

MONO COUNTY SUSTAINABLE AGRICULTURAL STRATEGY

January 4, 2018

I. INTRODUCTION

As a rural county with low population densities and only 6% of the land base in private ownership, Mono County has a unique agricultural story to tell. Agriculture is the County's second economic industry and is key not only to the stability of our communities, but also our rural character and quality of life. Most people move to Mono County for the magnificent views and inherent wildness of the land, which has been preserved by open space, open ranges, and family-owned agriculture handed down through generations. These ranches and operations rely heavily on the 94% of land owned by public agencies, as few agricultural producers in the County can survive on the limited private land base. Management issues across these jurisdictional boundaries; development pressure as the economy recovers; and natural resource management concerns such as water conservation, wetlands protection, riparian habitat conservation, and sensitive species issues clearly indicate the need for comprehensive land use, agriculture, and range management across Mono County.

In 2015, Mono County was awarded a grant through the Sustainable Agricultural Lands Conservation (SALC) Program to develop a sustainable agricultural strategy. Since that grant award, several major issues have shifted the landscape and context of sustainable agriculture in Mono County, including a 2015 decision by the U.S. Fish and Wildlife Service (USFWS) to withdraw a proposed listing of the Bi-State sage-grouse under the Endangered Species Act, a major cross-jurisdictional effort to collaborate on compliance with the Sustainable Groundwater Management Act, and the legalization of commercial cannabis activities. The work conducted under the (SALC) grant program, and the content of the sustainable agricultural lands strategy, has been fluid in order to incorporate these emerging issues.

II. DELIVERABLES

The purpose of this project was to complete an agricultural lands inventory across jurisdictional boundaries, prioritize the most highly productive and critically threatened lands, coordinate management across jurisdictions, and develop mitigation strategies to balance grazing operations with conservation and improvement of natural resources such as wildlife habitat. Mono County is pleased to provide the following project deliverables to meet these goals:

- **Agricultural Lands Geodatabase** (<http://www.bistatesagegrouse.com/general/page/geodatabase>): An interactive, online map of spatial layers relevant to agricultural operations displaying an inventory of agricultural lands, environmental and landscape characteristics, and potential threats and other issues that may affect agricultural sustainability. The geodatabase can be used to conduct analyses of agricultural lands including potential productivity and threats based on various factors.
- **Agriculture in Inyo & Mono Counties: An Economic Profile** (Appendix A): A collaborative effort with the Inyo-Mono Agricultural Commissioner's Office, this report quantifies agriculture's total economic contribution through food production, employment, and economic "multiplier effects." The report also examines agriculture's economic diversity, ecosystem services, production across different land ownership types, inter-county relationships, and opportunities to expand through greater diversification.
- **Bi-State Sage-Grouse website** (<http://www.bistatesagegrouse.com>): The relationship between sage-grouse and grazing was a key area of dispute in the USFWS's proposed listing; as a result, a great deal of conservation work has been conducted by private ranchers and agencies to demonstrate the compatibility of grazing if managed appropriately. The website is an outreach effort to "tell the story" of this unprecedented and amazing multi-party collaborative conservation effort, educate the public (and agricultural operators) about the co-benefits of grazing and habitat conservation, and connect agricultural operators with resources and projects that benefit both operations and the land.
- **Owens Valley Groundwater Authority Joint Powers Agreement** (Appendix B): In Mono County, the Tri-Valley area, one of the largest agricultural basins in the county, falls into the Owens Valley Groundwater Basin, a medium priority basin under the Sustainable Groundwater Management Act. A total of 11 eligible entities within

Inyo and Mono counties joined in 2017 in an effort to collaborate on a Sustainable Groundwater Management Plan by 2022.

- **Commercial Cannabis General Plan Policies** (Appendix C): In November 2016, the voters of California legalized commercial cannabis, including cultivation. The approval set off a firestorm of policy and regulatory development throughout the state, including Mono County. The County has addressed the issue head on, conducted a number of public workshops, and drafted and approved General Plan policies to guide the development of this new agricultural market.

III. INVENTORY & EXISTING SETTING

An inventory of agricultural lands and the definition of the existing setting is provided through the interactive geodatabase and economic profile. The geodatabase provides an interactive map and analysis tool, and the economic profile quantifies agriculture's total economic contribution through food production, employment, and economic "multiplier effects."

The geodatabase platform is within an ArcGIS mapping application and is hosted at <http://www.bistatesagegrouse.com/general/page/geodatabase>. The interface is intended to be intuitive and exploratory, with the user able to select various menu options and activate/deactivate layers to change the view and the analysis. Menu buttons are located under the title bar at the top left of the webpage. The following data layers are provided:

