



Agricultural Lands Strategy

April 2021



**Larimer County Natural Resources Department
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Summary

- The focus of LCDNR’s efforts around agriculture, is the conservation of the land itself and applying agricultural practices as a component of the stewardship of lands owned by LCDNR and centered around achieving identified stewardship outcomes. Stewardship outcomes are defined as ecological benefits related to soil health, water quality and quantity, and protection of natural habitats.
- The Open Lands Master Plan identifies a myriad of values for which lands will be conserved across 13 land conservation priority areas. Agriculture (defined as rangelands and croplands) is one of these values (along with natural resources, wildlife habitat, recreation, community separators and scenic viewsheds) for which Larimer County Department of Natural Resources (LCDNR) conserves land.
- At times, values associated with conserved lands are water-dependent including irrigated agriculture, wetlands and riparian habitats, and recreation. Tying water to conservation easements, water sharing, acquiring, or leasing water, and designating instream flow rights are among the tools LCDNR can pursue to ensure the longevity of key conservation values.
- Larimer County’s climate goals, as outlined in the Larimer County Climate Smart Framework (2020), provide guidance to how we manage agricultural practices on LCDNR owned lands, particularly related to increased soil carbon sequestration.

Larimer County Natural Resources Department’s Role in Agriculture

Several documents help inform LCDNR’s role in agriculture as the conservation of land and the use of agricultural practices to help achieve land stewardship outcomes.

- The Help Preserve Open Spaces ballot language states, “...proceeds of the tax shall be expended to acquire fee title interest for open space, natural areas, wildlife habitat, parks and trails and to acquire less than fee interest in real property such as conservation easements, land and water leases, purchase options, etc. and to acquire water rights for use in connection with the aforementioned purposes.”
- The mission of the Department of Natural Resources is “to establish, protect and manage significant regional parks and open lands providing quality outdoor recreational opportunities and stewardship of natural resources. We are committed to fostering a sense of community and appreciation for the natural and agriculture heritage of Larimer County for present and future generations”.
- The mission of the Open Lands Program is “to preserve and protect significant open space, natural areas, wildlife habitat and develop parks and trails for present and future

generations. These open lands provide opportunities for leisure, human renewal and protection of our natural and cultural resources.”

- The 2015 Open Lands Master Plan (Master Plan) identifies 13 priority land conservation areas for a myriad of values including natural resource, wildlife habitat, scenic viewshed, community separator, recreational and agricultural values. The Buckeye and Wellington priority areas are identified for land conservation as areas where agriculture is likely the primary value given the concentration of productive, high value working farms and ranches. Land conservation in other priority areas will likely favor other values, but may include lands with agricultural value.

While these documents form the basis of LCDNR’s efforts around land conservation, the following guiding principles further define the Department’s role in agricultural land conservation and management.

Guiding Principles

- The focus of LCDNR’s efforts around agriculture, including fostering an appreciation of agriculture heritage, is embedded in the conservation of agricultural land and managing these lands to achieve defined stewardship outcomes related to soil health, water quality/quantity and natural habitat.
- LCDNR defines agriculture in broad terms to include ranching, dryland and irrigated production agriculture, local food production, orchards/vineyards and forage production (for example hay crop).
- On county-owned lands, LCDNR prefers not to be the practitioner of agricultural activities, and instead prefers to partner with the agriculture community through the use of regionally competitive agricultural leases to farmers and ranchers designed to meet defined stewardship outcomes.
- LCDNR’s mission is conservation of land for many values, including agriculture. On lands where the primary conservation value is cropland agriculture, the county prefers to conserve these lands through conservation easement, leaving the fee ownership and farm management to private farmers.
- Where feasible, LCDNR will link water to conservation easements to protect key water-dependent conservation values such as irrigated agriculture, stockwater, wetlands, and instream flows.

