OPEN SPACE BOARD OF TRUSTEES

Monday, June 15, 2015

Open Space and Mountain Parks Administrative Offices
66 S. Cherryvale Road

STUDY SESSION

5:00 ***Study Session: Agricultural Resource Management Plan**

MEETING AGENDA

(Please note that times are approximate.)

6:00 I. Approval of Minutes

6:05 II. Public Participation for Items Not Identified for Public Hearing

6:15 III. Matters from Staff
NIST Update
Art Program
Cultural Resource Update
Undesignated Trail Closure Effectiveness Study

7:00 IV. Matters from the Board

7:10 V. **Consideration of a motion regarding North Trail Study Area Plan Sideboards

8:10 VI. **Review of and recommendation regarding the 2016 Open Space and Mountain Parks Department Capital Improvement Program Budget and a portion of the Lottery Fund Capital Improvement Program Budget.

8:40 VII. Adjournment

*The study session is open to the public but there will be no public participation.

**Public hearing

TO: Open Space Board of Trustees

FROM: Tracy Winfree, Director, Open Space and Mountain Parks
Mark Gershman, Environmental Planning Supervisor
Andy Pelster, Land and Facilities Operations Supervisor
Kacey French, Environmental Planner I
Lauren Kolb, Agricultural Resource Specialist

DATE: June 15, 2015

SUBJECT: Study Session: Agricultural Resource Management Plan

---

I. PURPOSE

The purpose of this study session is for the Open Space Board of Trustees (OSBT) and staff to discuss aspects of staff's analysis on the following "Tier One" topics of the Agricultural Resources Management Plan:

- Increase diversified organic vegetable farming on OSMP land.
- Evaluate the suitability/feasibility of other alternative agricultural uses.
- Develop a policy surrounding structures such as greenhouses and their appropriateness on OSMP lands.

II. QUESTIONS FOR THE BOARD

Does the OSBT have questions or comments about the analysis or preliminary recommendations regarding:

1) Diversified vegetable farming?
2) Alternative agricultural uses?
3) Agricultural structures including greenhouses?

III. BACKGROUND

The Open Space and Mountain Parks (OSMP) Agricultural Resources Management Plan (Agricultural Plan) is a component of the Agriculture and Local Foods Initiative identified by City Council as part of their 2014-2015 goals and is intended to address the major contributions of OSMP to this initiative. The Agricultural Plan is also intended to address the relevant strategies identified in the Open Space and Mountain Parks Grassland Ecosystem Management Plan (approved by the OSBT in 2009, accepted by City Council in 2010). The goal of the Agricultural Plan is **to ensure the long-term sustainability of agricultural operations and the ecological health of OSMP lands while fostering connections among community members and local agriculture.**

Last July the OSBT and staff discussed the scope, framework and planning approach of the Agricultural Plan. Among the items discussed were the significant plan components. Based upon the board discussion and staff identification of the plan components that develop new policies, staff identified three "Tier One" topics. Staff has included the analyses for these topics in Attachments A-C.

IV. ISSUES

Diversified Vegetable Production

Growing interest from the community in the availability and diversity of locally grown food has been reflected in the work plan priorities of the City Council which identifies a desire to support a greater diversity of local foods. In response, OSMP staff analyzed the current (2015) OSMP land system to identify the best opportunities for diversified vegetable farming **(Attachment A).**

The first phase of the analysis focused on identifying OSMP properties which have suitable soils, adequate water availability and the necessary infrastructure (for the purposes of the analysis, defined as outbuildings and a residence), or the "essential agricultural characteristics" to support diversified vegetable farming. Twenty-four properties met the criteria (described in more detail in Attachment A) and were classified as candidates for further analysis. These 24 properties represent the maximum extent of where diversified vegetable farming could potentially expand to on OSMP. However, there are natural resource values associated with these properties and tradeoffs for conversion.

The second phase of the analysis is focused on evaluating the compatibility of the candidate properties with management area designations, pre-established resource management goals and other resources including sensitive species. Since all of the candidate sites will require infrastructure improvements before they could be used for vegetable farming, staff also estimated the conversion and maintenance costs for each of the candidate sites.

Currently, the analysis only goes so far as identifying the natural resource values,[1] visitor infrastructure and management area designations for each of the candidate sites. A determination including more detailed analysis on the compatibility for each site has not yet been undertaken; there are currently no recommendations. However, staff anticipates it is likely that less than half of the properties will ultimately be recommended for conversion. In addition to including more detailed analysis on the compatibility of each site, the final recommendations will also include final cost estimates, prioritizations, and recommendations for phasing the improvements/conversion of properties.

Alternative Agricultural Uses

For the purpose of the analysis, *alternative agricultural* is defined as activities and enterprises that are related to but not required for agricultural production and provide opportunities for producers to diversify their income and/or market their produce. Examples of alternative agricultural include farm stands, farm events, and "agratainment" (harvest festivals, petting zoos, "u-pick" operations, corn mazes, etc.). City policy has not allowed alternative agricultural uses on OSMP lands, and there has been no significant demand among lessees for them.[2]

Staff recognizes that alternative agricultural activities have the potential to improve the economic viability of agricultural operations and provide OSMP visitors opportunities to

---

[1] The Bobolink Management Areas are the exception and have not yet been identified/chosen. OSMP staff will be incorporating new data from the hayfield monitoring to determine which fields may provide the best opportunity to meet Bobolink conservation objectives. Due to the interrelatedness of the two plan components a determination on specific fields to be managed for bobolinks will be made in conjunction with the recommendations on the diversified vegetable analysis.

[2] With the exception of horse livery operations at Boulder Valley Ranch which ceased operation over twenty years ago, there have been no other alternative agricultural operations in the history of the OSMP agricultural program.

connect with the land and agricultural heritage of the Boulder Valley. However, like other activities proposed for open space lands, staff wished to ensure that prior to recommending any alternative agricultural activities, they were consistent with policy guidance and the other purposes of OSMP. In response to the wide range of activities with significant differences among them, staff chose to assess the activities by category and adapted a pre-existing framework to consider which, if any, forms of alternative agriculture would be most appropriate for OSMP. The following table lists the categories and criteria used for this analysis.

Category	Criterion
Relationship to setting	Dependence on an agricultural setting and/or OSMP lands
	Ability to increase peoples' appreciation of agriculture or understanding of Open Space purposes.
Compatibility with resource protection	Compatibility with the preservation of agricultural resources
Compatibility with existing facilities and services	Compatibility with a low level of existing facilities and services (e.g. parking, minimal maintenance, enforcement, monitoring, etc.)
	Compatibility with providing a safe recreational experience
Compatibility with other activities	Compatibility with other recreational activities/other visitor's experiences

Activities in the categories of *agratainment*, *farm events*, *community gardens, food forests, farm stands/stores* and *demonstration farms/farm camps* were evaluated against these criteria. When issues or considerations emerged, staff responded by developing mitigating strategies to improve the compatibility of the activity. In all cases the assessments only considered the alternative activities as accessory uses and occurring as part of operations where agricultural production remained the primary purpose of the operation.

Staff concluded that the following alternative agricultural activities were most compatible with the evaluation criteria:

- U-pick Operations
- Farm to Table Dinners
- Farm Stands/Stores
- Demonstration Farms/Farm Camps (but not as part of the existing agricultural lease program)

Attachment B contains the full analysis for all activities. Staff recommends an incremental phasing in of alternative activities to give lease managers and others affected an opportunity to gain experience and adapt to the changes.

Agricultural Structures

The necessity of structures for agricultural production predates the current and increasing interest in local foods. In fact the City Charter (Section 176) anticipated the need for improvements to support agricultural operations in 1986 when it was amended to include the following (emphasis added):

> Open space land may not be improved after acquisition unless such improvements are necessary to protect or maintain the land or to provide for passive recreational, ***open agricultural***, or wildlife habitat use of the land.

There are a number of structures that have been in use on OSMP for decades in support of livestock and hay production operations such as barns, corrals, loafing sheds, livestock shelters and storage sheds. In most instances these structures predate OSMP's ownership of a ranch, and have demonstrated their necessity. No changes are being recommended for these structures.

The growing interest in local diversified vegetable production has resulted in an increased interest in structures like greenhouses and hoophouses that can extend the growing season increasing yields and, potentially, profits. Therefore these structures are the focus of staff's analysis. The focus on hoophouses and greenhouses resulted in the development of a framework that could be used to consider other replacement or new structures as well as unanticipated future structures (**Attachment C**).

Staff considers hoophouses to be a structure consistent with charter language and policy guidance. While there may be future designs for greenhouses that make them more cost effective and energy efficient, current technology is not available to address these criteria, and staff is not recommending including greenhouses as structures for construction on OSMP lands.

Attachment C provides the full analysis and recommendations for agricultural structures on OSMP.

V. NEXT STEPS

Staff will revise the Tier One topics based on OSBT feedback from this study session. Those changes, along with the remaining plan components will be included in a draft plan presented to the Open Space Board of Trustees later in 2015.

ATTACHMENTS:

A. Analysis of Diversified Vegetable Production
B. Analysis of Alternative Agricultural
C. Analysis of Agricultural Structures

Best Opportunity Analysis for Diversified Vegetable Farms

Background and Purpose

Supporting local agricultural producers is a longstanding tradition at OSMP. Environmental constraints such as soil quality and water availability limit most of the agricultural production on OSMP lands to livestock or hay/forage production rather than diversified vegetable farming. However, the recent growing interest from both Boulder's city leaders and the general community to support a greater diversity of local foods has led OSMP staff to evaluate the suitability of OSMP lands for diversified vegetable production. The purpose of this Best Opportunity Analysis is to identify OSMP properties most appropriate to expand diversified vegetable farming, integrated vegetable and livestock farming[1] and/or for operating a pasture-based dairy.[2]

There are currently five properties on OSMP lands with 27 acres in diversified vegetable farming and no pasture-based dairies.

Methodology

The analysis first identified OSMP properties which have suitable soils, adequate water availability, and have or are nearby infrastructure necessary to support diversified vegetable farming[3]. (The evaluation criteria are described in more detail below.) The properties which met these essential agricultural characteristics were classified as candidates for further analysis.

The candidate properties were evaluated for compatibility with management area designations, pre-established resource management goals and other resources including sensitive species. (The evaluation criteria are described in more detail below.) Staff conducted a site-specific evaluation of the infrastructure at each candidate property to determine the type(s) of operation the existing infrastructure is best suited to support. Staff then identified and estimated the costs of infrastructure improvements and other needed management actions to convert and maintain the property as a diversified vegetable farm. Lastly, a recommendation for each of the candidate properties will be developed (TBD) and management strategies identified to provide additional direction to guide the conversion and management of properties identified for diversified vegetable farming.

---

[1] Farmers commonly desire to keep pastured livestock in conjunction with a vegetable farm as it is both economical and a sustainable agricultural practice in that produce unfit to market or surplus product can be feed to the pastured livestock. Keeping pastured livestock provides the farmer with not only a way to get rid of unwanted products but also provides them with either a modest source of additional income (e.g. selling eggs) and/or food. The recommendations will distinguish between vegetable only farms and farms integrated with pasture-based livestock because of the different size (acres needed) and infrastructure requirements and identify the type(s) of operations the property can support and any differences in management actions.

[2] Pasture-based dairies are small micro-scale dairies. The number of animals permitted is typically based on the zoning designation and parcel size. For example, in areas zoned Agricultural, four animal units per acre are permitted. Pasture-based is distinctly different from feed yards, where feed is imported on the property to sustain a higher density of animal units on the parcel than otherwise permitted. Pasture-based dairies were included in this analysis because the infrastructure necessary for this type of operation exists on several OSMP properties. Only properties with the existing supporting infrastructure were considered. The recommendations will identify the type(s) of operations the property can support and any differences in management actions.

[3] All of the properties with the infrastructure to support micro-dairies are located on properties that meet the soil and water requirements.

Phase I Evaluation: Essential Agricultural Characteristics

Infrastructure

Diversified vegetable farming requires outbuildings suitable for prospective lessees/growers to process and store their products. It is also customary for growers to reside on the property, for reasons of convenience and efficiency, as evidenced by the existence of residences on all of the properties which have outbuildings. In addition, on-site housing is often necessary to attract qualified lessees. For this first phase of analysis staff identified all OSMP properties which have outbuildings and residence to support diversified vegetable farming. Staff also included properties within 0.5 miles from agricultural properties with the necessary infrastructure, including existing private farms and farms on other publicly owned lands currently leased for diversified vegetable farming, because those sites could be used to expand existing operations.

Soil Type

The ability to use a property to cultivate vegetables is dependent on having a suitable soil type. Suitable soil types have the right combination of physical and chemical characteristics such as texture, slope, pH and permeability. It is of equal importance that the soils are neither excessively erodible nor saturated with water for long periods of time, as annual vegetable fields are dominated by bare ground and therefore prone to erosion, and vegetable cultivation is not compatible with water-logged soils.

In order to identify OSMP properties with suitable soils, staff referenced a soil survey of the Boulder area conducted by the United States Department of Agriculture (USDA) in 1975.[4] The survey identifies the types and locations of soils found in eastern Boulder County, and groups soils into Capability Classes based upon their suitability for agricultural production. As the Capability Class increases, the greater the limitations are on the practical use of a soil type for agriculture. Appendix A lists the soils in the various Capability Classes and identifies the limiting factors for each soil type and Capability Class.

