

A-Appendix A: Agricultural Inventory Irrigation and Fencing Details

Lease Area	Irrigation	Condition of Irrigation Infrastructure	Fencing	Condition of Fencing
Axelson-Johnson-Cowles-Dawson (AJCD)	Johnson Ditch and the Star Ditch	The irrigation infrastructure is relatively minimal. There are a few concrete junction and diversion boxes that are anywhere from 50-100 years old. These structures continue to function in a decent fashion but should be replaced within the next 2-5 years for the most efficient irrigation use. There are some drainage issues along 55 th Street from irrigation tailwater on the West Axelson property. This issue has been reoccurring for the past 10-15 years and is compromising the road edge of 55 th Street. The installation of additional field laterals on the interior side of the perimeter fence would help to prevent any further erosion issues along the 55 th Street.	10 strand high tensile fence	The fence design consists of all wooden line posts spaced at 60 foot intervals with 10 strands of a 12.5 gauge high tensile wire with a 200 ksi rating that is set at a pattern that encourages cattle to stay within its fenced boundary. Most of this fence was installed in the mid-1980s and is starting to deteriorate quickly. The typical lifespan of this style of fence is around 20-30 years, so this fence is in need of replacement in the near future.
Boulder Valley Ranch Complex	Farmers Ditch	All 292 currently irrigated acres are irrigated with Farmers Ditch water. Current infrastructure shortcomings only allow for 292 acres to be irrigated. There are multiple concrete diversions off of Farmers Ditch that service the area. These headgate structures vary from good to poor in condition and functionality. Water that is diverted from the ditch is conveyed in earthen laterals throughout the BVR complex. Tailwater drainage has been an occurring problem on the Lore/Ellison property near the Eagle trailhead. This drainage issue has also compromised the road edge of 55 th Street and occasionally floods the Eagle trailhead parking lot. Additional field laterals may be a solution to lessen the effects of excess tailwater.	10 strand high tensile fencing on the eastern properties and four strand barbwire fencing on most of the western properties	Much of the barbwire fencing to the west is 40 plus years old and is in various stages of disrepair. As this fence is due for replacement it is either being replaced with a 10 strand high tensile fence or a wildlife friendly four strand smooth wire/barbwire fence design.
Gallagher-Nu-West-Harrington	Farmers Ditch	Farmers ditch is piped through an underground lateral system that feeds the properties through multiple valves. The valves feed water through gated pipe on both Gallagher and Nu-West. The Gallagher hayfield is 39 acres and 100 percent irrigated. The middle third of the property is a natural drainage. It also drains the tailwater from the hayfield. The northern third of the property is occupied by prairie dogs and has not been irrigated for more than 10 years. There are 56 acres of the Nu-West/Harrington property that are irrigated pasture land. These acres are irrigated through the same piped system as the Gallagher hayfield. The	10 strand high tensile fencing on the north, east and west property boundaries and four strand barbwire fence on the shared property line to the west.	The high tensile fencing is in good to fair condition while the barbwire fence is in fair to poor shape. The barbwire fence at best estimate is 50-60 years old and is due for replacement. The Nu-West-Harrington fence is 10 strand high tensile fence on the north and west boundaries and four strand barbwire fence on the southeast boundary. The barbwire fence on the southeast boundary is owned/maintained by the Colorado Department of Transportation (CDOT) since it is the boundary to Highway 119. All fencing on the Nu-West-Harrington property is in good to fair condition.