- **Agriculture LUD:** From Mono County's General Plan Land Use Designations (LUDs), these lands provide for agricultural operations as an outright permitted use.
- **Appropriate Commercial Cannabis LUD:** Potential lands for commercial cannabis operations, based on initial land use compatibility analyses and recently adopted General Plan policies.
- **AV AP:** Antelope Valley Agriculture Preserves indicate lands that would be eligible to enter into Williamson Act contracts, if the County begins processing new contracts in the future.
- **AV WA:** Existing lands under Williamson Act contracts in the Antelope Valley.
- **BLM RMU:** Bureau of Land Management Range Management Units where grazing activity may or does occur.
- **BLM WSA:** Lands designated by the Bureau of Land Management as Wilderness Study Areas.
- **BP AP:** Bridgeport Valley Agriculture Preserves indicate lands that would be eligible to enter into Williamson Act contracts, if the County begins processing new contracts in the future.
- **BP WA:** Existing lands under Williamson Act contracts in the Bridgeport Valley.
- **BSSG Range:** Bi-State Sage-Grouse range and habitat.
- **Climatic Zone:** Provides climate zone in relation to hardiness.
- **Community Center Cannabis Buffer:** Per adopted General Plan policies, no commercial cannabis activities may locate within 600 feet of community centers.
- **Community Centers:** Community center locations.
- **Conservation Easements:** Lands under conservation easements and registered in the National Conservation Easement Database.
- **Dams:** Locations of dams.
- **Development Credits:** Development credits encourage clustered development and limit subdivision potential to encourage retention of intact acreage suitable for agricultural operations (see Chapter 13 of the Mono County General Plan).
- **Drought Severity:** Provides historical trend of drought severity.
- **Fault Regions:** Known fault lines within Mono County.
- **Fire Hazard Areas:** Area characteristics of fire severity.
- **Forest Carbon:** Baseline forest carbon storage.
- **Forest Disease/Insect:** Projected conifer loss by disease or insect damage.
- **Forest Type:** Classifies dominant species of conifer.
- **Groundwater Prioritization:** Groundwater basins characteristics based on California Statewide Groundwater Elevation Monitoring (CASGEM) data.

- **Harris Beef:** Distance of nearest slaughterhouse typically used by ranchers in Mono County.
- **H-T RMU:** Humboldt-Toiyabe National Forest Range Management Units where grazing activity may or does occur.
- **Invasive Plants:** Point set of typical invasive species in the Inyo National Forest.
- **Inyo Forest Roads:** System Roads within the Inyo National Forest documented by 2009 Travel Management plan.
- **Inyo RMU:** Inyo National Forest Range Management Units where grazing activity may or does occur.
- **Inyo/Mono Ag operations:** An inventory of cultivated crops and acreage based on Inyo-Mono Agricultural Commissioner data 2016 (visible alfalfa fields without a polygon are fallow due to drought).
- **LADWP Leases:** Areas available for agricultural leases on LADWP land.
- **Lahontan Basin:** The Lahontan basin.
- **Lakes:** Main lakes in Mono County.
- **Libraries:** Locations of Mono County libraries.
- **Library Cannabis Buffer:** Per adopted General Plan policies, no commercial cannabis activities may locate within 600 feet of libraries.
- **Mono Ag Lease:** Areas available for agricultural leases on County-owned parcels.
- **Mule Deer Range:** Current range of Long Valley Mule Deer herd.
- **Ownership blocks:** Identifies private vs. public lands.
- **Parks:** Locations of Mono County parks and recreation areas.
- **Park Cannabis Buffer:** Per adopted General Plan policies, no commercial cannabis activities may locate within 600 feet of parks and recreation areas.
- **Potential Agritourism Locations:** Agriculture areas within one mile of Scenic Byway corridor.
- **Sagebrush Steppe:** Sagebrush Steppe habitat.
- **Scenic Byway:** Highways registered as state or county scenic corridors.
- **Schools:** Location of Eastern Sierra Unified School District schools.
- **School Cannabis Buffer:** Per state law, no commercial cannabis activities may locate within 600 feet of schools.
- **SNBHS Range:** Provides current ranges of Sierra Nevada Bighorn Sheep, a state and federal endangered species.
- **SNYLF Habitat:** Habitat area for Sierra Nevada Yellow Legged Frog, a state and federal endangered species.
- **Soil Drainage:** Soil drainage potential.
- **Soil:** Data on soil type, water storage, soil loss tolerance, frost-free period, and annual forage potential.
- **Soil Water Storage:** Soil water storage potential.
- **Streams:** Main bodies of stream water and riparian areas.
- **USFS WSA:** Lands designated by the US Forest Service as Wilderness Study Areas.
- **Vegetative Land Cover:** Classification based on land cover type, ecological name, and ecological unit.
- **Water Features:** Artificial and natural routes for watersheds.
- **Well Systems:** Available data on well locations.
- **Wetlands:** Potential wetlands.
- **Wilderness:** Designated Wilderness Areas.

To avoid property value implications for private lands, specific analyses were not conducted to identify prime agricultural lands, most threatened lands, or any other defining characteristics. However, these analyses may be conducted by selecting the appropriate layers, and tailored to the specific study or issue at hand. In general, characteristics that define prime agriculture include the quality of soils, water access for irrigation by surface or ground sources, economic productivity, environmental contributions, and social benefits. Threatened lands are those that are impacted by issues that may prevent agricultural operations from occurring, such as sensitive species, limitations on groundwater pumping due to groundwater management, or proximity to more urbanized areas and therefore are most likely to face subdivision pressure.

Agriculture in Inyo & Mono Counties: An Economic Profile (June 2017) was commissioned by the Inyo-Mono Agricultural Commissioner's Office and provides a detailed analysis of the agricultural industry in Inyo and Mono counties. The basic summary is that the primary agricultural industry in Mono County is ranching (cattle and calf raising), feasibility is

dependent on fluidity of leases, animals are exported for processing and to access the market, and the diversity of products is low. The final report is available in Appendix A, and constitutes the existing economic setting.

IV. THREATS

The main threats to Mono County's agricultural industry are environmental, locational, and legislative. Most of these issues are not easily influenced, and simply establish the context for agricultural operations in Mono County. For example, environmental threats such as drought, heat waves, frosts, wildfire, etc., are cyclic in nature and not preventable. Similarly, the isolation of Mono County in the Eastern Sierra, especially in the winter when transportation corridors to the west side are closed, is a geographic and geologic fact that cannot be altered.