Staff determined properties comprised principally of soils in Capability Classes I through III were suitable, with appropriate conservation practices, for diversified vegetable farming. Properties dominated by soils in Capability Classes IV through VI pose severe cultivation limitations, such as being highly erodible, stony, or excessively wet and staff determined were not suitable for diversified vegetable farming. [5]

Water Availability

A reliable and adequate water supply is necessary to support diversified vegetable farming. Both the volume of water available and length of time the water is available were used to evaluate a property's potential for diversified vegetable farming.

All of the properties with the necessary infrastructure and appropriate soils were evaluated to determine which could be adequately watered with OSMP's water portfolio. Colorado State University

---

[4] Soil survey of Boulder County Area, Colorado. United States Department of Agriculture Soil Conservation Service in cooperation with the Colorado Agricultural Experiment Station. January 1975.

[5] Capability classes VII and VIII exist, however none of the properties with the necessary infrastructure are comprised of soils in these classes. In addition soils in capability classes VII and VIII have such severe limitations they are unsuited to cultivation.

agronomists recommend at least 1.5 acre-feet of water per acre. All of the properties with appropriate infrastructure and soils met the minimum criterion for water volume. In addition, diversified vegetable farming requires less water than the current use, hay/forage operations; this is due to the differences in efficiency of flood irrigation used for hayfields versus the drip irrigation and overhead systems for diversified vegetables.[6]

In addition to requiring a minimum amount of water, diversified vegetable farming also requires a consistent source of irrigated water - typically longer than the current hay/forage operations. Staff identified those properties which in addition to having enough water, have a long enough average duration of irrigated water to support vegetable farming. Staff chose 100 consecutive days of water as the threshold based on the water requirement of tomatoes. Tomatoes are one of the most popular vegetables grown on diversified vegetable farms and take anywhere from 65 to 120 days to reach maturity which is representative or longer than the maturation time for most other types of vegetables grown in the area.

Findings

Twenty-four OSMP properties meet the above infrastructure, soils and water requirements necessary for diversified vegetable farming (Figure 1). The infrastructure, soils and water supply for each of the candidate properties are described in greater detail in the individual Property Assessments.

Phase II Evaluation Criteria

The following section describes the Phase II Evaluation Criteria.

Management Area Designations

The Visitor Master Plan (VMP) categorizes OSMP lands under one of four management area designations: Agricultural, Passive Recreation, Natural and Habitat Conservation. These designations provide the foundation for determining what types of opportunities/activities are allowed and the level of resource protection. The management area designation and corresponding goals (Appendix B) of the candidate property and adjacent areas were evaluated for compatibility with diversified vegetable farming.

While diversified vegetable farming may be a more obvious potential fit for properties designated as Agricultural Areas, properties with other management area designations were also evaluated to determine the potential to meet the resource management goals while also providing an opportunity for diversified vegetable farming.

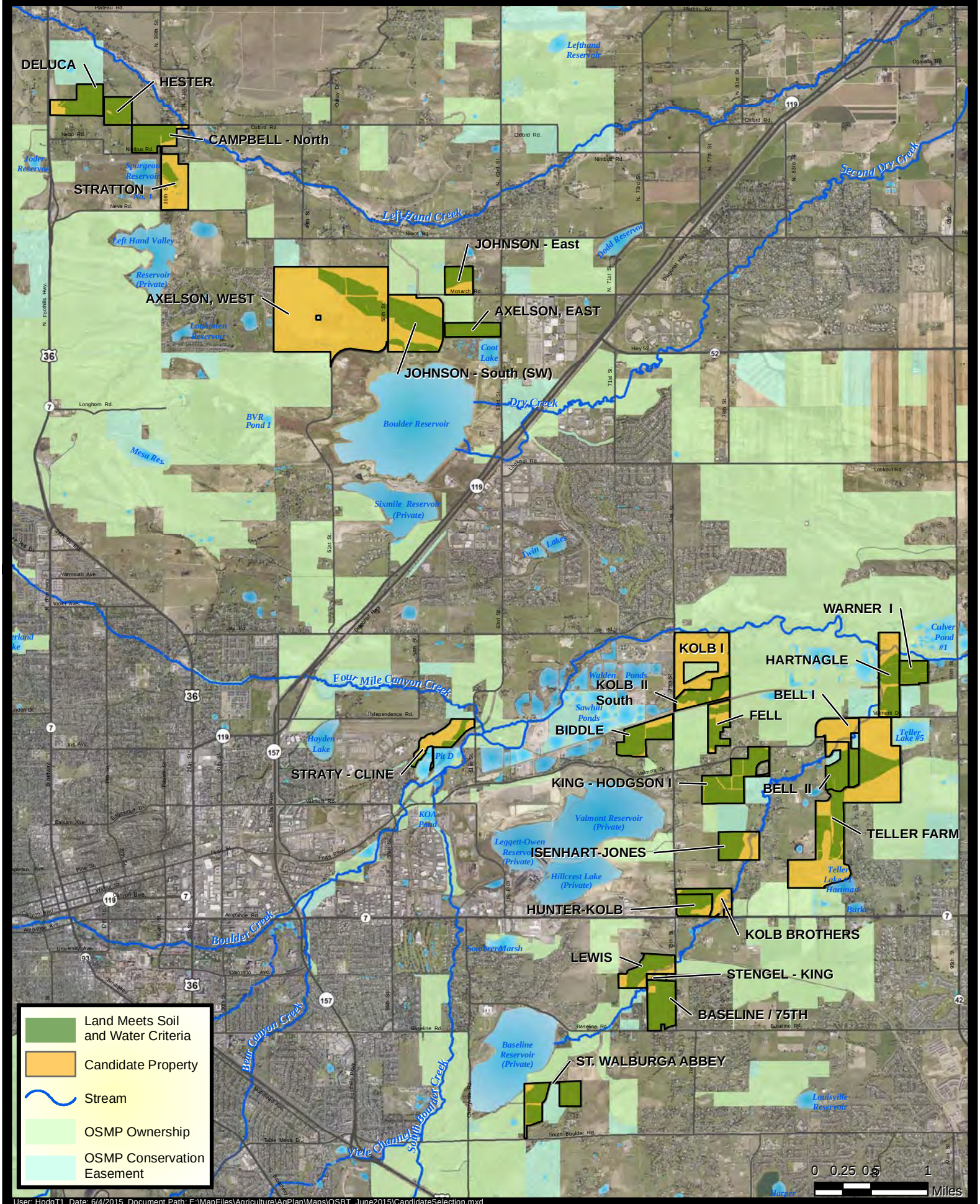
Visitor Infrastructure/Resources

Existing OSMP trails and conceptual trails identified in the Boulder Valley Comprehensive Plan were considered, to the degree they went through or approached candidate sites. While visitor infrastructure or the associated activities may not preclude a property from being converted it may

[6] Byelich, B, Cook J., and Rowley, C. Small Acreage Irrigation Guide. Colorado State University and USDA Natural Resources Conservation Service. June 2013.

City of Boulder Open Space and Mountain Parks
Agricultural Plan

Figure 1
Candidate Properties



User: HodgT1 Date: 6/4/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\CandidateSelection.mxd

influence the area for consideration or management actions may be identified to mitigate any potential conflicts.

Prairie Dog Colony Management Designation and Occupation History

Prairie dog activity, such as burrowing and feeding, is incompatible with irrigated agricultural production and water management. Irrigation and related agricultural practices associated with diversified vegetable farming are likewise incompatible with the life requirements of prairie dogs.

The Grassland Plan identified management area designations for prairie dogs and associated species. The management area designations were determined by evaluating factors such as prairie dog habitat suitability (a prairie dog habitat suitability model and analysis were completed as part of the Grassland Plan), block size, urbanization, recreational activities, irrigated agriculture and adjacent land management goals. The management area designations are Grassland Preserves, Multiple Objective Areas, Prairie Dog Conservation Areas, Transition Areas and Removal Areas. The candidate properties were evaluated for compatibility with the management area designation of the property and surrounding lands. Appendix C describes the management objectives of the various prairie dog management area designations.

In addition to the prairie dog management area designation, historical (maximum extent) and current prairie dog occupation were also considered as prairie dogs will eventually attempt to re-colonize lands previously occupied. Where candidate properties or adjacent lands are or have been occupied, management costs and actions to prevent re-colonization were considered and included in the recommendations.

Bobolink Management Areas

All the candidate properties being considered for conversion to diversified vegetable farming are currently irrigated hayfields or pastures. By virtue of historic irrigation, mowing and grazing practices some of these semi-native hayfields and pastures support wildlife not commonly found elsewhere on OSMP lands such as bobolinks. Bobolinks are grassland songbirds thought to be undergoing a non-cyclical population decline due to a variety of factors including habitat destruction. Conservation of bobolink habitat has been part of OSMP's land management since the 1980s.

The Grassland Plan identified the goal of establishing or continuing agricultural management practices that support habitat for bobolinks by designating Bobolink Management Areas (Class A and Class B). Converting a candidate property to diversified vegetable farming would preclude managing that portion of the property for bobolink habitat as it would no longer be an irrigated hayfield or pasture. Several of the candidate properties were either designated as Class B Bobolink Management Areas or were identified as candidates for Class B designation in the Grassland Plan and others have recently been recognized as important bobolink habitat.

Other Sensitive Species

The presence of sensitive species and/or habitat on a candidate property was considered in determining the property's suitability for diversified vegetable farming. The sensitive species/habitats considered were:

- Northern leopard frog habitat
- Raptor nests
- Rare and state tracked plant communities (includes Ute ladies'-tresses orchid)
- Preble's meadow jumping mouse occupied habitat

Noxious Weeds

Like almost all other landowners in Colorado, OSMP is required to eradicate certain state "A-listed" weeds. Management may include the application of pesticides or herbicides. While the presence of state A-listed weeds may not preclude a property from being converted to vegetable farming it may affect the timeline for organic certification since in order to be certified, land must be pesticide free for at least three years.

Cultural Resources

Many of the candidate properties are comprised of historic structures or structures eligible for historical designation. Staff determined as long as any improvements to the structures are done in accordance with the applicable preservation policies and laws diversified vegetable farming is compatible with and in some cases may improve the condition of these cultural resources.

In addition to the structures, staff evaluated the candidate properties to determine if other cultural resources (prehistoric and historic archeological and paleontological) are present or known to exist on the candidate farms that would preclude the conversion of the property to a diversified vegetable farm. Staff determined that none were known to exist. However, some of the properties have not been adequately surveyed. For these properties the individual Property Assessments identify the need for a cultural resource survey. If the survey identifies significant cultural resources that would or could be adversely affected by the conversion of the property, the agricultural management of the property will need to be revaluated and the property may be removed from consideration.

Property Assessments

A property assessment was completed for all of the candidate properties. Some of the properties were grouped and evaluated together based on geographic proximity. The property assessments include the following:

- A description of Phase I: Essential Agricultural Characteristics (infrastructure, soils, and water).
- An evaluation of the property's compatibility with other resources and management goals (Phase II Evaluation Criteria).
- An evaluation of the infrastructure, management actions and costs associated with converting the property to a diversified vegetable farm.
- TBD - A recommendation on whether the property should be converted to a diversified vegetable farm, integrated vegetable and livestock farm and/or a pasture-based micro-dairy.

Axelson West

Essential Agricultural Characteristics

Infrastructure

There is a residence, one-small outbuilding/garage and grain bin on the southern portion of the property. On the northern building site, there is a Quonset hut, a two car garage, two loafing sheds, corrals and hay storage facilities.

Water

An adequate amount of irrigated water (≥ 1.5 acre-feet) from the Left Hand Ditch delivered via the Starr lateral is available April 1 to October 31, approximately 210 days. Fields 39 and 60 are not irrigated. There is a domestic well on the property[7].

Soils

Over eighty acres (80.9) across fields 40, 41, 48, 49, and a portion of 42 are primarily Valmont clay loam with 1-3% slopes, Capability Class III, suitable for diversified vegetable farming.

Compatibility with Other Resources and Management Goals[8]

Management area designation	Agricultural
Presence of visitor infrastructure	BVCP (and VMP) Conceptual Trail Alignment Alignment: Axelson Trail Alignment
Prairie dog colony management area designation	Grassland Preserve and Transition Area
Prairie dog occupation	Grassland Preserve is occupied and encroaching into Transition Area
Bobolink management area designation	TBD – Not identified as Class B or Class B candidate in the Grassland Plan.
Presence of sensitive species	• Seasonal Osprey closure. Closure does not extend into fields with suitable soils and water. • Rare and state-tracked plant communities are found on this property but do not intersect with agricultural fields that meet the soil and water criteria.
Presence of State A listed noxious weeds	Mediterranean sage

Management Actions and Cost Estimate for Conversion

- Clean up property[9]
  - Cost Estimate: $ 10,000
- Update outbuilding to accommodate a cooler and wash area.
  - Cost Estimate: $20,000
- Construct a livestock pole barn
  - Cost Estimate: $40,000

[7] Colorado Water Laws allows domestic wells to be used for livestock water as well as for irrigation up to one acre of land.
[8] The tables provide summary information only. Please refer to the maps provided for each property for more detailed information on the locations of the resources.
[9] All properties will require a level of general clean up as all properties have dilapidated/abandoned infrastructure and/or equipment left from previous agricultural operations.