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		<p>pipings system runs underneath 51st Street to service the property. A section of the Nu-West property is irrigated through gated piping as well (approx. 25 acres) while the remaining 31 acres are irrigated through earthen laterals. The southern 20 acres of Nu-West are occupied by prairie dogs and are not currently irrigated.</p>		
Bennett-Steele	Table Mountain Ditch	<p>Both Bennett and Steele have irrigated hayfields which are irrigated with Table Mountain Ditch water. Irrigation infrastructure on the Steele property consists of earthen laterals that service the 20 acres of hay. Earthen laterals are also the main form of water delivery on the Bennett property. A small portion (eight acres) is fitted with gated pipe that is diverted through a newly installed concrete diversion. The Table Mountain Ditch runs through the middle of both properties. The Bennett hayfield is 35 acres and the Steele hayfield is 20 acres. Prairie dog occupation limits large portions of pasture on both properties.</p>	10 strand high tensile fence	<p>Fencing on the Bennett property is in fair to poor condition. Fencing on the Steele property is in good to fair condition.</p>
Campbell-Hester	Left Hand Ditch Company	<p>On Hester, 25 of the 39 acres are actively irrigated while 29 of the total 56 acres on the Campbell property are irrigated. An additional 17 acres have the ability to be irrigated on the Campbell property. During the flood of 2013, significant damage occurred on the eastern side of the Campbell property that has not allowed for irrigation to continue at this time. The main issue was two pipes that conveyed water over the top of the Left Hand Valley Inlet Ditch were washed out. Heavy sedimentation on the hayfield along with severe washing of the field laterals also contributed to the problem. Reconstruction efforts are in place to return irrigation water to the east side of Campbell by as early as the 2016 irrigation season.</p>	<p>Campbell property has mostly five strand barbwire fence. The northern boundary fence is a 10 strand high tensile fence. The fencing on the Hester property is a mix of four to five strand barbwire and 10 strand high tensile fence.</p>	<p>The high tensile fence on the Campbell property was recently replaced (2012) and is in good working condition. The barbwire fencing throughout the rest of the Campbell property is in fair to poor shape and will need to be completely replaced within the next five years. The western and northern boundary fence as well as the interior fence on the Hester property were replaced in 2012 and are in good working condition. The eastern and southern boundaries have been properly maintained and are in good condition.</p>
Deluca-Stratton	Left Hand Ditch Company	<p>All of the Deluca property is irrigated for hay production. Nearly 22 acres on the north end of the Stratton property is irrigated. These same 22 acres in the north are also serviced by a year round seep that keeps a constant amount of water in the field laterals. This seep is also directed into the northern most pond which connects to the other ponds through the fenced off 20 acre wet meadow. Due to the constant wet condition in the northern end of the Stratton</p>	<p>Four strand barbwire on the north, south and west boundaries and 10 strand high tensile fencing on the east side of the Deluca property. Interior fencing is field fencing that is 36 inch wire mesh fence with strands of barbwire on the top of it. The perimeter of the Stratton property has five strand barb-wire fencing and the interior fence around the wet meadow if strand wildlife friendly</p>	<p>Fencing on the Deluca property is in fair condition and will need to be replaced in the next five to 10 years. Perimeter fencing on the Stratton property is in fair to poor condition and will need to be replaced with the next two to four years. Stratton's interior wildlife friendly fencing was installed in 2012 and is in good condition.</p>