Land Acquisition/Conservation: Rangelands and Croplands

Larimer County Natural Resources Department acquires lands/conservation easements within 13 defined priority areas as identified in the 2015 Open Lands Master Plan, that include natural resource, wildlife habitat, scenic viewshed, community separator, recreational and agricultural values. Specific to agriculture land conservation, the master plan identifies both the Buckeye and Wellington Separator priority areas due to the high agricultural productivity and intact operations and infrastructure, as well as the community separator, viewshed and other values that match department land conservation goals. To date, approximately 1/4 of the land in these priority areas has been conserved via conservation easement (CE) by various entities.

The Open Lands Master Plan outlines that conservation of agricultural lands will be primarily via conservation easement. Conserving lands via conservation easement is a low financial cost to both acquire and manage the land as they stay in private ownership. However, to meet recreation and access goals, conserving lands by fee simple purchase is often necessary, which comes at a much higher acquisition and subsequent long-term management cost.

LCDNR's intention is to conserve as many acres as possible across the Master Plan priority areas and to date LCDNR has conserved over 53,000 acres with partners. Of these conserved lands, about 34,000 acres, or 2/3, are currently in some form of agriculture (ranching or cropland).

When evaluating lands for conservation, sustainability is a key consideration. In the case of agricultural lands, generally farms or ranches that are contiguous with other conserved lands or are in areas of high concentration of agricultural lands, are more sustainable. In addition, there are many innovative models and partners that are working on creative ways to conserve and manage agricultural lands to promote ecological sustainability and includes soil, water and habitat conservation practices. One tool available in reviewing agricultural land values for conservation, is the Land Evaluation and Site Assessment (LESA) tool developed by the Larimer County Agricultural Advisory Board. LESA provides a method for evaluating both soil productivity and non-soil factors (farm size, water availability and reliability, contiguity with other ag parcels, and scenic, habitat, and strategic values) affecting a site's relative importance for agricultural use. This tool will be incorporated as needed to evaluate lands being considered for conservation.

Land Acquisition/Conservation Strategy 1: Acquire rangelands both through fee title and conservation easements. The Department conserves rangeland agricultural lands with native vegetation, habitat and ecological values both through fee-title and conservation easement acquisition. Fee-simple acquired lands are managed to protect a variety of key resource values including intact native vegetation, wildlife habitat, viewsheds while at the same time providing for public access and outdoor recreation. On LCDNR owned lands, applying integrated tools, including livestock grazing when appropriate, achieves desired ecological outcomes, and are outlined in the "Management" section below. This practice also allows ranchers to expand grazing operations or may provide new ranchers and opportunity to access grasslands for livestock operations.

Key strategy elements for acquisition/conservation of rangelands include:

- Acquire fee title and conservation easements on rangeland
- Prioritize conserving lands that are adjacent to other conserved lands, adding to a contiguous more sustainable conservation area.
- As feasible and landowners are willing, tie water to conserved lands to protect key conservation values such as irrigated agriculture, wetlands, and instream flows.

Land Acquisition/Conservation Strategy 2: Conserve lands primarily in cropland agriculture via conservation easement. Where public access is not practical or desired, and where the primary value is cropland agriculture, LCDNR's preferred land conservation strategy is through the acquisition of conservation easements (CE). This approach achieves the land conservation goals of the county and keeps these parcels in

private ownership and management. This approach reduces the overall acquisition costs to LCDNR and does not require long-term land management costs to be incurred by the department. In addition, placing a CE on agricultural lands generally reduces the residual value from the development potential, to the agricultural use value, potentially making these CE encumbered lands more affordable for the next generation of farmers/ranchers. At times, it may be necessary initially to acquire lands that are primarily (or include portions) in cropland agriculture through fee purchase. These cropland properties will be evaluated to determine if keeping the land in public ownership or selling the fee portion, encumbered with a CE, best meet LCDNR's conservation outcomes and goals.