- Construct a small (1/10 acre-foot) irrigation pond near the headgate of the Starr lateral to facilitate the delivery of irrigation water to any planting beds.[10]
    - Cost Estimate: $5,000
- Construct a fence to separate fields 48 and 49 for diversified vegetable farming from the rest of the property which may be grazed.
    - Cost Estimate: $10,000
- Construct a prairie dog fence to separate prairie dog colonies from the portion of property suitable for vegetable farming.
    - Cost Estimate: $30,000
- Passive relocation of prairie dogs
    - Cost Estimate: $50,000
- Make efforts to ensure the fields are properly irrigated to avoid prairie dog encroachment from the adjoining Grassland Preserve.
    - Cost Estimate: ongoing/unknown

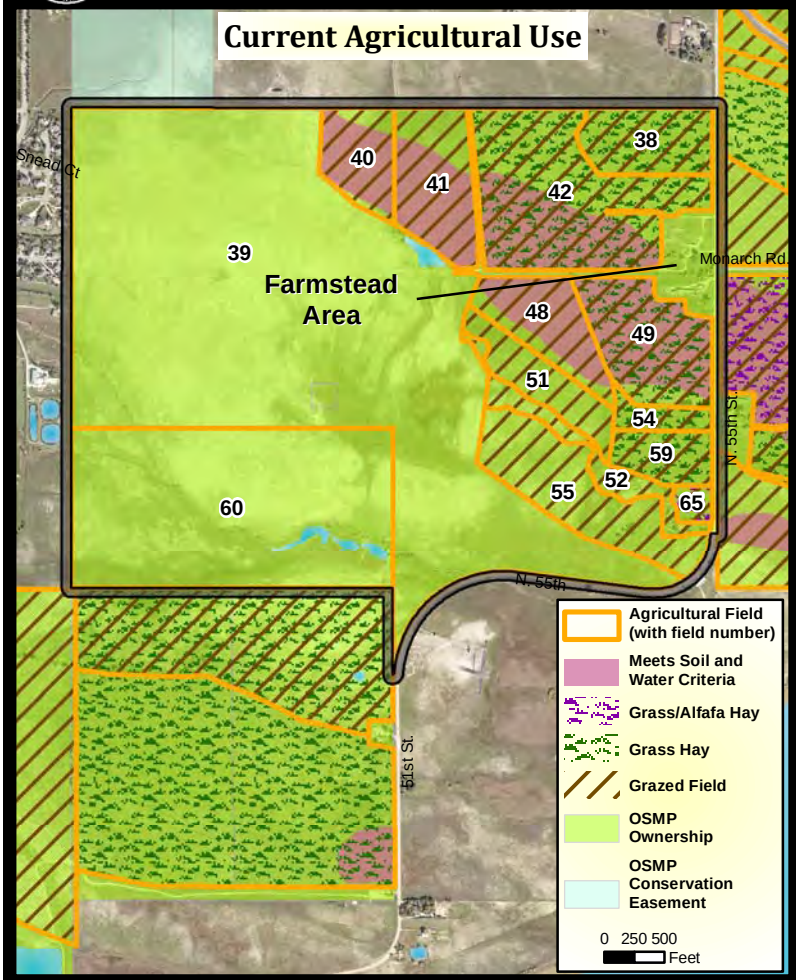
Total Cost Estimate: $165,000

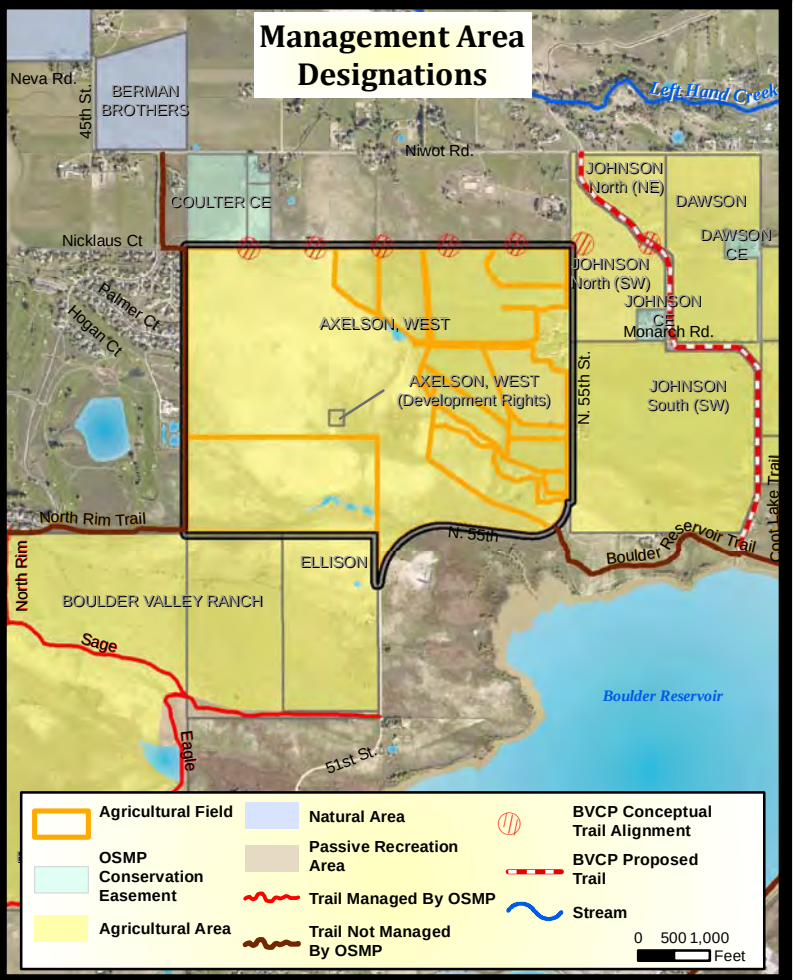
Recommendation

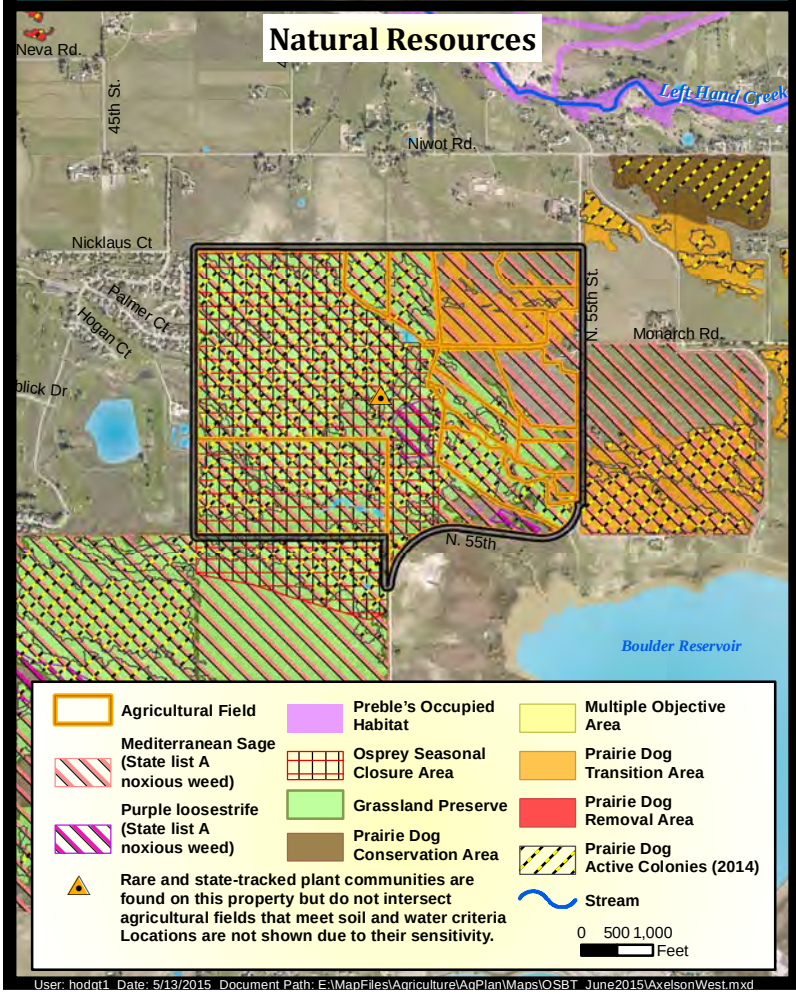
TBD

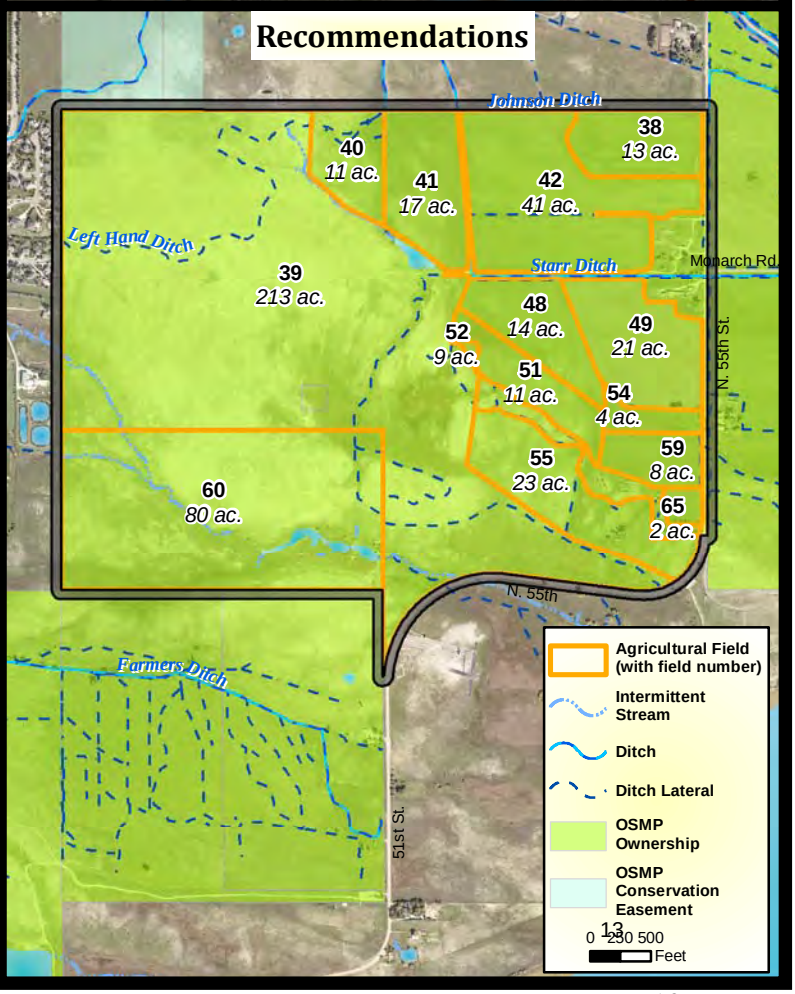
[10] Irrigation ponds are only to be used for the temporary storage, less than 72 hours, of water.

Axelson West









User: hodgt1 Date: 5/13/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\AxelsonWest.mxd

Lewis, Stengel-King, and Baseline & 75th

Essential Agricultural Characteristics

Infrastructure

There is a residence, a large barn (formerly used for milking and storage), a pole barn for covered hay storage, four sheds and a three bay garage on the Lewis property.

Water

For most of the Lewis property, an adequate amount of irrigated water (≥ 1.5 acre-feet per acre) is available from the Enterprise and Cottonwood #2 Ditches and is available May 16 to August 8 (84 days), and May 16 to September 12 (119 days), respectively. Field 262 is served solely by the Enterprise Ditch and therefore lacks 100 days of irrigation water and field 53 is not irrigated.

On all but one field on the Stengel-King and Baseline & 75th properties, there is an adequate amount of irrigated water (≥1.5 acre-feet per acre) available from the McGinn Ditch, which runs April 29 to October 10, approximately 164 days. Field 271 on the Baseline & 75th property is not irrigated.

Soils

Approximately 40 acres on the Lewis property are suitable for diversified vegetable production. Field 245, 3.7 acres, is comprised entirely of Nunn Sandy clay loam with 1-3% slopes, Capability Class II. Fields 244, 251, and 256 (36 acres), are comprised of a combination of Nunn sandy clay loam with 1-3% slopes and Ascalon-Otero Complex with 3-5% slopes, Capability Class III.

Approximately 4 acres on the Stengel-King property are suitable for diversified vegetable production. Field 442 is comprised primarily of Ascalon sandy loam with 1-3% slopes, Capability Class II.

Sixty-one acres on the Baseline & 75thproperty are suitable for diversified vegetable production. Fields 267, 280, 283, and 285 (51.5 acres) are comprised of Ascalon sandy loam with 1-3% slopes, Capability Class II. Field 265 (9.5 acres) is comprised of Ascalon sandy loam with 1-3% slopes and Ascalon-Otero Complex with 3-5% slopes, Capability Classes II and III, respectively.