Legislative threats may be issues the County can engage with and mitigate, depending on the scale and nature.

Prominent, current legislative threats are described below:

Sustainable Groundwater Management Act (SGMA)

The Sustainable Groundwater Management Act (SGMA) is state legislation that requires the formation of Groundwater Sustainability Agencies (GSAs) in medium and high priority basins, with a requirement to draft and complete a Groundwater Sustainability Plan (GSP) by a certain date. In Mono County, the Tri-Valley area, consisting of the communities of Benton, Hammil Valley, and Chalfant, fall into the Owens Valley Groundwater Basin, a medium priority basin extending from the Tri-Valley to Little Lake Valley and encompassing 1,030 square miles in Inyo and Mono counties.

The Owens Valley Groundwater Basin includes 13 entities eligible to form GSAs, plus a number of mutual water companies, Native American tribes, Los Angeles Department of Water and Power (LADWP), and federal agencies (the Bureau of Land Management, US Forest Service). After over 18 months of, sometimes contentious, discussions, 11 eligible entities agreed to form a single GSA with the intent to collaborate on one GSP for the entire basin.

The total cost for a GSP is estimated at about \$750,000. Funding is voluntary by the individual entities, and tied to the number of votes they are able to cast on the governing board. The cost could be as little as \$3,300 per year if all entities participate and a grant is received, or \$22,600 if a grant is not received, and then continues to go up toward a maximum amount of \$250,000/year if fewer entities provide funding. Mono County has no funding set aside for this cost, and will be relying on the General Fund and contingency monies to make a financial contribution. The Tri-Valley Groundwater Management District (TVGMD) and the Wheeler Crest Community Services District (CSD), the only other two eligible GSA entities in Mono County, have few income sources and almost any amount beyond the minimum cost exceeds their ability to contribute. Neither district has dedicated staff, but the County serves as staff in a very limited and minimal fashion to the TVGMD for more complex matters and Board meetings. In addition, in the TVGMD, a very small number of agricultural operators (approximately five) constitute the main groundwater users; other water users are mainly considered de minimus users. Thus, the funding burden falls primarily on the few agricultural operators in the Tri-Valley, and some have outright stated that the \$22,600/year cost will force them to abandon operations.

Beyond the complexities of coordinating a single plan across the jurisdiction of 11 entities, the tribes, mutual water companies, and LADWP are significant players who are vocally requesting a more substantial role in the GSA, and most of these parties are located in Inyo County, creating challenging dynamics to balance interests between Inyo and Mono counties. In addition, much of the land subject to the GSP is federal land, and the federal agencies are not subject to state laws, creating an additional layer of complexity.

In short, while compliance with the SGMA has the benefit of ensuring sustainable groundwater use into the future, it has potential immediate implications that could threaten the viability of the fragile agricultural economy in the Tri-Valley area, and may be difficult for Mono County to protect our interests in the larger context of the basin.

Bi-State Sage-Grouse Endangered Species Act Listing

In late 2013, the US Fish and Wildlife Service (USFWS) proposed to list the Bi-State Sage-Grouse (BSSG) distinct population segment as threatened under the Endangered Species Act (ESA), and released proposed critical habitat designations. The critical habitat would have encompassed over 80% of the small privately owned land base in Mono County, and would have significantly impacted agricultural operations. The proposed listing and critical habitat proposal galvanized the already-established Local Area Working Group (LAWG), which consists of state, federal, local, private, and non-profit entities, to refine the Bi-State Action Plan to include specific projects and provide funding commitments for implementation. Mono County became a very active player in this conservation effort, providing funding and local government conservation commitments that contributed to the USFWS's determination in 2015 to withdraw the proposed listing and critical habitat designation because the Service's Policy for the Evaluation of Conservation Efforts (PECE) had been met.

While conservation efforts continue to be successful, essentially implementing a Recovery Plan without the need for an ESA listing, factors outside the control of the collaborating parties could result in the listing being proposed again in the future. In addition, the USFWS's decision to withdraw the listing is being challenged in court. Mono County has intervened in the lawsuit on behalf of the USFWS, and been granted status by the court.

Greenhouse Gas Emissions

Mono County's Resource Efficiency Plan provides a baseline of emissions within the community and government operations as established under statewide protocol. Emission sources include energy use, water consumption, transportation, waste disposal, and agricultural practices, and mitigation measures follow established best practices. Within the unincorporated county, 140,310 MT_{CO₂e}/year are released in emissions, with a 17% reduction goal set for 2020. The 2010 levels for known systematic agriculture emissions, provided by 99% livestock gestation and 1% fertilizer application, were 21,920 MT _{CO₂e}/year, and are projected to remain stable to 2020 through 2035. Agriculture operation's emissions comprise 16% of total baseline emissions in Mono County, making agriculture the fourth largest producer of GHG. While a large contributor of GHG, agriculture projections remain stable, and the promotion of optimal agriculture practices for fertilizer application will subtract 20 MT_{CO₂e} from total emissions, or 12,440 pounds of fertilizer. The gestation figures were based on the 59,750 head of cattle and sheep, while only 60 MT _{CO₂e} are derived from nitrogen fertilizer applications.

Current greenhouse gas emission protocols do not provide for methodologies to sequestering carbon through agricultural practices, effectively mandating that the agricultural industry can only exacerbate, and never mitigate, greenhouse gas emissions. In this case, agricultural operations are discouraged in order for local jurisdictions to meet greenhouse gas emission reduction targets. Protocols and greenhouse gas emission calculation methodologies should evolve to promote best agricultural practices that can have an impact on emission reduction.