Key strategy elements for conservation of croplands include:

- Conserve agricultural lands within the Buckeye and Wellington priority areas as identified in the Open Lands Master Plan using conservation easements as the primary strategy.
- Prioritize agricultural lands that contribute to a larger contiguous area of conserved lands.
- Seek conservation buyers for fee ownership (with CE retained by LCDNR) of land purchased by LCDNR where the primary conservation value is cropland, when additional public value is limited, or when current goals can be better met in private ownership.
- Where feasible and landowners are willing, tie water to conservation easements to protect key water-dependent conservation values such as irrigated agriculture, stockwater, wetlands, and instream flows.

Land Stewardship: Agricultural Practices Management on LCDNR-owned Lands

The majority of land owned by Larimer County Department of Natural Resources are dominated by native vegetation. In many cases, grazing is employed as a tool to achieve conservation outcomes concerning soil health, water quality and quantity and natural habitat enhancements while at the same time partnering with the agricultural community. Competitive, market-based grazing leases that prioritize meeting defined conservation outcomes over financial return, are issued to third party producers. This philosophy recognizes the value of the ecological services provided by prescriptive livestock grazing and allows both parties to meet their desired outcomes; a profitable enterprise for the lessee and an ecological benefit to LCDNR.

LCDNR owns and manages some parcels in irrigated and dryland cropland production. Agricultural practices on these croplands are also carried out through competitive, market-based leases that also prioritize meeting defined conservation outcomes over financial return. Conservation outcomes focus on adaptive management practices to enhance soil health, natural habitats, water quality and water conservation. With this philosophy, both parties can meet their desired outcomes; a profitable enterprise for the lessee and an ecological benefit to LCDNR.

Management of lands LCDNR owns in fee-simple, will focus on achieving defined conservation outcomes around soil health, water, and habitat as outlined below:

Land Stewardship Strategy 1: Improve soil health

Soil health includes such parameters as soil fertility, water infiltration, carbon sequestration, and erosion prevention. The majority of LCDNR lands are managed for diverse, intact, native vegetation and are in good condition according to Natural Resource Conservation Service (NRCS) reference conditions. However, areas where LCDNR will focus to improve soil health are dryland and irrigated croplands where practices can be modified to increase fertility, water infiltration and soil carbon and reduce erosion. LCDNR will consult with the NRCS on specific best practice recommendations to determine how employing specific management actions can increase soil carbon.

Key strategy elements to increase and/or maintain soil health include:

- Minimize soil disturbance on native grassland/soils by protecting existing intact plant communities and restoring diverse native plant communities.
- Minimize soil disturbance with practices that promote minimum turning of the soil.
- Plant cover crops (instead of letting soils lie bare) to avoid soil erosion caused by wind and water and help improve carbon sequestration.
- Implement planned crop rotations and selection for improved soil health.
- Add slow-release organic fertilizers, manure (including adding livestock to the system), or biochar to cropland soils.
- Amend with specific fertilizers (not pre-mixed) as needed based on soil analysis
- Plant windbreaks adjacent to cropland fields and implement other methods to prevent wind erosion.
- Plant native vegetation in pivot corners to stabilize soils and act as a carbon sink.
- Rotate grazing to increase soil organic matter and favor species diversity and community resilience to invasion of exotic species.
- Develop water sources to protect sensitive areas and allow grazing animals to disperse more evenly across the landscape.

Land Stewardship Strategy 2: Improve water quality and quantity

Management practices will be employed that improve water quality and water conservation through land management practices. Where water savings occur due to improved or changed practices, water shares will be examined for other beneficial uses that match LCDNR goals such as leased to support adjacent cropland sustainability, conversion to instream flows, establishment of native plant communities, etc.

Key strategy elements to improve water quality and quantity include:

- Contour farm to reduce erosion from water runoff and improve water quality.
- Establish native vegetation buffers as a filter for runoff between disturbed areas (including ag fields) and riparian/wetland areas.
- Plant crops appropriate to arid regions that are less water dependent.
- Employ irrigation efficiencies such as using plant moisture-sensing devices, using high efficiency irrigation systems, and/or adapting irrigation schedules.
- Rotationally graze to avoid soil compaction, undesirable vegetation and runoff.
- Fence livestock out of riparian and wetland areas (in wildlife friendly manner) to avoid water quality impacts from feces and erosion inputs.