Compatibility with Other Resources and Management Goals

Management area designation	Agricultural
Presence of visitor infrastructure	BVCP Conceptual Trail Alignment: Dry Creek Trail
Prairie dog colony management area designation	N/A
Prairie dog occupation	N/A – not occupied
Bobolink management area designation	TBD
Presence of sensitive species	Rare and state-tracked plant communities are found on all three properties and intersect with agricultural fields that meet the soil and water criteria.
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

- Clean up properties
  - Cost Estimate: $15,000
  - Perform a historic structures assessment on the house, barn, and outbuildings on the Lewis property.

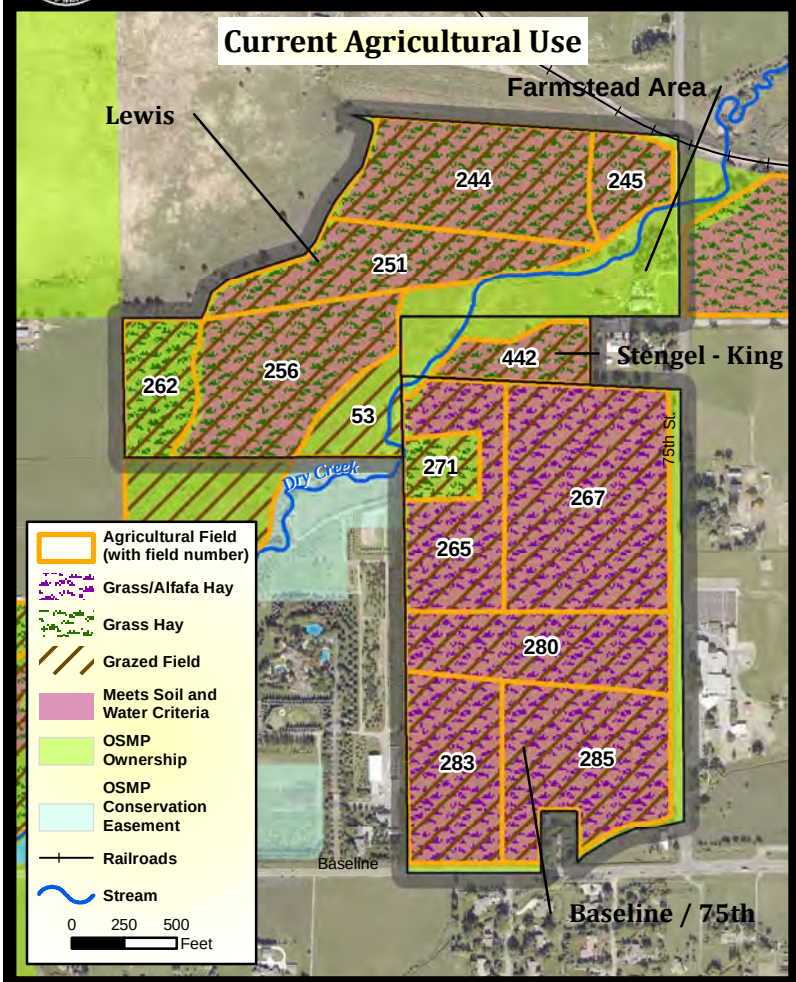
    - Cost Estimate: $15,000
- Rehabilitate residence
    - Cost Estimate: $400,000
- Rehabilitate barn and other outbuildings
    - Cost Estimate: $100,000
- Update outbuilding to accommodate a cooler and wash area.
    - Cost Estimate: $30,000
- Construct two small (1/10 acre-foot) irrigation ponds, one on Baseline & 75th, one on Lewis, near the vegetable cropping areas to facilitate the delivery of irrigation water to any planting beds.
    - Cost Estimate: $10,000
- Cultural resource survey for Stengel-King

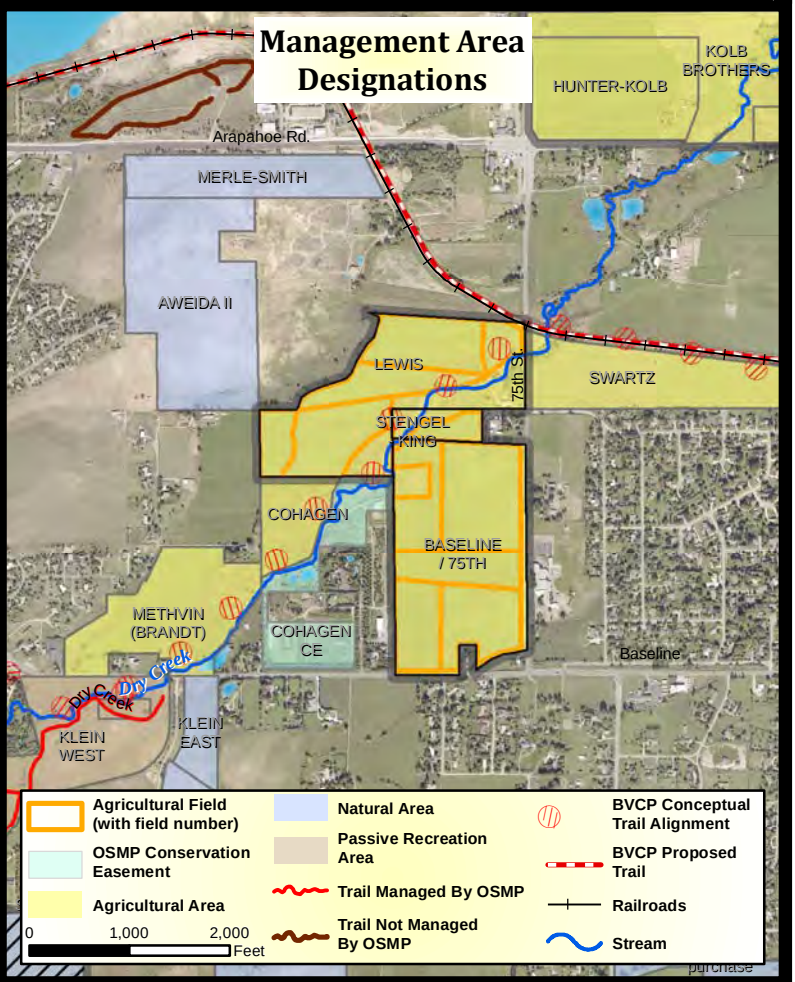
Total Cost Estimate: $570,000

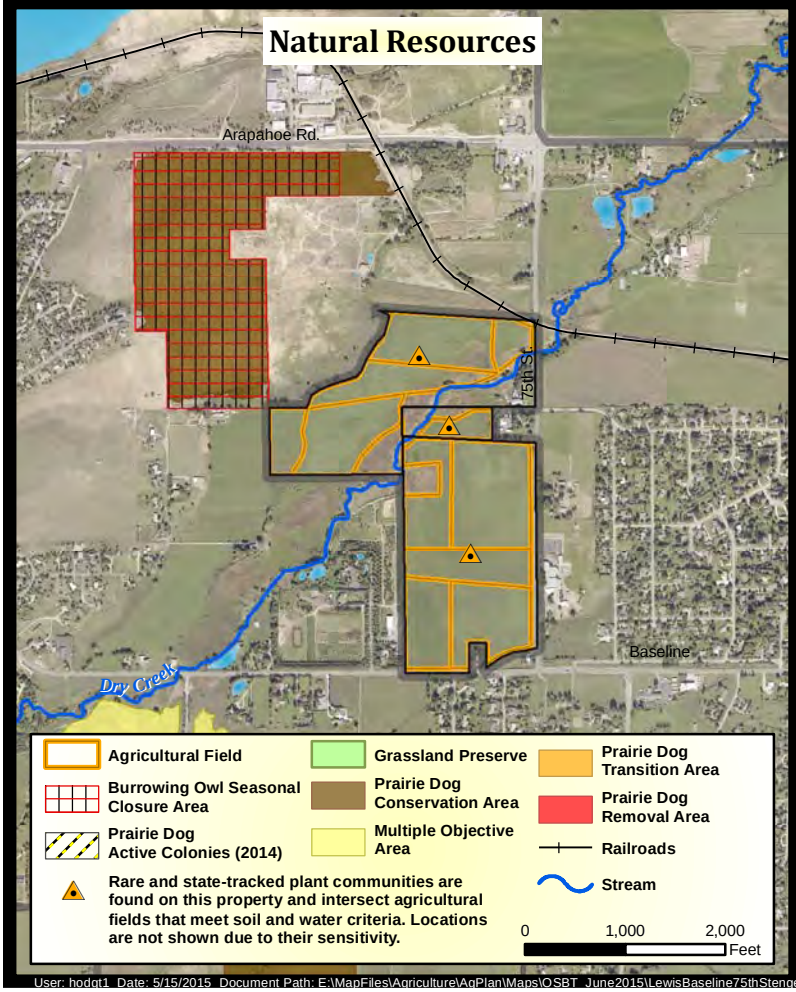
Recommendation

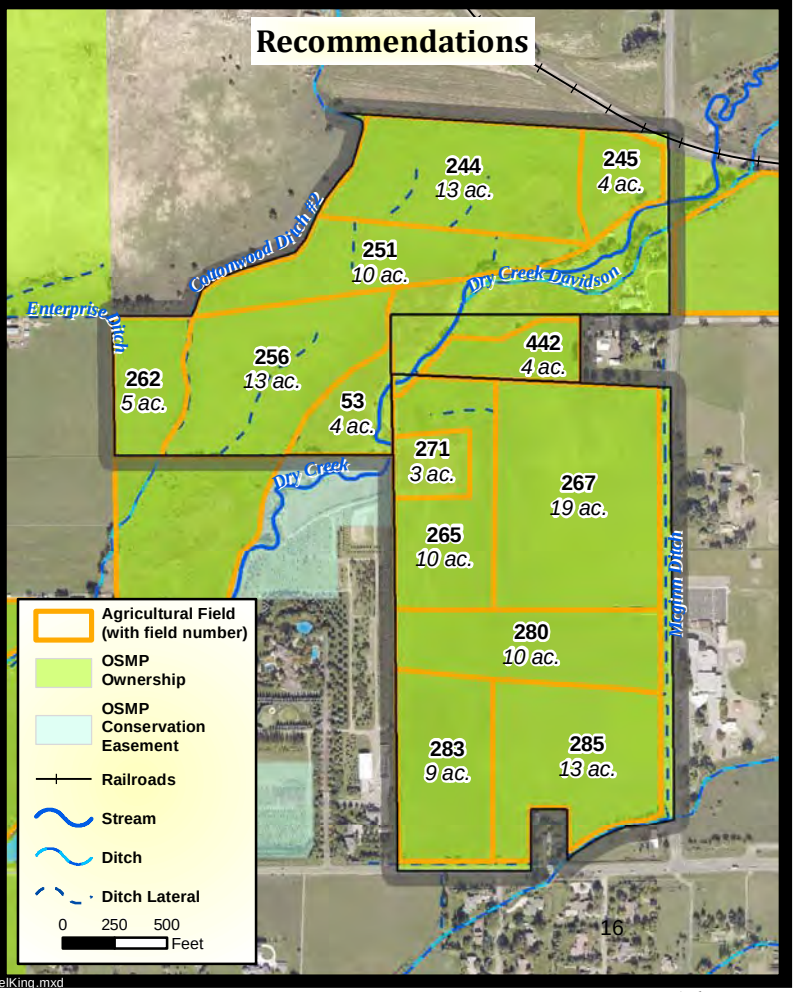
TBD

Lewis, Stengel - King, Baseline / 75th









User: hodgt1 Date: 5/15/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\LewisBaseline75thStengelKing.mxd

Hartnagle and Warner

Essential Agricultural Characteristics

Infrastructure

There is a historic residence on the Hartnagle property and seven outbuildings including a large barn that was used for hay storage, milking and shelter. Livestock shelter is available on the property.

Water

For the portion of the Hartnagle property south of the Boulder Creek, an adequate amount of irrigated water (≥ 1.5 acre- feet per acre) from the Dry Creek Davidson Ditch is available May 21 to Sept 1, approximately 103 days. Field 435 is not irrigated. There is a domestic well on the property.

For the Warner property, an adequate amount of irrigated water (≥ 1.5 acre-feet per acre) from the Leyner Cottonwood #2 Ditch is available from May 2 to September 18, approximately 139 days.

Both properties have a third of the interest in the storage water rights to Teller Lake #5. However, due to the junior status of these rights, it is not a reliable water source in dry years.

Soils

All of the property, approximately 54 acres on the Hartnagle property is suitable for diversified vegetable production. Fields 167, 173 and 175 (21.6 acres) are primarily Manter sandy loam with 1-3% slopes, Capability Class III. Fields 169 and 176 (5.3 acres) are primarily Ascalon sandy loam with 1-3% slopes, Capability Class II. Fields 154, 159, 161 and 163 (27 acres) are comprised of Ascalon sandy loam with 0-1% slopes, Capability Class I.

Thirty-three acres on the Warner property are suitable for diversified vegetable production. Fields 157 and 162 are comprised of Ascalon sandy loam, 0-1% slopes, Capability Class I.

