mn), mg/L	0.070					
		Soft	Moderately Hard	Hard	Very Hard	Brackish
		60	120	180	270	400
Hardness (CaCO3), mg/L	65					
		3.5	7.0	11	16	24
Hardness (CaCO3), grains/gal	3.8					

Additional Tests

Electrical Conductivity (EC @ 25C), µmho/cm	204

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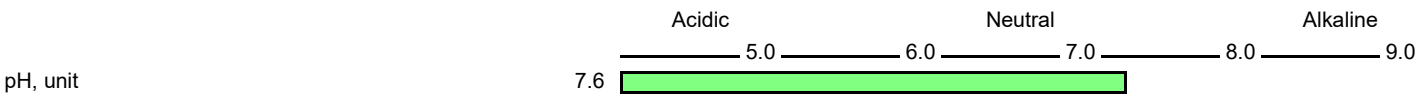
Ashleigh Laugesen
Signer

Sample ID:	OJO DE LENCHE	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock - Beef Calves



INTERPRETATIONS for BEEF CALVES ..... The following interpretations are considered appropriate for weaned, yearling, or growing cattle. The actual effect of a particular water source on health or performance depends on many factors, including diet, animal activity, air temperature, animal size, and condition. *(Interpretations for mature beef cattle or dairy cattle are available on requrest.)*

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NITRATE-NITROGEN: This water should have no effect on animal health or performance.

SULFATE: This water should have no effect on health or performance.

CHLORIDE: Chloride by itself poses little risk, but is considered a dissolved solid. See Total Dissolved Solids comments.

SODIUM: Sodium by itself poses little risk but is considered a dissolved solid. See Total Dissolved Solids comments.

CALCIUM: This concentration is not expected to affect animal health or performance.

MAGNESIUM: Should not have significant long-term effects on animal health or performance, but is considered part of dissolved solids (see Total Dissolved Solids comments)

POTASSIUM: Not expected to affect health or performance.

IRON: No specific health problems are expected from using this as a drinking water source. Performance is likely to be affected by improper equipment function, rather than health problems. High iron concentration may result in increased microbial growth and biofilm buildup in watering equipment. Dietary copper need may increase in certain cases.

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LABORATORY ANALYSIS RESULTS

Date Reported: 06/02/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Ashleigh Laugesen
Signer

Sample ID:	OJO DE LENCHE	**Date Received:**	
Client Name:		**Invoice No:**	428334
Location:		**P.O. #:**	
Date/Time Sampled:	05/14/2025	**Name of Sampler:**	
Date/Time Submitted:	05/23/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

IRON: May impart off-taste to meat of young animals (e.g., veal calves).

MANGANESE: No specific production problems expected from using this water.

MANGANESE: May impart off-taste to meat of young animals (e.g., veal calves).

HARDNESS: Hardness has no direct effect on drinking water safety or animal health.

AVERAGE DAILY WATER CONSUMPTION (gallons per head per day)

Calf (2 to 4 mo.) ..... 2 to 3.5 gal.
Feeder, growing (400-800 lb.) ..... 6 to 9 gal.
(Note: Water consumption may increase by 1½ to 2 times when temperatures exceed 80°F.)

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Lab No.: 5461

LABORATORY ANALYSIS RESULTS

Date Reported: 08/27/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Amy Meier
Data Review Coordinator

Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428984
Location:		**P.O. #:**	
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

Livestock - Beef Cattle

		Excellent	Good	Fair	Poor	Very Poor
		1000	2000	4000	6000	10000
Total Dissolved Solids (Calc) (TDS), mg/L	308					
		Very Low	Low	Medium	High	Very High
		10.0	30.0	70.0	100	300
Nitrate Nitrogen (NO3-N), mg/L	<0.1					
		200	500	1000	2500	4000
Sulfate (SO4), mg/L	0.63					
		65	170	340	670	1300
Sulfate-Sulfur (SO4-S), mg/L	0.21					
		35	130	250	500	1000
Chloride (Cl), mg/L	30					
		25	75	150	300	500
Total Sodium (Na), mg/L	8					
		40	100	200	400	600
Total Calcium (Ca), mg/L	41					
		25	50	120	250	500
Total Magnesium (Mg), mg/L	16					
		40	80	100	160	200
Total Potassium (K), mg/L	42					
		0.10	0.20	0.40	0.80	1.20
Total Iron (Fe), mg/L	2.91					
		0.010	0.025	0.050	0.075	0.150
Total Manganese (Mn), mg/L	0.060					
		Soft	Moderately Hard	Hard	Very Hard	Brackish
		60	120	180	270	480
Hardness (CaCO3), mg/L	170					
		3.5	7.0	11	16	24
Hardness (CaCO3), grains/gal	9.8					