V. TOOLBOX: OPPORTUNITIES AND MITIGATION

Based on the inventory and analysis of threats, a toolbox was developed to provide initiatives, programs, and policies that support a sustainable agricultural industry in Mono County. The Toolbox is comprised of the following sections: Market Expansion and Diversification, Resources and Operational Efficiencies, Legislative Programs & Land Use Planning, and Public Awareness.

Market Expansion and Diversification Tools

Commercial Cannabis Activities: In November 2016, the voters of California passed Proposition 64 legalizing adult use of marijuana and cannabis for purposes other than medical uses. Statewide, the measure passed with a 56.4% approval rating, and Mono County passed with a 61.6% approval rating. Every precinct in Mono County approved the measure, although the margin was low in Bridgeport and Tri-Valley.

With the passage of Prop 64, local jurisdictions in the state essentially had three options: 1) Allow the State to regulate activities, 2) Ban activities in completely or in part, or 3) Draft local regulations for cannabis activities. In June 2017, the Board of Supervisors reaffirmed direction to staff to develop local regulations, and the Board provided input on a potential land use framework.

Cannabis activities have the potential to provide a new market opportunity for agricultural operators through a high-value crop that can be grown on a smaller land base in comparison to traditional crops. In addition, a “microbusiness” model could support “value added” opportunities in addition to cultivation and nurseries, such as retail, manufacturing (extractions, infusions, making of edibles, packaging and labeling, etc.), and distribution as accessory uses to a main agricultural use.

Since early 2017, Mono County has been outreaching to communities on interests and concerns related to the legalization of commercial cannabis activities in Mono County under the state’s legal framework. Two rounds of engagement with Regional Planning Advisory Committees (RPACs),¹ two workshops with the Collaborative Planning Team, three workshops with the Planning Commission, six agenda items before the Board of Supervisors, and numerous other informal discussions have contributed to the County’s direction to develop local regulations and develop guidance in our General Plan policies.

The County’s general approach is to comply with the priorities identified in the Cole Memo to acknowledge the status of cannabis under federal law, provide opportunities for entrepreneurs in this new market, and protect quality of life for and the health & safety of residents and visitors. To establish principles and set forth guidance for the regulation of specific activities, General Plan policies were developed, refined by the Planning Commission and Board of Supervisors, and adopted by the County in December 2017 (see Appendix C). We were able to include this product in our toolbox because these regulations are exempt from the California Environmental Quality Act under Business & Professions Code §26055(h).

This tool provides the County with a policy basis derived from community input to develop site specific regulations for individual cannabis activities, including cultivation, nurseries, retail, distribution, manufacturing, testing, and microbusinesses. The next step is to develop these site-specific regulations (which would be regulations in a zoning code for most jurisdictions), adopt them, and then implement the regulations by accepting and processing permit applications.

Agritourism: As Mono County’s tourism base supported by recreational activities is successful and established, merging tourism with working lands creates the functional sub-context of Agritourism. Agritourism is a broad term that encompasses many enterprises. However, the main incentive is to improve the economic quality of life for an operator. In stimulating a needed income, the incentive to remain on the farm will continue, so the planning horizon will increase. Agritourism is the utilization of a value added product to earn on comparative advantages, with its success being brought by diversity and direct sales through marketing in lieu of financial or production modes. Further, the tenant is

¹ Regional Planning Advisory Committees (RPACs) consist of members appointed by the Board of Supervisors to participate in community-based planning by providing input on General Plan policy development and other planning matters. Seven RPACs cover the county: Antelope Valley, Bridgeport Valley, Mono Basin, June Lake Citizens Advisory Committee, Long Valley/Paradise/Swall Meadows, Benton/Hammil Valley, and Chalfant Valley.

based in a land based connection and embracing the rural qualities provided; thereby this would cover more traditional farm stands with cottage foodstuffs, bed and breakfast home-stays, weddings, farm to table dinners, wineries, breweries, and distilleries.

The Use Permit process typically groups activities into a single document; thereby, many of the features of agritourism can be incorporated. There is also the ability to 'downgrade' a use permit process to an internal director's review, which eliminates the need for planning commission interpretation and usually public noticing, though this may also be a requirement depending on the function of the project's scope. The ability to create this flexibility would be through the application of seasonal use. Increasing the density would not be applicable to such a varied activity.

Farmer's Markets, Value Added products, and Community Supported Agriculture: Currently, there are no Farmer's Markets in the unincorporated Mono County. The Town of Mammoth Lakes, the only incorporated city in Mono County, has a summer Farmer's Market. Entry into the Farmer's Market is relatively simple. An operator must have a current Town of Mammoth Lakes business license, have membership dues for their space through the purveyor at Skip's Farmer's Market, and register with the Inyo Mono Agriculture Commissioner. In addition to raw products, California Public Health Code has provided an outlet for value added products through Cottage Food laws, whereby an applicant with a permit and an inspected kitchen may offer certain foodstuffs for value added product and sale directly to a market; there are currently four permits issued, two Class A and two Class B. There is currently one Community Supported Agriculture (CSA) program operating in Mono County, Sierra Bounty. This CSA acts as a food HUB, where local products are sourced and distributed through Stellar Brew, a local coffee shop and owner of Sierra Bounty.

Community Gardens: There are Community Gardens in the Mono County communities of Benton, Crowley, Lee Vining, Bridgeport, and Walker. These sites range in size and operational capacity. Lee Vining Community Garden is a model to use for integration within all communities, as its connection with the local school system advocates the food system. Bolstering the capacity for yield based on the needs of the area creates a more insulated food system and provides opportunities for persons to experience the mechanizations of food cycles. Unfortunately, there is limited access to programs such as 4H, so these community garden sites should try to incorporate as many diverse operations as are possible. Along these lines, each community garden site could also be a part of a larger whole. Integrating these sites could provide for climatic variability throughout the county, and each site could serve as a sample of the climatic variability, through either collective means or individual outreach.