Compatibility with Other Resources and Management Goals

Management area designation	Habitat Conservation Area
Presence of visitor infrastructure	OSMP managed East Boulder - White Rocks Trail
Prairie dog colony management area designation	Prairie Dog Removal Area
Prairie dog occupation	Currently active
Bobolink management area designation	TBD
Presence of sensitive species	• Rare and state-tracked plant communities are found on the Hartnagle property but do not intersect with agricultural fields that meet the soil and water criteria. • Leopard frog habitat
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

- Clean up of Hartnagle property
  - Cost Estimate: $10,000
- Rehabilitate the deteriorating residence which is currently uninhabitable.

    - Cost Estimate: $300,000 – $500,000[11]
- Assess the historic outbuildings to determine if they are historically significant.
- Rehabilitate the deteriorating outbuildings/or construct new and accommodate a cooler and wash area
    - Cost Estimate: $80,000
- Construct two small (1/10 acre-foot) irrigation ponds on each property adjacent to vegetable cultivation areas to facilitate delivery of irrigation water to any planting beds.
    - Cost Estimate: $10,000
- Remove prairie dogs
    - Cost Estimate: $40,000
- Construct a prairie dog fence along western boundary
    - Cost Estimate: $40,000
- Renovate the milking barn to be brought up to code.[12] (The necessity of this management action is dependent on what type of operation is proposed for the property, i.e. pasture-based cow or goat dairy)
    - Cost Estimate: $40,000

Total Cost Estimate: $480,000-$720,000.

Recommendation

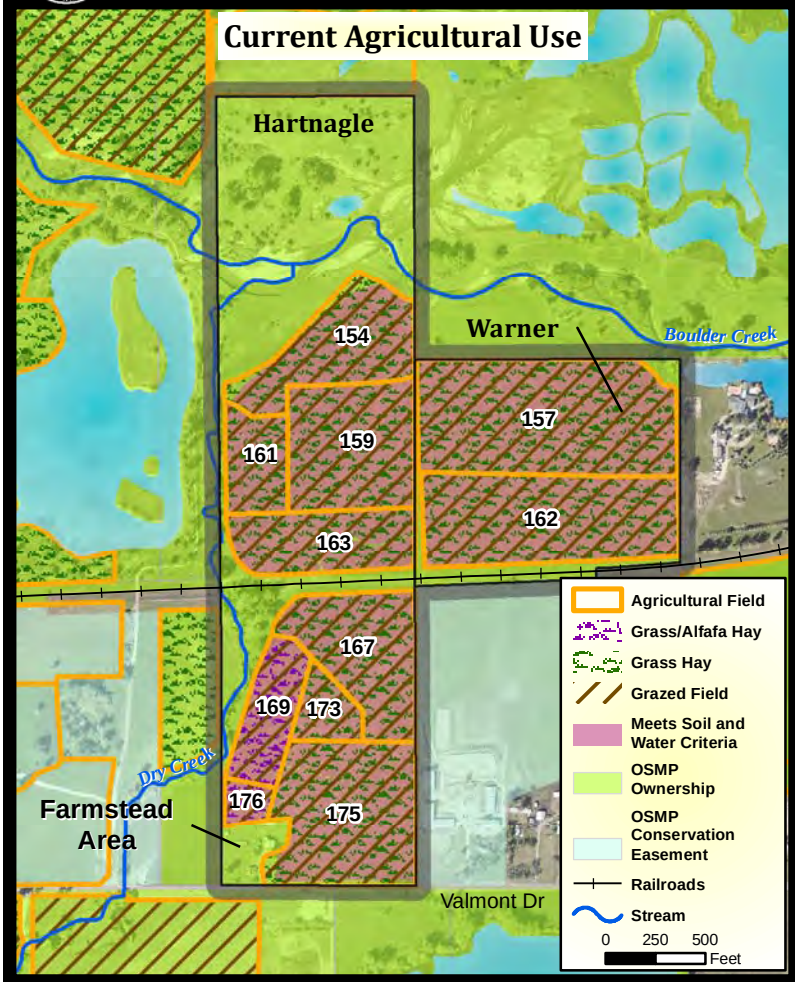
TBD

[11] An historic structures assessment is underway, which will provide a more accurate estimate.

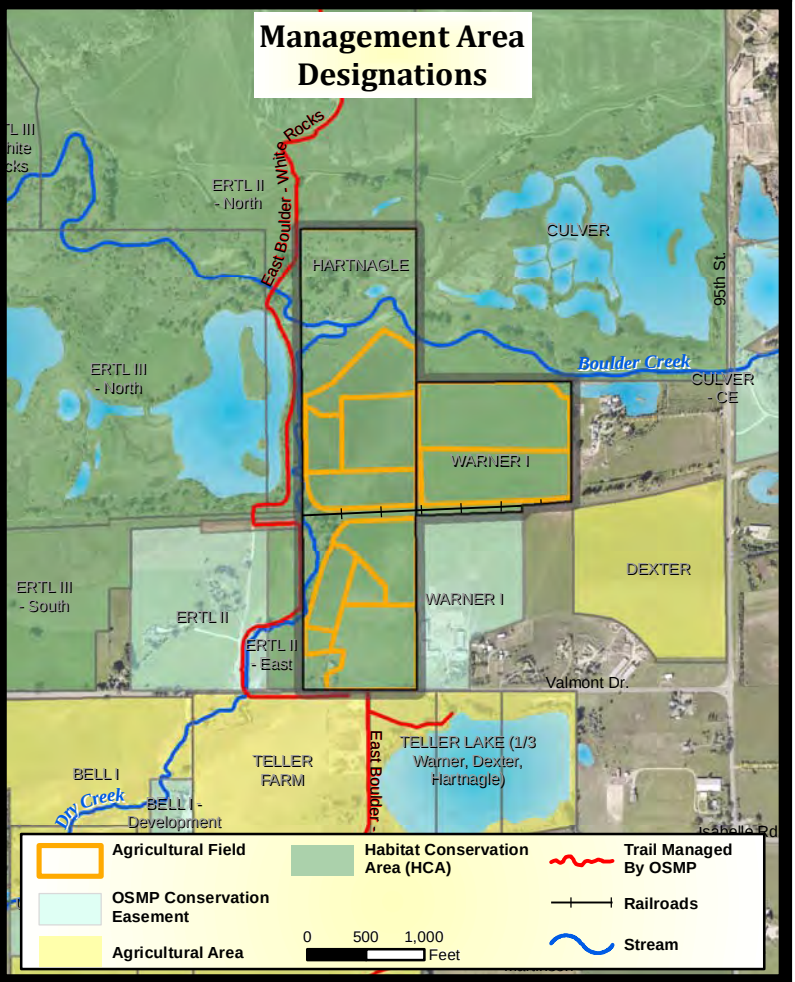
[12] Subject to local, state and federal oversight via Boulder County Public Health, Colorado Department of Agriculture and the U.S. Food and Drug Administration

Hartnagle, Warner

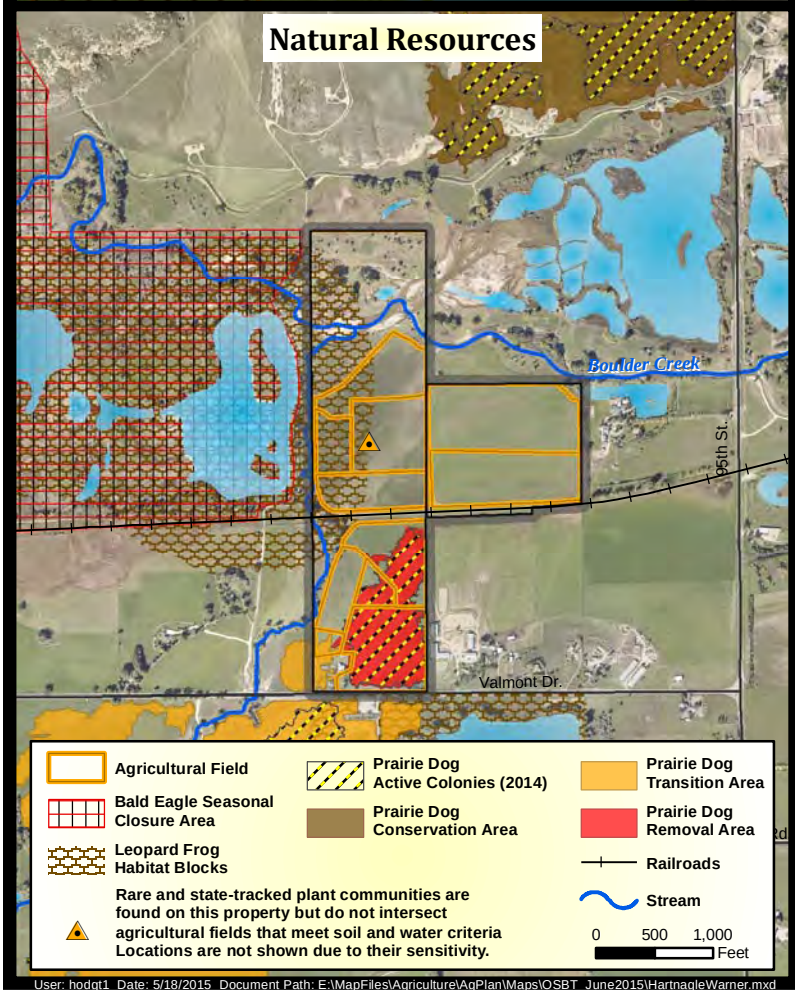
Current Agricultural Use



Management Area Designations



Natural Resources



Recommendations

Hunter-Kolb and Kolb Brothers

Essential Agricultural Characteristics

Infrastructure

There is a historic residence and eight outbuildings including a milking barn, loafing shed, a tower silo and grain bin. Livestock shelter is available on the property.

Water

An adequate amount of irrigated water (≥ 1.5 acre-feet per acre) is available from the Enterprise and Cottonwood #2 Ditches and is available May 16 to August 8, 84 days, and May 16 to September 12, 119 days, respectively. There are two domestic wells on the property.

Soils

Approximately 51 acres are suitable for diversified vegetable farming. Fields 445, 446, 447, and 448 (51.2 acres) are comprised primarily of Ascalon sandy loam with 1-3% slopes, Capability Class II.

Compatibility with Other Resources and Management Goals

Management area designation	Agricultural
Presence of visitor infrastructure	No
Prairie dog colony management area designation	N/A
Prairie dog occupation	N/A – not occupied
Bobolink management area designation	TBD
Presence of sensitive species	Rare and state-tracked plant communities are found on the Kolb Brothers property but do not intersect with agricultural fields that meet the soil and water criteria.
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

- Clean up property
  - Cost Estimate: $10,000
- Rehabilitate residence
  - Cost Estimate: $300,000[13]
- Assess the historic outbuildings to determine if they are historically significant
  - Cost Estimate: $5,000
- Rehabilitate the deteriorating outbuildings/or construct new and accommodate a cooler and wash area
  - Cost Estimate: $80,000
- Construct a small (1/10 acre-foot) irrigation pond near the Cottonwood #2 headgate to facilitate the delivery of irrigation water to any planting beds
  - Cost Estimate: $5,000
- Construct interior fence to separate vegetable fields from grazing areas
  - Cost Estimate: $10,000

[13] This estimate was provided by The University of Colorado Denver's Center of Preservation Research, part of the College of Architecture and Planning who performed an historic structures assessment on the residence May 2014.