Additional Tests

Electrical Conductivity (EC @ 25C), µmho/cm	482

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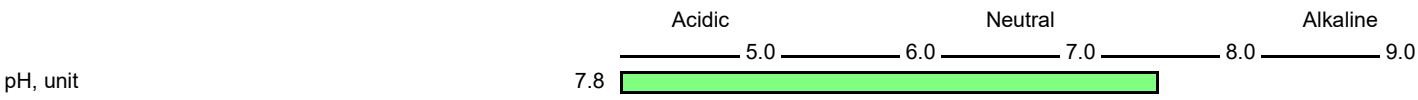
Date Reported: 08/27/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Amy Meier
Data Review Coordinator

Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428984
Location:		**P.O. #:**	
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

Livestock - Beef Cattle



INTERPRETATIONS for MATURE BEEF CATTLE ..... The following interpretations are considered appropriate for cows, bulls, and finishing cattle. The actual effect of a particular water source on health or performance depends on many factors, including diet, animal activity, air temperature, animal size, and condition. *(Interpretations for beef calves or dairy cattle are available on requrest.)*

TOTAL DISSOLVED SOLIDS, CONDUCTIVITY: EXCELLENT QUALITY ("fresh" water): Should have no effect on health or performance.

NITRATE-NITROGEN: This water should have no effect on animal health or performance.

CHLORIDE: Chloride by itself poses little risk, but is considered a dissolved solid. See Total Dissolved Solids comments.

SODIUM: Sodium by itself poses little risk but is considered a dissolved solid. See Total Dissolved Solids comments.

CALCIUM: This concentration is not expected to affect animal health or performance.

MAGNESIUM: Should not have significant long-term effects on animal health or performance, but is considered part of dissolved solids (see Total Dissolved Solids comments)

POTASSIUM: Not expected to affect health or performance.

IRON: No specific health problems are expected from using this as a drinking water source. Performance is likely to be affected by improper equipment function, rather than health problems. High iron concentration may result in increased microbial growth and biofilm buildup in watering equipment. Dietary copper need may increase in certain cases.

IRON: May impart off-taste to meat of young animals (e.g., veal calves).

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Lab No.: 5461

LABORATORY ANALYSIS RESULTS

Date Reported: 08/27/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Amy Meier
Data Review Coordinator

Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428984
Location:		**P.O. #:**	
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

MANGANESE: No specific production problems expected from using this water.

HARDNESS: Hardness has no direct effect on drinking water safety or animal health. It can cause scale buildup and clogging of pipes and drinkers, leading to reduced water consumption and associated problems.

AVERAGE DAILY WATER CONSUMPTION (gallons per head per day)

Feeder, finishing ..... 10 to 12 gal. Cow, dry or mature ..... 10 gal.
Bulls ..... 12 gal. Cow with calf ..... 12 gal.

(Note: Water consumption may increase by 1½ to 2 times when temperatures exceed 80°F.)

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Date Reported: 08/27/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Amy Meier
Data Review Coordinator

Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428984
Location:		**P.O. #:**	
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

Livestock - Beef Calves

		Excellent	Good	Fair	Poor	Very Poor
		500	1000	2000	3500	5000
Total Dissolved Solids (Calc) (TDS), mg/L	308					
		Very Low	Low	Medium	High	Very High
		10.0	20.0	40.0	70.0	100
Nitrate Nitrogen (NO3-N), mg/L	<0.1					
		100	200	450	1200	2000
Sulfate (SO4), mg/L	0.63					
		35	65	150	400	670
Sulfate-Sulfur (SO4-S), mg/L	0.21					
		20	70	140	300	500
Chloride (Cl), mg/L	30					
		20	50	100	200	350
Total Sodium (Na), mg/L	8					
		30	60	120	240	450
Total Calcium (Ca), mg/L	41					
		20	35	80	170	350
Total Magnesium (Mg), mg/L	16					
		10	25	50	100	150
Total Potassium (K), mg/L	42					
		0.10	0.20	0.40	0.80	1.20
Total Iron (Fe), mg/L	2.91					
		0.010	0.025	0.050	0.075	0.150
Total Manganese (Mn), mg/L	0.060					
		Soft	Moderately Hard	Hard	Very Hard	Brackish
		60	120	180	270	400
Hardness (CaCO3), mg/L	170					
		3.5	7.0	11	16	24
Hardness (CaCO3), grains/gal	9.8					