Resources, Operational Efficiencies & Infrastructure

Funding Resources: Through a multi-partnership effort, which included Mono County, Eastern Sierra Land Trust received a selective portion of the Regional Conservation Partnership Program (RCPP) for the Bi-State region in conservation efforts for Bi-State Sage-Grouse habitat rejuvenation. Landowners in portions of Inyo, Mono, and Alpine Counties of California. The project area for the RCPP is the same as that covered by the Bi-State Action Plan's Population Management Units for sage-grouse, an area of 7,000 square miles. Financial assistance through RCPP will be awarded directly from NRCS to landowners who plan to carry out projects that will benefit the goals of the RCPP.

Operators are given financial assistance to plan and adopt conservation practices that will restore sage-grouse and other wildlife habitat, improve agricultural water quality, conserve private ranchlands, and upgrade agricultural infrastructure. Awarded a total of \$8 million in NRCS funding, the funds will be allocated as \$7,235,000 going to agricultural and wetlands conservation easement purchases; the remaining \$765,000 will be applied to Environmental Quality Incentives Program (EQIP) projects. EQIP projects include many aspects, such as more efficient irrigation technologies, creating a secondary conservation measure.

Primarily, funds will cover the costs of conservation easements in the Bi-State area that will protect wetlands, conserve sage-grouse habitat, and safeguard productive lands against the threat of development or conversion of grasslands, including dryland range and irrigated pasture. RCPP activities related to Bi-State sage-grouse habitat are prioritized based on Bi-State Action Plan recommendations. Many of the lands will also follow a similar rubric to Conservation Easement criteria.

The partners have pledged to double the \$8M RCPP investment to support the goals of the project. They will provide direct financial assistance to ranchers, technical assistance, and other in-kind services, such as outreach and education, monitoring, land stewardship, restoration, and administrative services. As an RCPP partner, Mono County will support the outreach and education through the Sustainable Agriculture Conservation portal within the www.bistatesagegrouse.com website. With limited staffing available from FSA or NRCS, as field offices are located outside of the jurisdiction, support will aim to increase participation in RCPP and assist landowners in preparing RCPP applications.

Under some circumstances, ranchers with the authority to operate on public lands (e.g. a grazing lease or permit) are also eligible for funding. Organizations that wish to pursue the goals of the RCPP are welcome to participate. For example, land trusts, producers' collaborative, Conservation Districts, and other groups may propose, assist, and complete projects with NRCS, and may contribute towards the goals of the RCPP to increase project leverage.

As the lead partner, Eastern Sierra Land Trust (ESLT) wrote and submitted the RCPP proposal. ESLT will coordinate work with the other partners and report annually to NRCS on progress towards the goals of the RCPP. Mono County has recently contracted Eastern Sierra Land Trust, so a higher fluidity in coordination will occur.

The duration of the RCPP is August 2017-June 2022. The funding application schedule will be determined by NRCS. It is likely that the first opportunity for landowners to apply for funding under the RCPP will be early spring 2018.

Williamson Act: Mono County has 13,110 prime acres in active Williamson Act contracts. In order to keep these working lands viable, there have been many attempts to bolster the overhead, such as the Williamson Act, part of the 1965 Land Conservation Act, which keeps open space for agriculture production through a reduced tax assessment on the property. Budget shortfalls of 2008 decimated the available funds to subsidize Counties lost tax revenue to \$1000.00, statewide. Of the regional contracts, 70% of the working landscapes had entered into a Williamson Act contract. If a county is unable to renew a contract when expired, there was a recorded 37% higher tendency to sell those lands; 71% of ranchers had annual profits less than or equal to their tax savings in 2009. Legislation has tried to amend this problem with AB 1256 giving the ability to collect more taxes by reducing contract periods by 10% and increasing assessed valued by 10% or the difference between Prop. 13 and Williamson Act assessed parcels, and more currently, SB 618 authorizes property owners in WA contracts to rescind and simultaneously enter in a Solar-Use easement, where a photovoltaic facility would have a term on the property for no less than 20 years. Currently, The Mono County General fund has continued paying the tax credits provided to active Williamson Act parcels. If additional funding is available to enact new contracts, Agricultural Preserves have been established, documenting viable areas able to enter into a Williamson Act contract. Based on this regional baseline, where Mono County is one of the top producers within the Sierra Nevada region, the needs to promote alternative means to rangeland production and a means to retain those lands vulnerable to negative shocks, whether through the current Williamson Act or by new means, such as conservation easements, is essential.

Commercial Kitchen Space/ Farmer's Market Hub: There are many options within value added requirements of a cottage food permit, which are issued by Mono County Environmental Health. However, many products produced on farm need to be processed or prepared in a commercial kitchen. Though a ministerial permit, this can be an added cost for entry into the market. Each local community center has commercial kitchen appliances and the needed counter space required for food processing; there needs to be a dedicated space as a commissary for supplies, though flexibility should be afforded with limited frequency of the operation. As community centers provide many events with food, such as weddings, these centers have the potential to increase the local food system. Following this path, community centers could enable a greater connection to the local farms with the yields available. These centers could act as a food hub to focalize the community and generate a greater diversity than individual farm stands, acting more as a farmer's market. Scheduling could follow the standard protocol for renting these spaces. This alternative process is currently allowed through the liability clause.