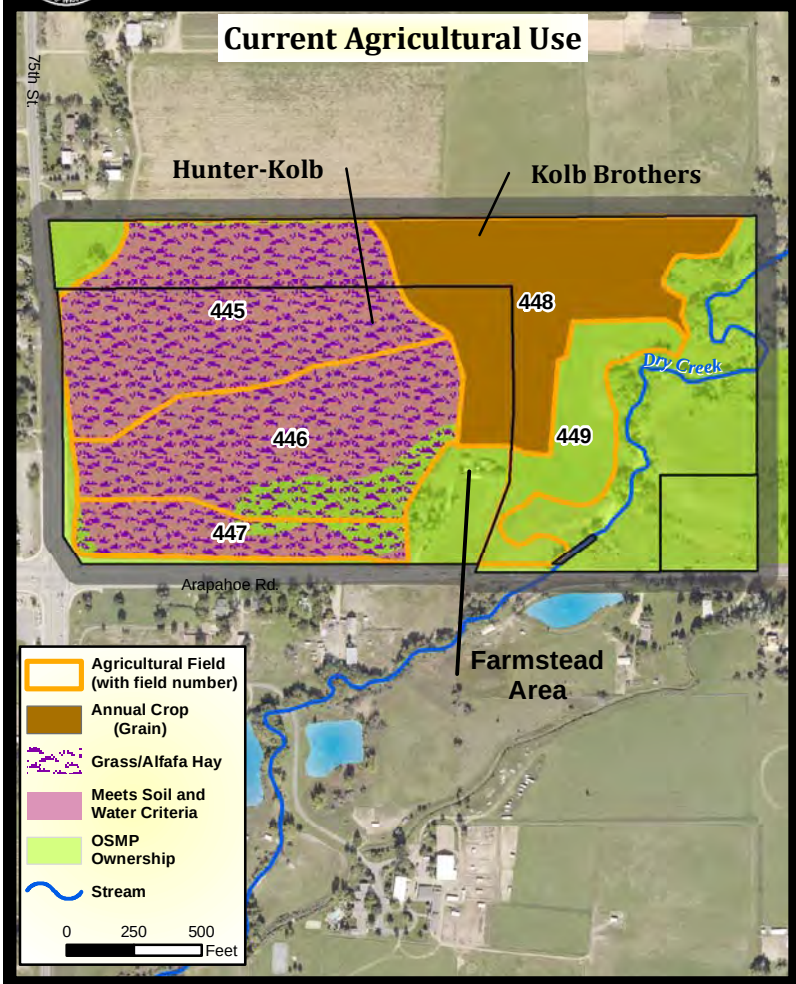
- Renovate the milking barn to be brought up to code. (The necessity of this management action is dependent on what type of operation is proposed for the property, i.e. pasture-based cow or goat dairy.)
    - Cost Estimate: $50,000

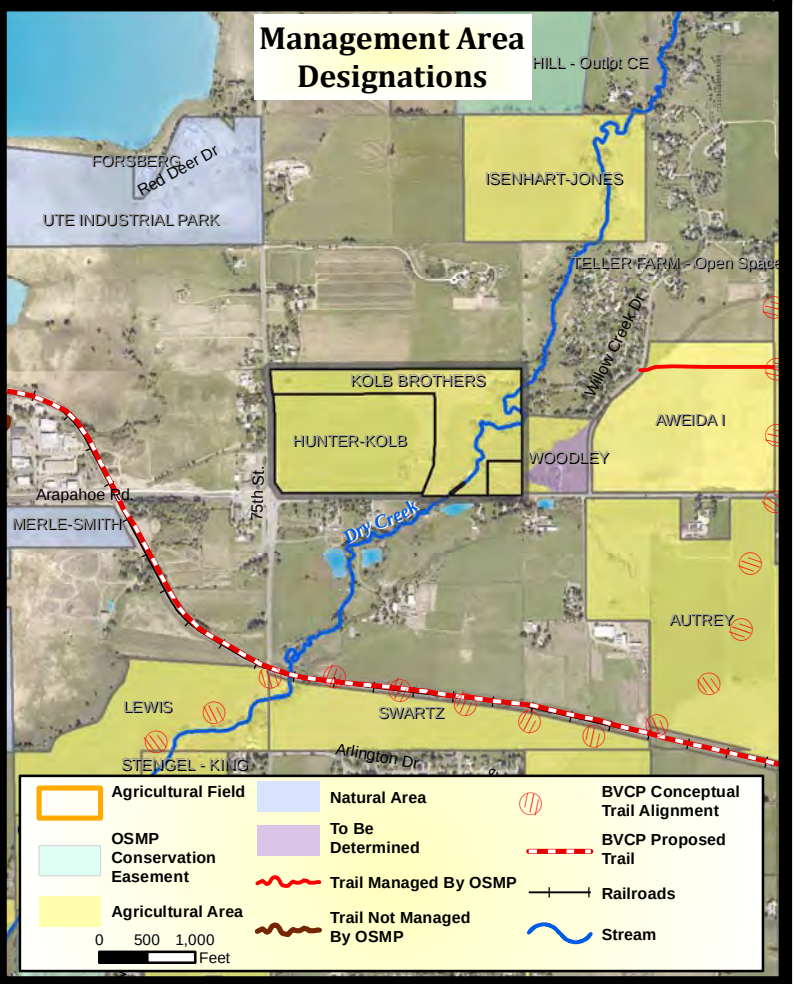
Total Cost Estimate: $410,000 - $460,000

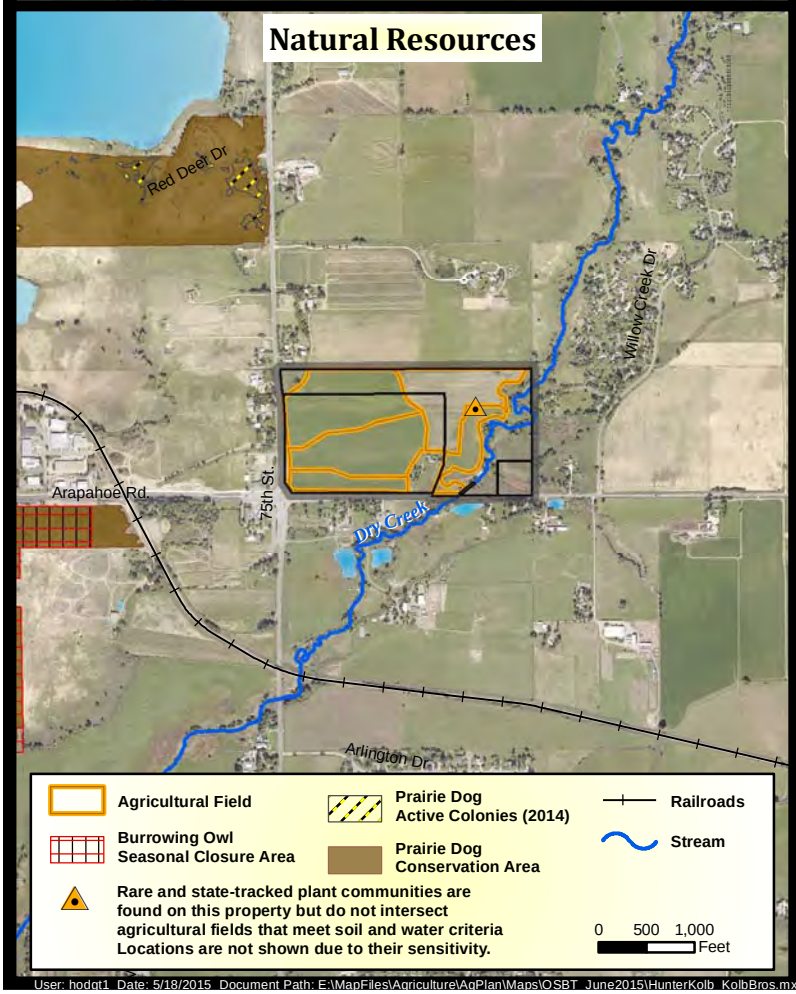
Recommendation

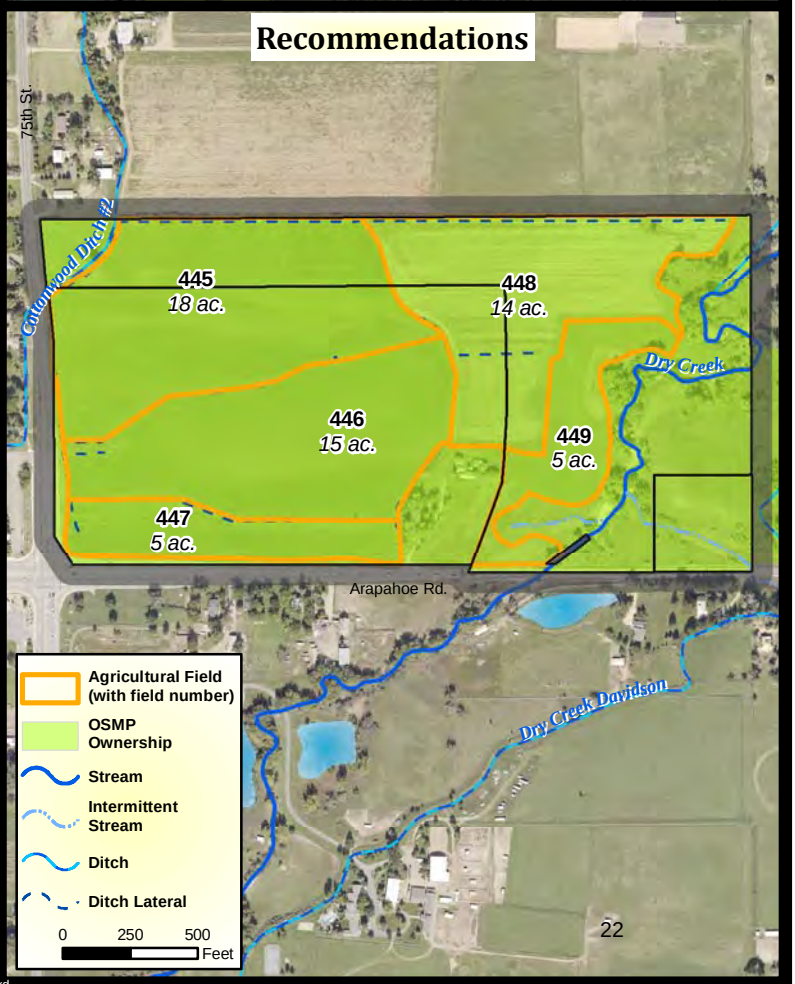
TBD

Hunter-Kolb, Kolb Brothers









User: hodgt1 Date: 5/18/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\HunterKolb_KolbBros.mxd

Deluca, Campbell, Hester, and Stratton

Essential Agricultural Characteristics

Infrastructure

There is a residence and two outbuildings, an attached garage and small storage shed on the Deluca property. There are no loafing sheds or barns on the DeLuca property. There are two small barns on the northeastern edge of the Campbell property.

Water

Most of the fields on the DeLuca, Campbell Hester and Stratton properties have an adequate amount of irrigated water (≥ 1.5 acre-feet per acre) available from the Left Hand Ditch, from April 1 to October 31, approximately 210 days. Portions of fields 457 and 458 on the Stratton property are not irrigated.

Soils

Approximately 70 acres on the DeLuca property are suitable for diversified vegetable farming. Fields 14 and 19 (44.4 acres) are comprised of a mixture of Valmont clay loam, 1-3 % and 3-5% slopes, both Capability Class III. Portions of field 13 (25.8 acres) is comprised of Valmont clay loam, with 1-3 and 3-5% slopes, Capability Class III.

The entirety of the Hester property, 39 acres on fields 17 and 18, is comprised of Valmont clay loam with 1-3% slopes, Capability Class III, suitable for diversified vegetable production.

Approximately 50 acres of the Campbell property are suitable for diversified vegetable production. Fields 21, 23 and 459, and the northern portion of field 24 are comprised of Valmont clay loam with 1-3% slopes, Capability Class III.

Approximately 10 acres on the Stratton property are suitable for diversified vegetable production. A portion of field 457 is comprised of Valmont clay loam with 1-3% slopes, Capability Class III.

Compatibility with Other Resources and Management Goals

Management area designation	Natural Area
Presence of visitor infrastructure	No
Prairie dog colony management area designation	Stratton - Removal Area Campbell – Transition Area Deluca & Hester – N/A
Prairie dog occupation	Stratton – Occupied Campbell – Not occupied Deluca & Hester – N/A
Bobolink management area designation	TBD
Presence of sensitive species	Rare and state-tracked plant communities are found on the Deluca, Campbell and Stratton properties and intersect with agricultural fields that meet the soil and water criteria.
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

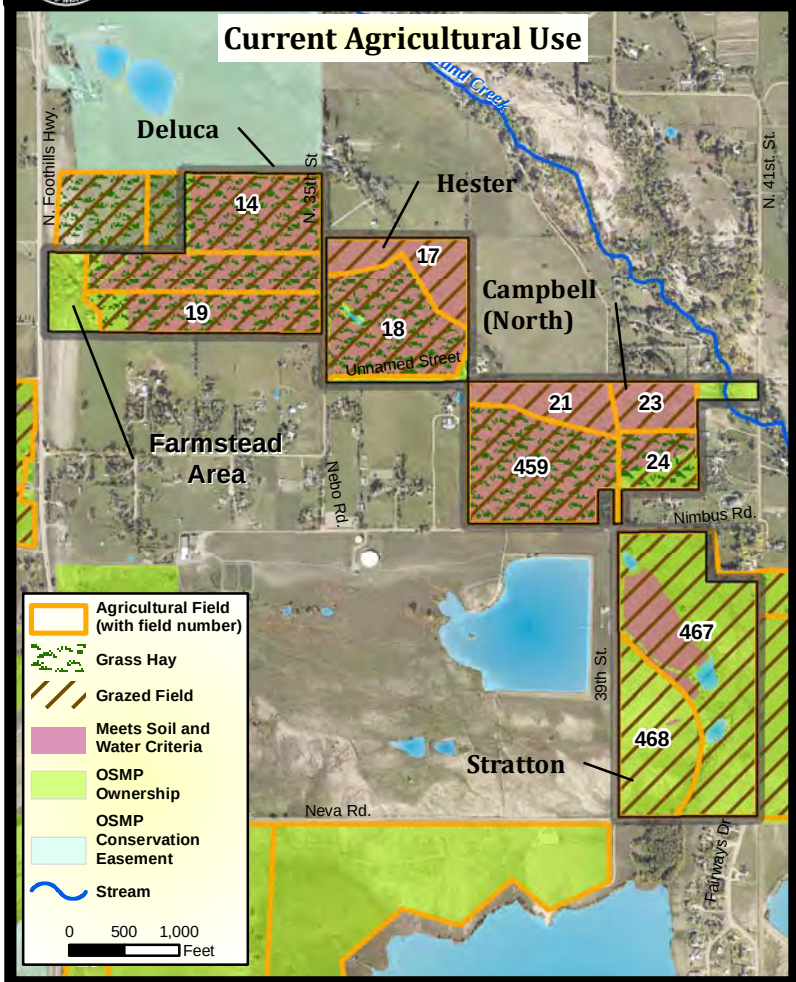
- Clean up property
  - Cost Estimate: $15,000
- Construct new outbuildings to accommodate equipment storage, a cooler and wash area
  - Cost Estimate: $100,000
- Construct a series of small (1/10 acre-foot) irrigation ponds on each property adjacent to vegetable cultivation areas to facilitate delivery of irrigation water to planting beds
  - Cost Estimate $5,000 each
- Construct interior fence to separate vegetable fields from grazing areas
  - Cost Estimate: $10,000
- Cultural Resource survey for Deluca