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		<p>property it is only suitable for cattle production. The southern end of Stratton has historically been irrigated, but due to inconsistent use and lack of maintenance to the irrigation infrastructure, it is not currently able to be serviced. OSMP does have preliminary plans to improve irrigation infrastructure on the south end of the property to once again irrigate as much of the property as possible. Both Deluca and Stratton are serviced by Left Hand Ditch Company irrigation water.</p>	<p>fencing.</p>	
<p>Bruning</p>	<p>Left Hand Ditch Company and the Table Mountain Ditch Company</p>	<p>All 22 acres are irrigated and irrigation water sources are Left Hand Ditch Company and the Table Mountain Ditch Company.</p>	<p>10 strand high tensile fence</p>	<p>Fence is in fair condition and may need to be replaced in the next 10 to 15 years, but due to lack of grazing on the property, the fence only serves as a property boundary and will be low on any fence replacement priority list.</p>
<p>Seigle</p>	<p>Boulder and Whiterocks Ditch Company and Farmers Ditch Company</p>	<p>Hayfields are irrigated with Boulder and Whiterocks Ditch Company and Farmers Ditch Company irrigation water during the irrigation season (April–October). During the fall and winter months a small trickle is allowed down the Boulder and Whiterocks ditch that allows for cattle stock water. Water is run down a concrete lateral that parallels Highway 119 and is then diverted into earthen laterals within the fields.</p>	<p>10 strand high tensile fence for all interior fencing as well as the west, north and northeastern boundaries. The southeastern fence line is owned by CDOT and is a four strand barbwire fence.</p>	<p>These fences are in good to poor condition. The majority of this fence was replaced/repared in 2012 and will not be in need of replacement for 20+ years. Certain interior sections are in poor condition and will be repaired in 2015. All maintenance of the southeastern fence line is the responsibility of CDOT.</p>
<p>Lousberg</p>	<p>Farmers Ditch Company</p>	<p>Currently 22 acres are irrigated through field laterals that are diverted off of Farmers Ditch. Historically, an additional 15 acres were irrigated in the northwest pasture but due to a lack of use over time irrigation infrastructure in that area is no longer adequate. OSMP is currently exploring options to make that 15 acres irrigable in the next two years. This would increase the grass production available to the sheep and increase the overall production of the property. The five acres of organic vegetables are irrigated through a drip tape system. An irrigation pond was constructed in the southwest corner of the property in 2014 to accommodate the vegetable production. The drip tape is a slow release tubing installed 12 to 18 inches underground to irrigate the crops from the ground up. The drip tape is fed from the irrigation pond through a solar pumping system that allows the vegetable crops to be irrigated whenever they need to be during the irrigation</p>	<p>10 strand high tensile fence</p>	<p>This fence was newly installed or refurbished in early 2013 and is in good condition. This fence should not need replacement in the next 20 years. In order to keep the sheep where they need to be and to protect them from neighboring predators, the agricultural tenants use pliable wire mess fencing that can easily be installed and uninstalled quickly. In order not to overgraze a certain area the sheep must be moved frequently which requires constantly changing the fencing alignment within the lease area.</p>

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		season (April–September) for the Farmers Ditch. There are also multiple sources of tailwater that run through the property. The tailwater and the pond in the center of the property serve as fall/winter water sources for the sheep on the property.		
Dagle	Left Hand Ditch Company	The two main conveyances of irrigation water are through a concrete lateral and through 10 inch gated pipe.	Four strand barbwire fencing and four strand smooth wire fencing.	Both fencing types are in good to fair condition and will not be in need of replacement for the next 15+ years.
Bison	Sweede Ditch Company and irrigation shares in the Colorado Big Thompson Irrigation Company	Nearly all (62 acres) of the Bison lease area is irrigated. The property is irrigated through a series of earthen field laterals in conjunction with a small run of a concrete lateral in the middle of the property.	Half of the perimeter fence on the Bison property is 10 strand high tensile fence while the other half is four strand barbwire fencing. The permanent interior fencing is also 10 strand high tensile fence. While cattle are present on the property, single strand electrical fence is temporarily installed to contain cattle in certain areas.	Not assessed
Ryan	No irrigation currently	The only water source for cattle is the drainage that runs along the south side of the lease area. That drainage typically goes dry by mid to late summer making it the main factor in determining the grazing season on the Ryan property. The Ryan property was historically irrigated, but that practice has not happened for 30+ years. OSMP is working with the private landowner to the west of the property as well as Boulder County Parks and Open Space to devise a way to return irrigation water to the property.	Four strand wildlife-friendly fencing	The fence was newly installed or refurbished in 2013, is in good condition and will not need replacement for the next 20+ years.
Oasis	Sweede Ditch Company		10 strand high tensile fence	The fencing is in good to fair condition
Berman Brothers	Lefthand		Four strand barbwire fence around the property except for the northern boundary which is not fenced and will be completed by the end of 2015.	The fencing is in good to fair condition

A- Literature Cited

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