Additional Tests

Electrical Conductivity (EC @ 25C), µmho/cm	482

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Amy Meier
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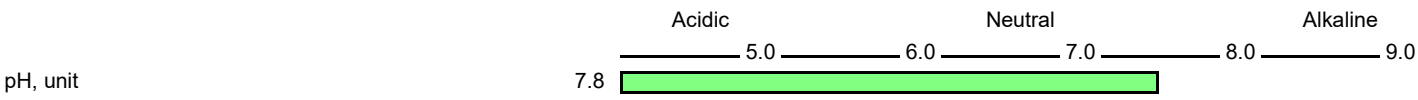
Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428984
Location:		**P.O. #:**	
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

Livestock - Beef Calves



INTERPRETATIONS for BEEF CALVES ..... The following interpretations are considered appropriate for weaned, yearling, or growing cattle. The actual effect of a particular water source on health or performance depends on many factors, including diet, animal activity, air temperature, animal size, and condition. *(Interpretations for mature beef cattle or dairy cattle are available on requrest.)*

TOTAL DISSOLVED SOLIDS, CONDUCTIVITY: **EXCELLENT QUALITY ("fresh" water):** Should have no effect on health or performance.

NITRATE-NITROGEN: This water should have no effect on animal health or performance.

SULFATE: This water should have no effect on health or performance.

CHLORIDE: Chloride by itself poses little risk, but is considered a dissolved solid. See Total Dissolved Solids comments.

SODIUM: Sodium by itself poses little risk but is considered a dissolved solid. See Total Dissolved Solids comments.

CALCIUM: This concentration is not expected to affect animal health or performance.

MAGNESIUM: Should not have significant long-term effects on animal health or performance, but is considered part of dissolved solids (see Total Dissolved Solids comments)

POTASSIUM: Not expected to affect health or performance.

IRON: No specific health problems are expected from using this as a drinking water source. Performance is likely to be affected by improper equipment function, rather than health problems. High iron concentration may result in increased microbial growth and biofilm buildup in watering equipment. Dietary copper need may increase in certain cases.

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Date Reported: 08/27/2025

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Amy Meier
Data Review Coordinator

Sample ID:	LOOKOUT	**Date Received:**	
Client Name:		**Invoice No:**	428984
Location:		**P.O. #:**	
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

IRON: May impart off-taste to meat of young animals (e.g., veal calves).

MANGANESE: No specific production problems expected from using this water.

HARDNESS: Hardness has no direct effect on drinking water safety or animal health. It can cause scale buildup and clogging of pipes and drinkers, leading to reduced water consumption and associated problems.

AVERAGE DAILY WATER CONSUMPTION (gallons per head per day)

Calf (2 to 4 mo.) ..... 2 to 3.5 gal.
Feeder, growing (400-800 lb.) ..... 6 to 9 gal.
(Note: Water consumption may increase by 1½ to 2 times when temperatures exceed 80°F.)

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Amy Meier
Data Review Coordinator

Sample ID:	PAVO SPRING	**Date Received:**	
Client Name:		**Invoice No:**	428984
Location:		**P.O. #:**	
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

Livestock - Beef Cattle

		Excellent	Good	Fair	Poor	Very Poor
		1000	2000	4000	6000	10000
Total Dissolved Solids (Calc) (TDS), mg/L	40					
		Very Low	Low	Medium	High	Very High
		10.0	30.0	70.0	100	300
Nitrate Nitrogen (NO3-N), mg/L	0.73					
		200	500	1000	2500	4000
Sulfate (SO4), mg/L	2.2					
		65	170	340	670	1300
Sulfate-Sulfur (SO4-S), mg/L	0.73					
		35	130	250	500	1000
Chloride (Cl), mg/L	2.0					
		25	75	150	300	500
Total Sodium (Na), mg/L	5					
		40	100	200	400	600
Total Calcium (Ca), mg/L	5					
		25	50	120	250	500
Total Magnesium (Mg), mg/L	1					
		40	80	100	160	200
Total Potassium (K), mg/L	3					
		0.10	0.20	0.40	0.80	1.20
Total Iron (Fe), mg/L	0.19					
		0.010	0.025	0.050	0.075	0.150
Total Manganese (Mn), mg/L	<0.005					
		Soft	Moderately Hard	Hard	Very Hard	Brackish
		60	120	180	270	480
Hardness (CaCO3), mg/L	16					
		3.5	7.0	11	16	24
Hardness (CaCO3), grains/gal	0.9					