Mobile Slaughter Units: After-market processing of livestock determines the locale in which products are sold; retaining more locally sourced meats increase the multiplier effect and jobs available. There are currently no registered meat processors in Mono County. Mono County Agriculture lands are permitted to operate slaughter following USDA and CA Food & Agriculture standards. Many operators send cattle either to Harris Ranch in the Central Valley, or to auction. Based on the natural and organic meat market, Mono County could add value to the 10,000 plus cattle & calves and 15,000 plus sheep & lambs through local processing. The 2009 Natural Livestock Feasibility Study provided thresholds needed to increase economic productivity through marketing and infrastructure. The study determined that 21 merchants preferred locally raised products, and ranchers supported slaughtering services, though desiring a stationary processing area instead of a mobile unit; this dramatically increases the costs and decreases the feasibility. The basis of grass-fed, natural, organically raised beef and sheep is a dominate factor within food markets. However, these benefits are lost to the ability to capitalize for these characteristics. The market for livestock beef is currently \$1.14 per pound live weight, regardless of good quality of life and healthy diet for the livestock. Mobile Slaughter Units, direct marketing, and regional labelling could offer an estimated \$2.59 per pound. Accessing this market would offer broader options for direct sales and shipments. In order to operate a successful MSU, a UNR study found that there was a profitable level of production at \$1.40 per pound, which offers an additional \$1.19 margin of profit per pound. A mobile slaughter unit with a stationary cut and wrap facility with the measures to dispose of offal has an estimated cost of \$256,825.00. Accounting for access to the fixed cut and wrap facility in Reno, a part of the Tahoe Basin food shed, which Mono County belongs, would close the disconnect between processing and market with a lower overhead for infrastructure costs.

There also needs to be an interconnection between the operations with the label. Mobile Slaughter Units not only promote the local food chain, retaining more dollars to the local economy, there is also a direct correlation to quality. Transportation at best leads to a negative effect on color, pH and bruising; often during transport bones fracture, and the intense trauma and stress reduces weight. Mobile Slaughter Units are generally more humane, and provide a superior meat. M.S.U. are able to operate in closer locales for the livestock transportation, so this also reduces Vehicle Miles Traveled. Humane labels, such as "MSU Processed" and "Local Grass-fed" would need to be incorporated to provide the extra addition to the price point. However, marketing focus should not just be on the inherent qualities of the meat, but the treatment of both the animal and the planet. The New Ecological Paradigm affirms people hold the belief there is the ability to change or affect nature, and where values filter through with an awareness of adverse future consequences. Marketing to this psychological profile offers a sense of obligation to take action, and the intentions will need direction towards a local product. Through "Theory of planned behavior" and "Value belief norm theory, there are positive results with this method of marketing, though there needs to be positive reinforcement that this type of operation is actually benefiting the livelihood of the animal. This would correspond directly with Agritourism's ability to demonstrate how a working farm operates. Agritourism also benefits operators with an outlet for direct marketing.

Cold-Frame Hoop-House Policy: In addition to adoption of California Building Code Appendix C Group U: Agriculture buildings, an interpretation for permit exemption for construction of cold-frame hoop-house membrane structures has been drafted. In contrast to using artificial light, greenhouse systems offer an amplification of light to the plant through polyurethane plastic stretched along a rigid frame. This membrane follows the definition parameters of "shade cloth structures". While much of the radiation can be retained with thermal mass, these structures may also utilize covering the structure for light elimination in order to trigger certain plant stages with shade cloth variations. Temperature may become an issue, and may be dealt with passive cooling systems, as all electrical and plumbing apparatus need a permit. Greenhouses are an economic and environmental solution to crop productivity. There should continue to be a consideration of the scenic corridor and the potential for visual blight; methodologies to shield the reflection should be considered in an operations plan.

Legislative Programs & Land Use Planning

Local Area Working Group for BSSG: The formation of the LAWG through agency and grassroots efforts has capitulated the ability to create a symbiotic ranching and critical species interaction. The group organization is open to all members of the public, and includes ranchers, federal agencies, state agencies, and government. These groups offered recommendations towards conservation efforts and most disturbing elements towards reestablishment of populations. Ranching was found to be a low priority, with conifer encroachment and nest deprivation by predation as the most

threatening. This has guided conservation efforts towards Pinyon-Juniper eradication and perching deterrents for corvid species.

Conservation Easements: Land tenure and access also needs diversification beyond simple fee ownership of land. Conservation Easements are such a tool where an agreement between a landowner and a nonprofit land trust, conservation group, or government agency protects the working land by purchasing development rights, thereby reducing the property value and placing conditions towards mitigation and compliance review. Shared or common property regimes have existed since the beginning of grazing. The traditional use of grazing continues, providing a symbiotic relationship between the cyclical natures of carbon.