- Evaluate water distribution for grazing to distribute cattle and avoid water quality impacts to water source areas.
- Utilize soil building practices to limit fertilizer applications.
- Integrate pest management practices to reduce the reliance on pesticides.

Land Stewardship Strategy 3: Protect and enhance native habitat.

Larimer County Natural Resource Department open spaces are primarily managed for native habitats and intact ecological systems. Grazing is one tool to help manage these native vegetation communities, given these lands evolved with grazing, to help achieve ecological benefits that enhance native habitat including invasive weed management, promoting plant growth and diversity and benefit species that depend on specific habitat requirements (such as grassland birds). Thus, where appropriate, prescriptive grazing plans focused on creating habitat mosaics, mimicking natural processes, and creating structure heterogeneity and diversity within plant communities, can be used to meet vegetation management objectives on conserved lands. Grazing activities will be guided by clear conservation outcomes and performed via third party producers via leases.

Key strategy elements to protect and enhance native habitat include:

- Integrate Pest Management practices to mitigate pesticide resistance.
- Develop grazing plans that articulate the primary site-specific conservation outcomes. On open space rangelands, these outcomes generally include promoting native plant community resilience and diversity, protecting soil and water, and benefitting species that depend on these plant communities.
- Develop grazing prescriptions with technical assistance from NRCS based on Ecological Site Descriptions that identify stocking rates, timing and duration of grazing and ensure best vegetation/habitat outcomes for wildlife and rare plant species/communities.
- Locate grazing infrastructure to avoid/minimize surface impacts to sensitive cultural resources, natural resources and rare plant species/communities.
- Design grazing infrastructure to minimize direct resource impacts including the use of wildlife-friendly fencing, wildlife ladders in stock tanks, and water gaps while fencing cattle out of riparian and wetland areas, etc.
- Favor practices that enhance habitat connectivity and avoid fragmenting landscapes and vegetation communities.
- Create habitat improvements to cropland edges/corners and consider pollinator enhancements in plantings and in pesticide selection/use.
- Time activities to avoid impacts to native species such as timing haying to avoid ground-nesting birds, limiting/avoiding activities within raptor buffers; etc

Land Stewardship Strategy 4: Improve ecological and financial sustainability through restoration. At times, fee-owned open spaces are acquired that are primarily cropland or include portions in cropland. These croplands will be evaluated to determine if converting to native vegetation best meets the primary conservation outcomes of the site while still meeting the ecological outcome and financial profitability leasing philosophy of the Department. Similarly, this change may be triggered if there isn't a willing lessee that can realize a profit while still achieving the conservation outcomes of

the site. Once restored, the department will look to integrated land stewardship practices, such as grazing, prescribed fire, weed management, etc. to achieve conservation outcomes, thereby continuing financially viable agricultural use. Key broad public benefits and conservation outcomes this transition would achieve are significant increases in ecological services such as water infiltration, wildlife habitat and carbon sequestration.

Alternatively, if the best or desired use remains cropland, the property will be evaluated relative to maintaining the property in public ownership vs. selling the fee ownership (encumbered with a CE) to a private farmer or entity. This transition provides the farm available for private ownership at the reduced value of the conservation easement while still conserving the farm in perpetuity. Future public access, if desired can be provided through the conservation easement.

Key strategy elements to restoring croplands of low value to LCDNR include:

- Evaluate primary use goals, public benefit, public access needs and desired conservation outcomes for LCDNR fee-owned croplands.
- When LCDNR's primary use goals or desired conservation outcomes for a property *are not* cropland, or if the cropland is not ecologically or financially sustainable, a restoration plan will be developed to convert the cropland back to a native plant community and grazing applied as appropriate to meet desired ecological benefits.
- When LCDNR's primary use goals or desired conservation outcomes for a property *are* cropland agriculture, and public access is not practical or desired, the property will be evaluated for transfer of fee ownership (encumbered with a CE) to a private farmer or entity. The potential for future public access can be addressed through the conservation easement.