Additional Tests

Electrical Conductivity (EC @ 25C), µmho/cm	62.5

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Amy Meier
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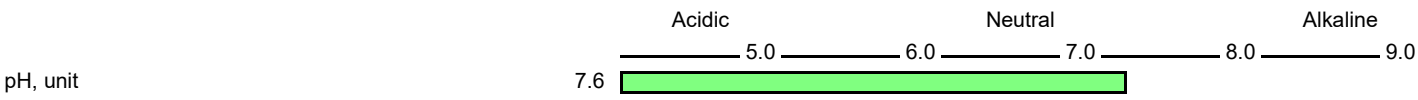
Sample ID:	PAVO SPRING	**Date Received:**	
Client Name:		**Invoice No:**	428984
Location:		**P.O. #:**	
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

Livestock - Beef Cattle



INTERPRETATIONS for MATURE BEEF CATTLE ..... The following interpretations are considered appropriate for cows, bulls, and finishing cattle. The actual effect of a particular water source on health or performance depends on many factors, including diet, animal activity, air temperature, animal size, and condition. *(Interpretations for beef calves or dairy cattle are available on requrest.)*

TOTAL DISSOLVED SOLIDS, CONDUCTIVITY: **EXCELLENT QUALITY ("fresh" water):** Should have no effect on health or performance.

NITRATE-NITROGEN: This water should have no effect on animal health or performance.

CHLORIDE: Chloride by itself poses little risk, but is considered a dissolved solid. See Total Dissolved Solids comments.

SODIUM: Sodium by itself poses little risk but is considered a dissolved solid. See Total Dissolved Solids comments.

CALCIUM: This concentration is not expected to affect animal health or performance.

MAGNESIUM: Should not have significant long-term effects on animal health or performance, but is considered part of dissolved solids (see Total Dissolved Solids comments)

POTASSIUM: Not expected to affect health or performance.

IRON: No specific production or health problems are expected from using this water as a drinking water source..

MANGANESE: No specific production problems expected from using this water.

HARDNESS: Hardness has no direct effect on drinking water safety or animal health.

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LABORATORY ANALYSIS RESULTS

Date Reported: 08/27/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Amy Meier
Data Review Coordinator

Sample ID:	PAVO SPRING	**Date Received:**	
Client Name:		**Invoice No:**	428984
Location:		**P.O. #:**	
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

AVERAGE DAILY WATER CONSUMPTION (gallons per head per day)

Feeder, finishing ..... 10 to 12 gal. Cow, dry or mature ..... 10 gal.
Bulls ..... 12 gal. Cow with calf ..... 12 gal.
(Note: Water consumption may increase by 1½ to 2 times when temperatures exceed 80°F.)

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Amy Meier
Data Review Coordinator

Sample ID:	PAVO SPRING	**Date Received:**	
Client Name:		**Invoice No:**	428984
Location:		**P.O. #:**	
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

Livestock - Beef Calves

		Excellent	Good	Fair	Poor	Very Poor
		500	1000	2000	3500	5000
Total Dissolved Solids (Calc) (TDS), mg/L	40					
		Very Low	Low	Medium	High	Very High
		10.0	20.0	40.0	70.0	100
Nitrate Nitrogen (NO3-N), mg/L	0.73					
		100	200	450	1200	2000
Sulfate (SO4), mg/L	2.2					
		35	65	150	400	670
Sulfate-Sulfur (SO4-S), mg/L	0.73					
		20	70	140	300	500
Chloride (Cl), mg/L	2.0					
		20	50	100	200	350
Total Sodium (Na), mg/L	5					
		30	60	120	240	450
Total Calcium (Ca), mg/L	5					
		20	35	80	170	350
Total Magnesium (Mg), mg/L	1					
		10	25	50	100	150
Total Potassium (K), mg/L	3					
		0.10	0.20	0.40	0.80	1.20
Total Iron (Fe), mg/L	0.19					
		0.010	0.025	0.050	0.075	0.150
Total Manganese (Mn), mg/L	<0.005					
		Soft	Moderately Hard	Hard	Very Hard	Brackish
		60	120	180	270	400
Hardness (CaCO3), mg/L	16					
		3.5	7.0	11	16	24
Hardness (CaCO3), grains/gal	0.9					