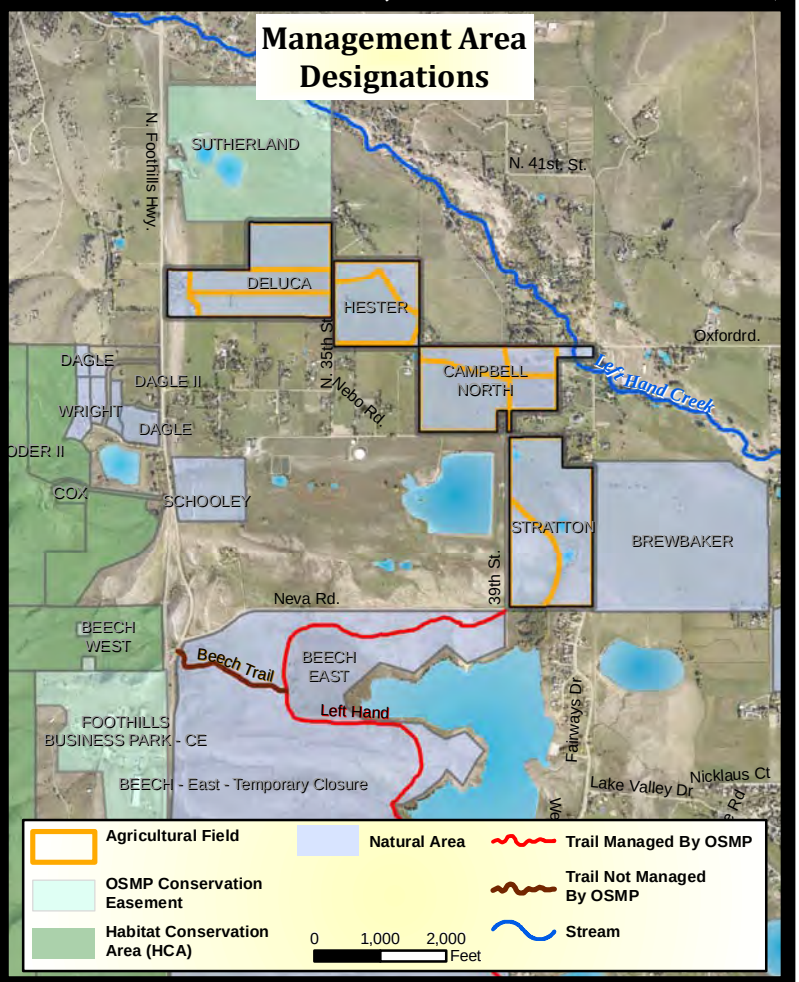
Total Cost Estimate: $130,000-$145,000

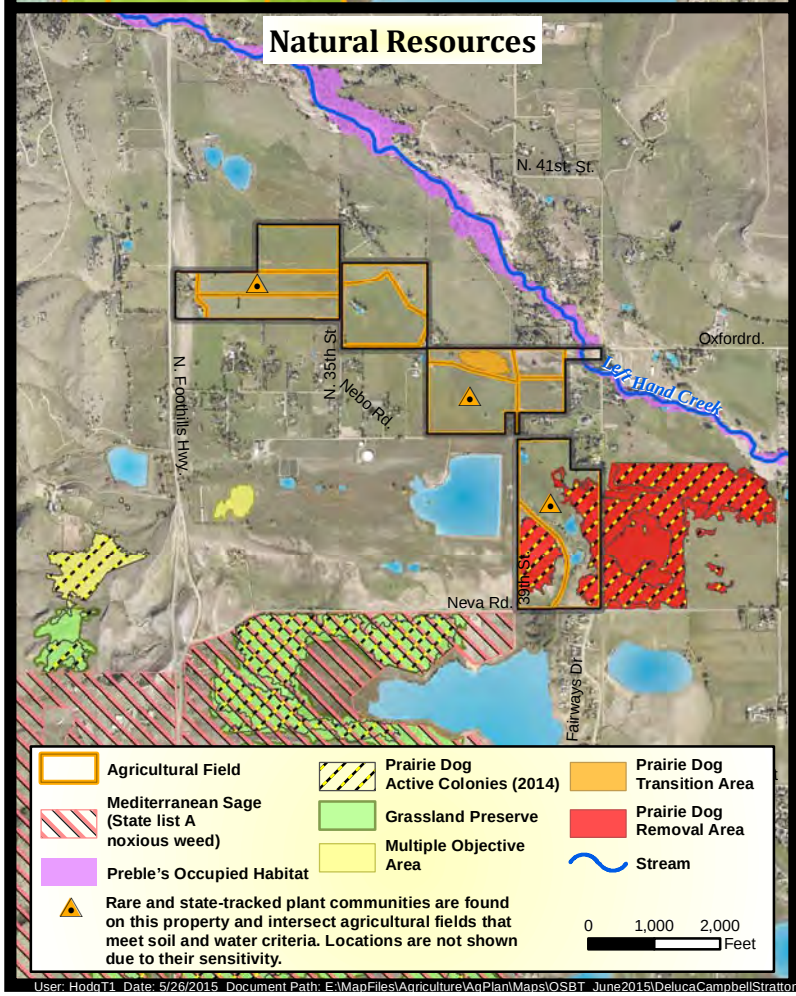
Recommendation

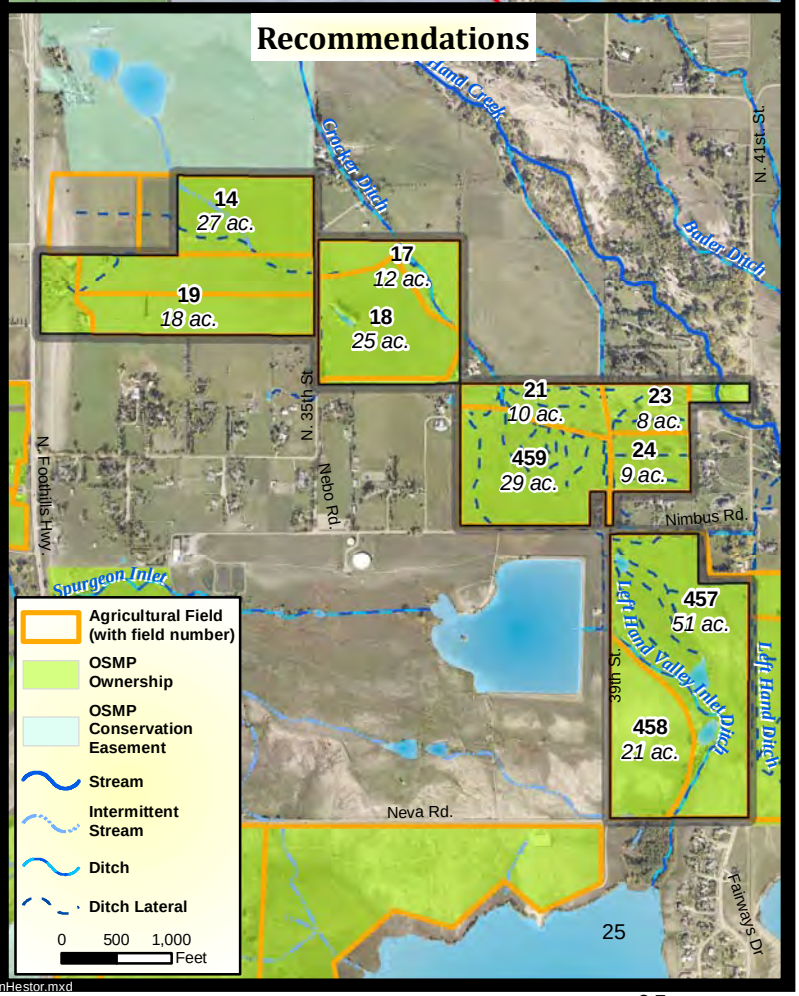
TBD

Deluca, Campbell, Hestor, Stratton









User: HodgT1 Date: 5/26/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\DelucaCampbellStrattonHestor.mxd

Johnson and Axelson East

Essential Agricultural Characteristics

Infrastructure

There is a residence and a milking barn on the Johnson property.

Water

An adequate amount of irrigated water (≥ 1.5 acre-feet per acre) is available from the Left Hand Ditch and delivered via the Star lateral from April 1 to October 31, approximately 210 days, for both the Johnson and Axelson properties with the exception of a 5.38-acre portion in the southwest corner of field 62 that is unirrigable.

Soils

125.2 acres on the Johnson property are suitable for diversified vegetable farming. A portion of fields 36 and 37, 43.6 acres north of Monarch Road, are comprised of Valmont clay loam with 1-3% slopes, Capability Class III. South of Monarch Road, there are 81.6 acres spread over fields 46, 47, 57, 58, 62, 64 and 66 comprised primarily of Valmont clay loam with 1-3% slopes, Capability Class III, but there is a 9-acre portion of field 66 that is comprised of Nunn clay loam with 1-3% slopes, Capability Class II.

The entirety of the 38-acre Axelson East property, fields 56 and 61, are comprised of Valmont clay loam, 1-3% slopes, Capability Class III, suitable for diversified vegetable production.

Compatibility with Other Resources and Management Goals

Management area designation	Agricultural
Presence of visitor infrastructure	BVCP proposed trail
Prairie dog colony management area designation	Transition Area
Prairie dog occupation	Occupied
Bobolink management area designation	TBD
Presence of sensitive species	Rare and state-tracked plant communities are found on the Johnson property and intersect with agricultural fields that meet the soil and water criteria.
Presence of State A listed noxious weeds	Johnson Property - Mediterranean sage

Management Actions and Cost Estimate for Conversion

- Clean up property
  - Cost Estimate: $10,000
- Assess the historic residence and outbuildings to determine if they are historically significant
  - Cost Estimate: $10,000
- Rehabilitate residence
  - Cost Estimate: $500,000
- Update outbuilding to accommodate a cooler and wash area
  - Cost Estimate: $30,000
- Construct a livestock pole barn
  - Cost Estimate: $15,000

- Construct a small (1/10 acre-foot) irrigation pond near the vegetable cropping area to facilitate the delivery of irrigation water to any planting beds
    - Cost Estimate: $5,000 per pond
- Construct a fence to separate fields 46, 47, 58 and 64 for diversified vegetable farming from the rest of the property which may be grazed
    - Cost Estimate: $15,000
- Construct a prairie dog fence to separate prairie dog colonies from cropping area on Johnson
    - Cost Estimate: $25,000
- Passive Relocation of prairie dogs off of fields 46, 47, 58 and 64

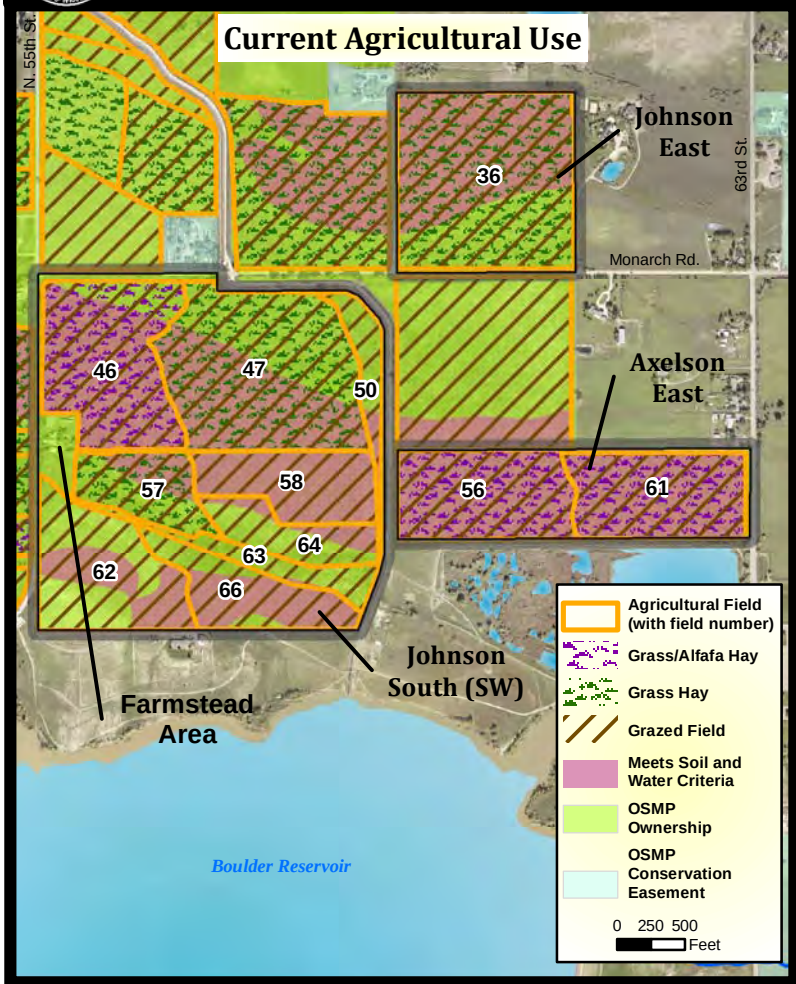
  Cost Estimate: $50,000
- Renovate the milking barn to be brought up to code (The necessity of this management action is dependent on what type of operation is proposed for the property, i.e. cow or goat dairy.)
    - Cost Estimate: $50,000