Conservation Easement funding is based on certain criteria which collected as a matrix provides a rubric for highest priority lands. Provided by Eastern Sierra Land Trust, the Agricultural Priority Criteria follow:

1. Agricultural viability - parcel size; access to agricultural markets; nearby or onsite processing facilities; soil/grassland quality; sustainable water supply; management capability; continued investment in operation
2. Strategic location - adjacent to or close to other protected public and private lands
3. Multiple resource values – wildlife habitat; scenic; cultural; historic values
4. Cost-effectiveness - landowner ability to contribute to stewardship fund; donate a portion of the easement value
5. Development pressure – evidence of adjacent or nearby development of agricultural lands to residential, commercial, or industrial development; presence of development credits on individual parcels and neighboring parcels
6. Relationship to local or regional planning - compatibility with Land Use Plan; development credits scenario; Important Bird Area; Scenic Byway; Forest Plan; etc.
7. Feasibility - patient and cooperative landowner; funding availability

Groundwater Sustainability Plan: Mono County has been participating in conversations about forming a Groundwater Sustainability Agency (GSA) under the state's Sustainable Groundwater Management Act (SGMA) since 2014. The County signed a Joint Powers Agreement with 11 other eligible entities to form the Owens Valley Groundwater Authority (OVGA) in the fall of 2017, which is intended to function as a single GSA for the entire Owens Groundwater basin (see Appendix B). In November 2017, the County appropriated up to \$91,000 from contingencies in the General Fund for Fiscal Year 17-18 to fund the Groundwater Sustainability Plan (GSP) on behalf of the County, Tri-Valley Groundwater Management District (TVGMD), and Wheeler Crest Community Services District (CSD). A more sustainable source of funding has not yet become available for this effort.

While many barriers and disagreements exist, and a collaborative foundation is slow in being established, the OVGA is moving forward. A grant application has been submitted to the State Department of Water Resources (DWR) for funding for the GSP, which would still leave the GSA with a 50% match. The road ahead is likely to be a long one, given the multiple entities involved and the history of relationships within this basin; however, the County is committed to participating productively to meet the goal of SGMA and with an intent to protect and sustain the agricultural economy in the Tri-Valley.

Greenhouse Gas Reduction Strategies: Within the climate of agricultural GHG stagnation, there will be a tendency to recreate experiences and definitions of agriculture production strategies. This accomplishment will be a different from the current model that exemplifies the traditional agrarian or rancher. Thereby, to sustain and create different opportunities for GHG reductions a toolbox that may affect change by offering possibilities for working land retention by offering new concepts for economic and social stimulus, mitigating agriculture lands from fragmentation by development or regulation, and promoting practices that actively sequester carbon.

Recognizing the elements of Carbon Sequestration in National Forest through institutional policy would provide drastic mitigation measures with the baseline of carbon emissions; further, the notion of forest and rangelands providing

offsets for the entire state would help understand the additional environmental services provided to urban centers such as water quality, decreased erosion, and carbon sequestration. This is especially pertinent with the current wildfire severity throughout the forests.

Common agricultural practices, such as soil tilling and grazing contribute to carbon emissions. These sources are less natural than respiration, but sequestration occurs with proper management. Carbon Farming is based on the ability to increase microorganisms and fungi throughout available organic matter and soil structure, enhancing the ability to store carbon during photosynthetic principles. Carbon would then be benefitted to plant mass and soil health. Funding is available through organizations such as the Carbon Cycle Institute, which successfully implemented the Marin Carbon Project, in coordination with Regional Conservation Districts. The Marin Project has demonstrated the viability of these operations and given baseline reduction potentials. To date, MCP has both demonstrated and modeled total greenhouse gas (GHG) mitigation rates over a 30-year period of more than 18 tons of CO₂-equivalents per acre of land treated with organic amendments. Working lands should be encouraged to experiment with this application.

The ideal nature of Mono County has its roots in the working lands motif. The rancher and farmer of Mono County are also a part of a lifestyle choice. How this psychology plays into both the functioning of the operation and the range of adaptation depends on the characteristics of the individual. Traditionally, ranchers and farmers trend towards price setting, where choices in the operation being market driven. A current trend that suggests such a shift in management is the Holistic Management (HM) protocol promoted by Allen Savory. Much of HM practice is the application of high density rotational grazing filtered onto a natural landscape. There is a premise assumption that a co-evolution of grass species occurred with grazing species, so a symbiotic relationship can be measured and applied practically through the sigmoid curve. Much of Mono County rangeland's grasses are bunch grasses, which may have and pronghorn antelope, mule deer, and SNBHS; these grazers do not have the same characteristics as cattle. However, private grassland can provide the landscape if seasonal variations are considered. With this needed to implement the program, such as increasing herd size to a larger animal unit per paddock. Rotation would be measured by time, frequency, and duration; modern electric fencing offering the ability to create these conditions. This technique may produce beneficial results in productivity in grasslands and soil health.

It would be of benefit to understand the complete carbon cycle within Mono County's range and pasture grass-fed cattle, as soil microorganisms and vegetative absorption of carbon and methane can create net zero emissions, in contrast to a feedlot's operation practices.

Public Awareness

Public Outreach (sage-grouse website): One of the key areas of dispute in the USFWS's listing and critical habitat proposal (see Bi-State Sage-Grouse under Threats section) was the interaction between agricultural uses, specifically grazing, and sage-grouse populations and habitat. The LAWG and federal agencies (Bureau of Land Management and US Forest Service) contended grazing was a low threat; however, the USFWS listing identified it as a more significant threat, although a special rule was proposed to exempt certain operations based on sustainable management. The LAWG and USFWS engaged in detailed discussions about grazing operations and management, and established common ground about how grazing operations should be managed to minimize impacts and enhance benefits within BSSG habitat.

As a result of that collaborative management effort, a great deal of work has been performed by both private property owners and federal agencies to assure grazing operations in BSSG habitat are responsible and sustainable. To support this effort and the greater BSSG conservation program, Mono County offered to develop and host a website that tells the story of the unprecedented success and collaboration of the LAWG (and other committees) on BSSG conservation, and integrate sustainable agricultural practices, encourage private property owners to participate in the conservation program, and provide resources and programs to help ranchers accomplish habitat-enhancing projects.