Additional Tests

Electrical Conductivity (EC @ 25C), µmho/cm	62.5

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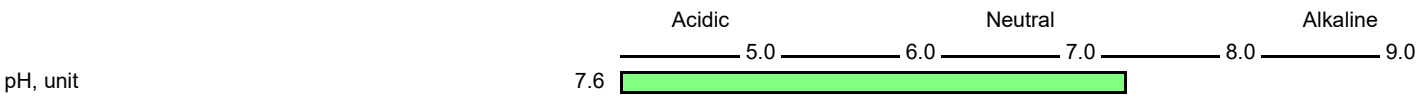
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

Livestock - Beef Calves



INTERPRETATIONS for BEEF CALVES ..... The following interpretations are considered appropriate for weaned, yearling, or growing cattle. The actual effect of a particular water source on health or performance depends on many factors, including diet, animal activity, air temperature, animal size, and condition. *(Interpretations for mature beef cattle or dairy cattle are available on requrest.)*

TOTAL DISSOLVED SOLIDS, CONDUCTIVITY: **EXCELLENT QUALITY ("fresh" water):** Should have no effect on health or performance.

NITRATE-NITROGEN: This water should have no effect on animal health or performance.

SULFATE: This water should have no effect on health or performance.

CHLORIDE: Chloride by itself poses little risk, but is considered a dissolved solid. See Total Dissolved Solids comments.

SODIUM: Sodium by itself poses little risk but is considered a dissolved solid. See Total Dissolved Solids comments.

CALCIUM: This concentration is not expected to affect animal health or performance.

MAGNESIUM: Should not have significant long-term effects on animal health or performance, but is considered part of dissolved solids (see Total Dissolved Solids comments)

POTASSIUM: Not expected to affect health or performance.

IRON: No specific production or health problems are expected from using this water as a drinking water source..

MANGANESE: No specific production problems expected from using this water.

HARDNESS: Hardness has no direct effect on drinking water safety or animal health.

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LABORATORY ANALYSIS RESULTS

Date Reported: 08/27/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Amy Meier
Data Review Coordinator

Sample ID:	PAVO SPRING	**Date Received:**	
Client Name:		**Invoice No:**	428984
Location:		**P.O. #:**	
Date/Time Sampled:	08/07/2025	**Name of Sampler:**	
Date/Time Submitted:	08/18/2025	**Name of Submitter:**	
Subject:	Drinking Water Lab Analysis	**Depth:**	

AVERAGE DAILY WATER CONSUMPTION (gallons per head per day)

Calf (2 to 4 mo.) ..... 2 to 3.5 gal.
Feeder, growing (400-800 lb.) ..... 6 to 9 gal.
(Note: Water consumption may increase by 1½ to 2 times when temperatures exceed 80°F.)

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Lab No.: 547

LABORATORY ANALYSIS RESULTS

Date Reported: 11/07/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Amy Meier
Data Review Coordinator

Sample ID:	OJO DE LECHE	**Date Received:**	
Client Name:		**Invoice No:**	429534
Location:		**P.O. #:**	
Date/Time Sampled:	10/17/2025	**Name of Sampler:**	
Date/Time Submitted:	10/29/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock

		Excellent	Good	Fair	Poor	Very Poor
		1000	2000	4000	6000	10000
Total Dissolved Solids (Calc) (TDS), mg/L	171					
		Very Low	Low	Medium	High	Very High
		10.0	30.0	70.0	100	300
Nitrate Nitrogen (NO3-N), mg/L	0.58					
		200	500	1000	2500	4000
Sulfate (SO4), mg/L	6.9					
		65	170	340	670	1300
Sulfate-Sulfur (SO4-S), mg/L	2.3					
		35	130	250	500	1000
Chloride (Cl), mg/L	25					
		25	75	150	300	500
Total Sodium (Na), mg/L	5					
		40	100	200	400	600
Total Calcium (Ca), mg/L	13					
		25	50	120	250	500
Total Magnesium (Mg), mg/L	4					
		40	80	120	160	200
Total Potassium (K), mg/L	43					
		0.10	0.20	0.40	0.80	1.20
Total Iron (Fe), mg/L	4.13					
		0.010	0.025	0.050	0.075	0.150
Total Manganese (Mn), mg/L	0.390					
		Soft	Moderately Hard	Hard	Very Hard	Brackish
		60	120	180	270	400
Hardness (CaCO3), mg/L	48					
		3.5	7.0	11	16	24
Hardness (CaCO3), grains/gal	2.8					

Additional Tests

Electrical Conductivity (EC @ 25C), µmho/cm	267

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Amy Meier
Data Review Coordinator

Sample ID:	OJO DE LECHE	**Date Received:**	
Client Name:		**Invoice No:**	429534
Location:		**P.O. #:**	
Date/Time Sampled:	10/17/2025	**Name of Sampler:**	
Date/Time Submitted:	10/29/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

Livestock

		Acidic			Neutral			Alkaline
		5.0		6.0		7.0		8.0		9.0
pH, unit	7.8							

More information is available at **cropfile.servitech.com**, 5.00.000 Water Resource Management (panel), 5.03 Livestock Water Quality (dropdown) and 5.03 Livestock Water Surveys (dropdown).

INTERPRETATIONS for GENERAL LIVESTOCK PRODUCTION ..... The following statements are general interpretations for a wide range of common livestock and poultry animals. The actual effect of a particular water source on health or performance depends on many factors, including diet, animal activity, air temperature, animal size, and condition. Interpretations for specific livestock types are available on request, including: *beef cattle, beef calves, dairy cattle, dairy calves, mature hogs, young pigs, poultry, horses, or sheep/goats*.

TOTAL DISSOLVED SOLIDS, CONDUCTIVITY: EXCELLENT QUALITY ("fresh" water): Low salinity level. Suitable for all classes of livestock and poultry.

NITRATE-NITROGEN: VERY LOW: Should have no effect on animal health or performance.

SULFATE: VERY LOW: Considered safe for all classes of livestock. No problems are expected. Could possibly affect poultry performance at upper end of range when sodium, magnesium, or chloride levels are high.

CHLORIDE: VERY LOW: Chloride is considered a dissolved solid. See TDS comments. Levels greater than 15 to 25 mg/L might affect poultry production when sodium exceeds 50 mg/L.

SODIUM: VERY LOW: Presents little or no risk to livestock or poultry.

CALCIUM: VERY LOW: No effect expected for livestock or poultry use. Calcium mineral supplementation may be needed in certain cases.

MAGNESIUM: VERY LOW: Presents little or no risk to livestock or poultry.

POTASSIUM: LOW: This water is considered satisfactory for animal consumption.

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Lab No.: 547

LABORATORY ANALYSIS RESULTS

Date Reported: 11/07/2025

Send To: 55267	NORTHERN NM STOCKMANS ASSOC DR CRISTOBAL VALENCIA 1116 SILVER AVE SW UNIT I ALBUQUERQUE, NM 87102

Amy Meier
Data Review Coordinator

Sample ID:	OJO DE LECHE	**Date Received:**	
Client Name:		**Invoice No:**	429534
Location:		**P.O. #:**	
Date/Time Sampled:	10/17/2025	**Name of Sampler:**	
Date/Time Submitted:	10/29/2025	**Name of Submitter:**	
Subject:	Livestock Water Lab Analysis	**Depth:**	

IRON: EXTREMELY HIGH: Performance likely to be affected by improper equipment function, due to high iron concentration resulting in increased microbial growth and biofilm buildup in watering equipment. High iron in drinking water may also reduce water intake which can directly reduce feed intake or milk production. This water may impart off-taste to meat of young animals (e.g., veal calves) or to milk. Excess absorbed iron from drinking water can lead to cellular oxidative stress, can inhibit copper and zinc absorption, and reduced growth or production. Seek professional advice regarding use of this water for livestock consumption.

MANGANESE: EXTREMELY HIGH (over 0.0150 mg/L): Performance likely to be affected by improper equipment functions due to high manganese concentration (resulting in increased microbial growth and biofilm buildup) rather than specific livestock health problems. May impart off-taste to meat of young animals (e.g., veal calves).

HARDNESS: SOFT: "Soft" water has no direct effect on drinking water safety or animal health, but may influence equipment, plumbing, and fixture performance.

AVERAGE DAILY WATER CONSUMPTION (gallons per day)

Beef cattle ..... 7 to 12 per head	Sheep, goats ..... 2 to 4 per head
Dairy cattle ..... 10 to 40 per head	Chickens ..... 8 to 10 per hundred birds
Swine ..... 2 to 8 per head	Turkeys ..... 10 to 15 per hundred birds
Horses ..... 8 to 12 per head	

(Note: Water consumption may increase by 1½ to 2 times when temperatures exceed 80°F.)

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