With the assistance of a consultant, the County developed and implemented the website structure and worked with LAWG to populate information on the site and establish communication features, such as an email sign up list. The site is

live and continues to be refined, and is available at <http://www.bistatesagegrouse.com>. A page dedicated to sustainable agricultural practices and resources is available at <http://www.bistatesagegrouse.com/general/page/sustainable-agriculture-land-conservation>. The complete report for Mono County's Sustainable Agricultural Strategy and the map and other products are available on this site.

This website provides a tool to emphasize the beneficial relationship between conservation in general, and specifically BSSG conservation, and grazing and ranching uses; promote participation by agricultural operators; and connect operators and property owners with funding for mutually beneficial projects.

VI. RECOMMENDATIONS

Based on the Toolbox, the following recommendations establish potential next steps for continuing to develop a sustainable agricultural industry in Mono County, and may be pursued as staffing and resources allow.

Policy Review and Integration: Since the initiation of this grant, the policy context for sustainable agriculture shifted dramatically with the Sustainable Groundwater Management Act and legalization of commercial cannabis activities. As a result, we shifted our research and focus accordingly to ensure we captured the new issues and continued to address the original concerns and strategy. However, with the introduction of so much new and unanticipated information, a comprehensive review of the General Plan should be conducted after the completion of this grant to ensure internal consistency and that new efforts and programs have sufficient policy guidance and support.

Regulations for Commercial Cannabis: With General Plan policies adopted to provide guidance, the next step is to develop site-specific regulations, which generally constitutes a zoning code amendment in most jurisdictions. In Mono County, our land use zoning code was integrated into our General Plan in 2000, and so we would be developing another General Plan Amendment.

Site-specific regulations would address issues such as setbacks, visual screening, odor control, security, and operational specifics, such as hours, waste disposal, etc. A few policy level questions remain as well, including determining whether certain cannabis activities are compatible with certain land use designations, if Type 7 manufacturing (with volatile substances) should be allowed or prohibited, if a cap or other limitation should be placed on the number of available permits, and if annual renewals should be required. Mono County has not limited permit numbers or required annual renewals for any type of permit or use in the past.

The recommendation is to complete the zoning code level of regulations for commercial cannabis operations, and then accept and process applications. The operation of these permits and potential impacts to communities and the environment should be monitored and assessed, and regulations adjusted in the future if demonstrated to be necessary.

Continue Enhancing Public Engagement Efforts: Public engagement and community-based planning are central tenants of Mono County's land use planning efforts, and should continue to be emphasized. Existing tools, such as the Regional Planning Advisory Committees (RPACs), should continue to be utilized, and new tools, such as the Bi-State Sage-Grouse website, should continue to be enhanced and promoted. Feedback on the site includes rewriting text to be more understandable by the average layperson (as opposed to biologists), converting to the distribution lists maintained through the website, adding more information, and enhancing the information and resources available on the Sustainable Agricultural page.

Additional outreach efforts such as a website should also be implemented for the Owens Valley Groundwater Authority (OVGA) and development of commercial cannabis regulations. OVGA information is currently hosted on the Inyo County Water Department's website, and will eventually be migrated to an independent website. The County currently hosts a

cannabis page (<https://monocounty.ca.gov/planning/page/cannabis-regulations>) and should ensure it remains current with sufficient information.

Sustainable Groundwater Management: The County should continue actively engaging in the Owens Valley Groundwater Authority and assisting with the development of the Groundwater Sustainability Plan in order to ensure groundwater sustainability for the future and protect agricultural uses in the Tri-Valley.

Agritourism & Place-based awareness: The water quality, biodiversity, and carbon emissions retained provide high economic returns not taken into account within the present economic model. The ecosystem is multifunctional and not quantified into standard economic models. A reevaluation of agritourism in coordinated preservation of lands protected is a cost value opportunity during off-season production. Mono County's potential in agritourism is less homogenized than the predominant agritourism model. Mono County farms are adjacent to important wildlife and habitat. Intensification of agriculture areas where arable lands are already disturbed or grasslands that are protected increase the diversity. Maintaining a healthy ecosystem should be an emphasis in order to maintain agricultural productivity. Similar to public unknowing the connections within the food system, there is also a disconnection from natural succession and the understanding of what conservation does to the landscape. Agritourism fosters a place based awareness and comprehension of environmental issues faced. Typically, conservation easement criteria discourage agritourism activities, diminishing the impact of increased visitation. However, conservation should be a part of the operator's mission for practical and aesthetic qualities. The ability to view the enhanced conservation easement and interact with the biodiversity created provides a sense of value gained through tax funding dispersal. The Bi-State Sage-Grouse interactions with private lands offers such an interaction. Currently, public outreach and mobilization for BSSG conservation is priority of the LAWG. The research and conservation efforts accomplished are defunct if there is not a participatory aspect towards these successes. The personal stories and experiences establish successful conservation.

VII. CONCLUSION

The sustainable agricultural lands strategy provides an agricultural lands inventory across jurisdictional boundaries and a tool to prioritize the most highly productive and critically threatened lands, coordinates management across jurisdictions, and develops mitigation strategies to balance grazing operations with conservation and improvement of natural resources such as wildlife habitat. The project will protect lands most at risk through implementation of the toolbox and recommendations, and continues to coordinate with other agencies to seek mutual benefits between agricultural operations and resource conservation. By defining win-win solutions, we are collaboratively preserving the agricultural industry in Mono County into the future.

Mono County appreciates the Sustainable Agricultural Strategy grant from the State of California, and looks forward to continuing to tackle the issues that impact our local agricultural industry. Recent issues have dramatically changed the face of agriculture in general, and the impacts are currently playing out in Mono County and the Eastern Sierra, as well as the State of California.