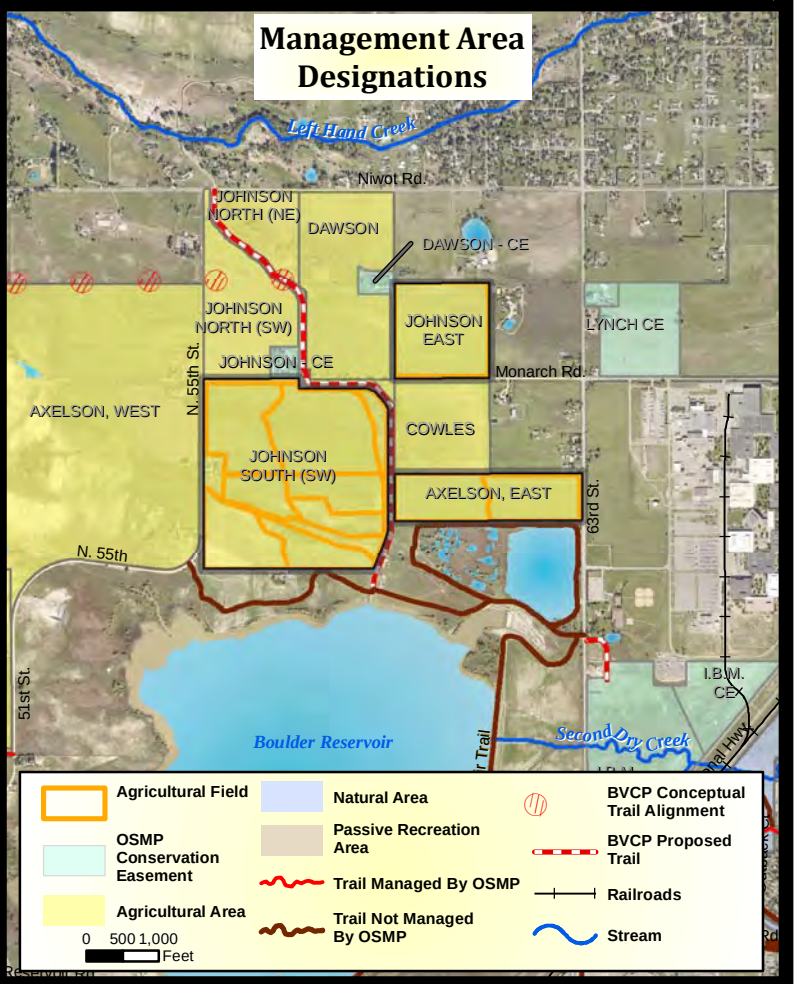
Total Cost Estimate: $660,000-$710,000

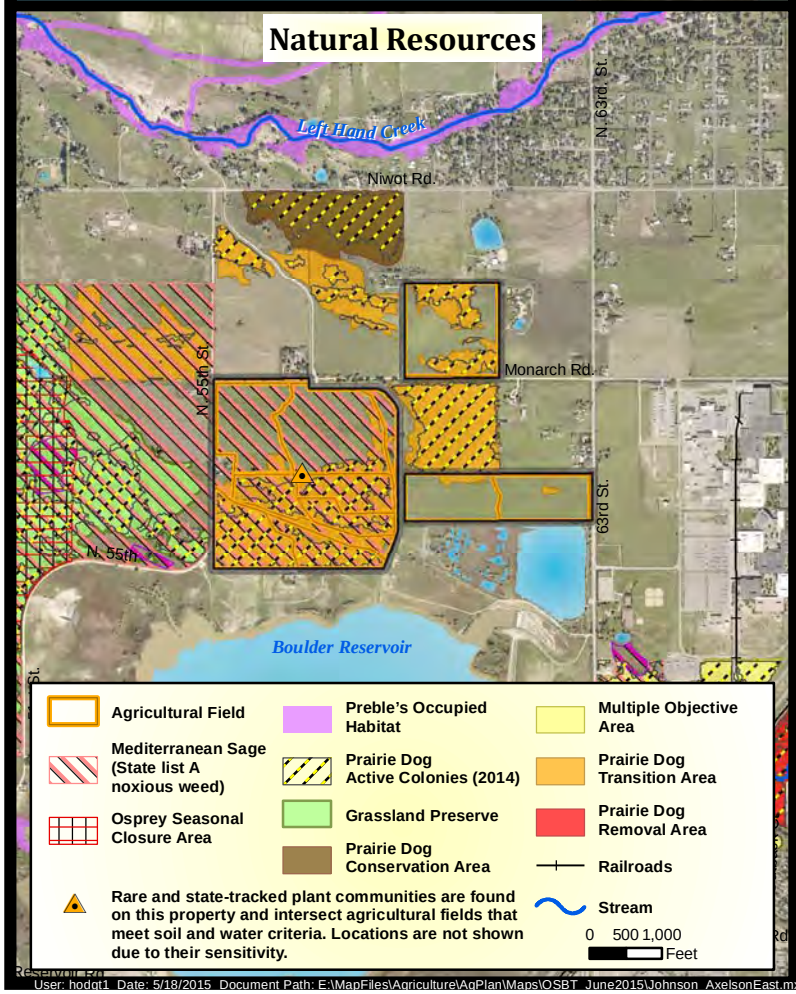
Recommendation

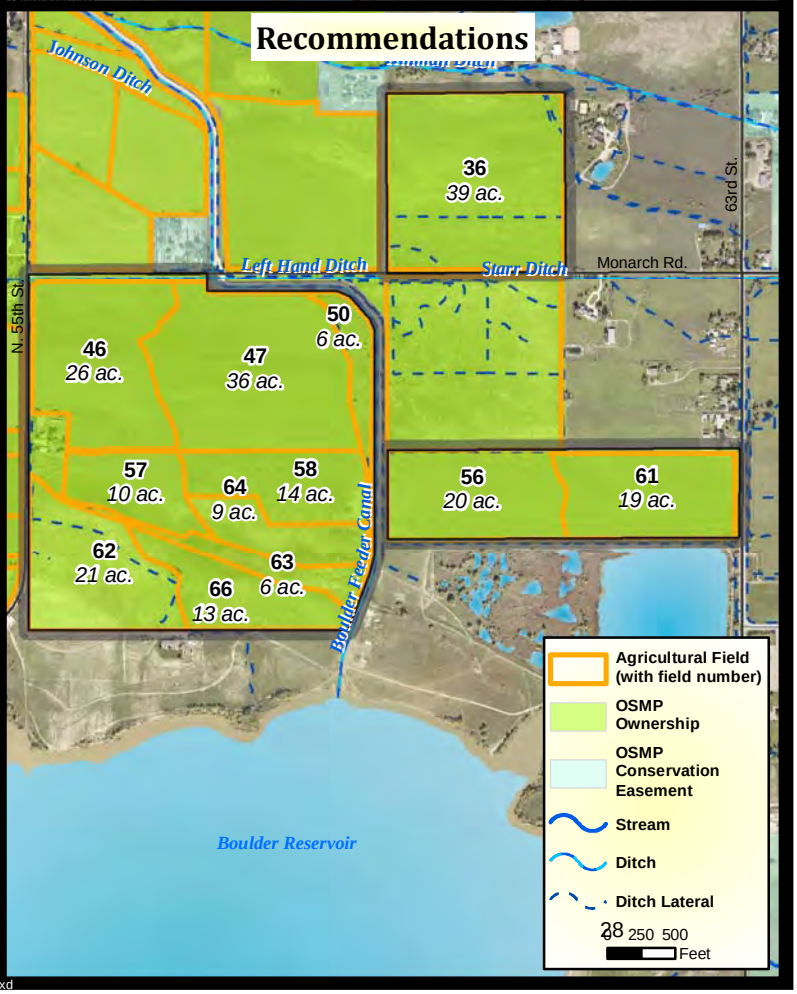
TBD

Johnson, Axelson East









User: hodgt1 Date: 5/18/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\Johnson_AxelsonEast.mxd

Kolb

Essential Agricultural Characteristics

Infrastructure

There is a residence, a large barn formerly used for milking and storage, a shed and two pole barns on the property.

Water

An adequate amount of irrigated water (≥ 1.5 acre-feet per acre) is available from the Green Ditch, Butte Irrigation and Milling Ditch and the Jones and Donnelly Ditch. Collectively, these ditches run from May 6 to October 28, 175 days. There is also a domestic well on the property, which has gone dry during past droughts.

Soils

Approximately 40 acres of field 160 is comprised of soils suitable for diversified vegetable production: Loveland soils, Capability Class III.

Compatibility with Other Resources and Management Goals

Management area designation	Habitat Conservation Area
Presence of visitor infrastructure	No
Prairie dog colony management area designation	Transition Area
Prairie dog occupation	Not occupied
Bobolink management area designation	TBD
Presence of sensitive species	• Bald eagle nesting area (Closed to human activity Nov. 1- July 31) • Northern leopard frog habitat • Rare and state-tracked plant communities are found on the property and intersect with agricultural fields that meet the soil and water criteria.
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

- Clean up property
  - Cost Estimate: $10,000
- Assess the historic residence and outbuildings to determine if they are historically significant
  - Cost Estimate: $10,000
- Rehabilitate residence
  - Cost Estimate: $150,000
- Rehabilitate existing barns and outbuildings
  - Cost Estimate: $100,000
- Update outbuilding to accommodate a cooler and wash area
  - Cost Estimate: $30,000
- Construct a small (1/10 acre-foot) irrigation pond near the vegetable cropping area to facilitate the delivery of irrigation water to any planting beds
- Cost Estimate: $5,000

- Renovate the milking barn to be brought up to code (The necessity of this management action is dependent on what type of operation is proposed for the property, i.e. pasture-based cow or goat dairy.)
    - Cost Estimate: $ 50,000

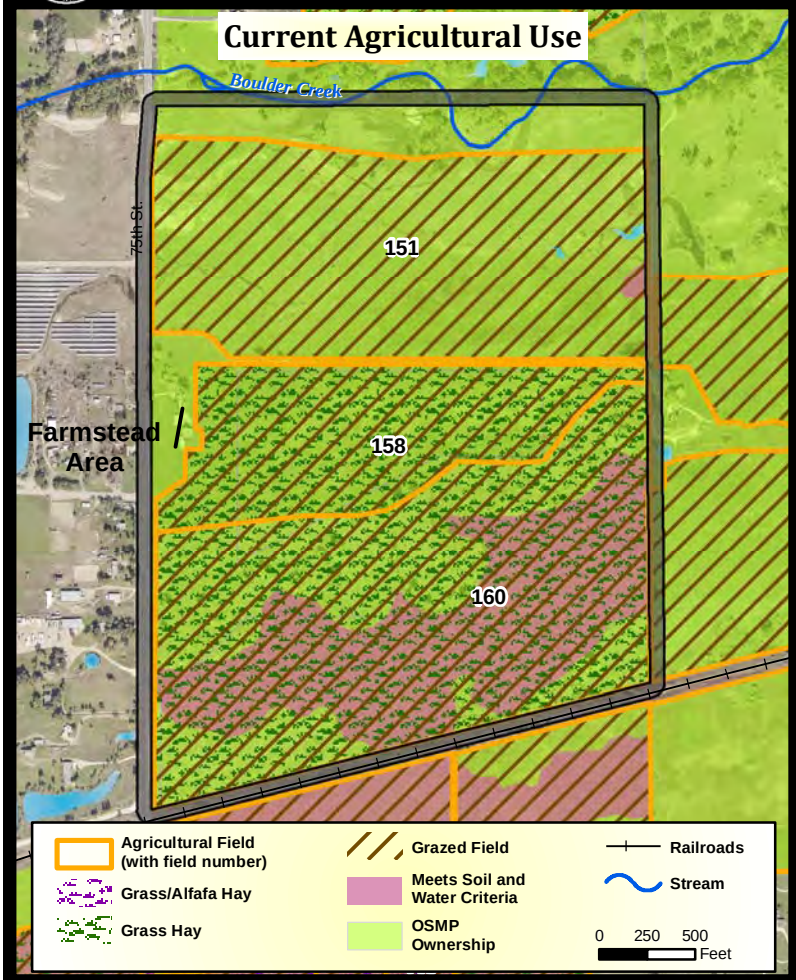
Total Cost Estimate: $305,000-$355,000

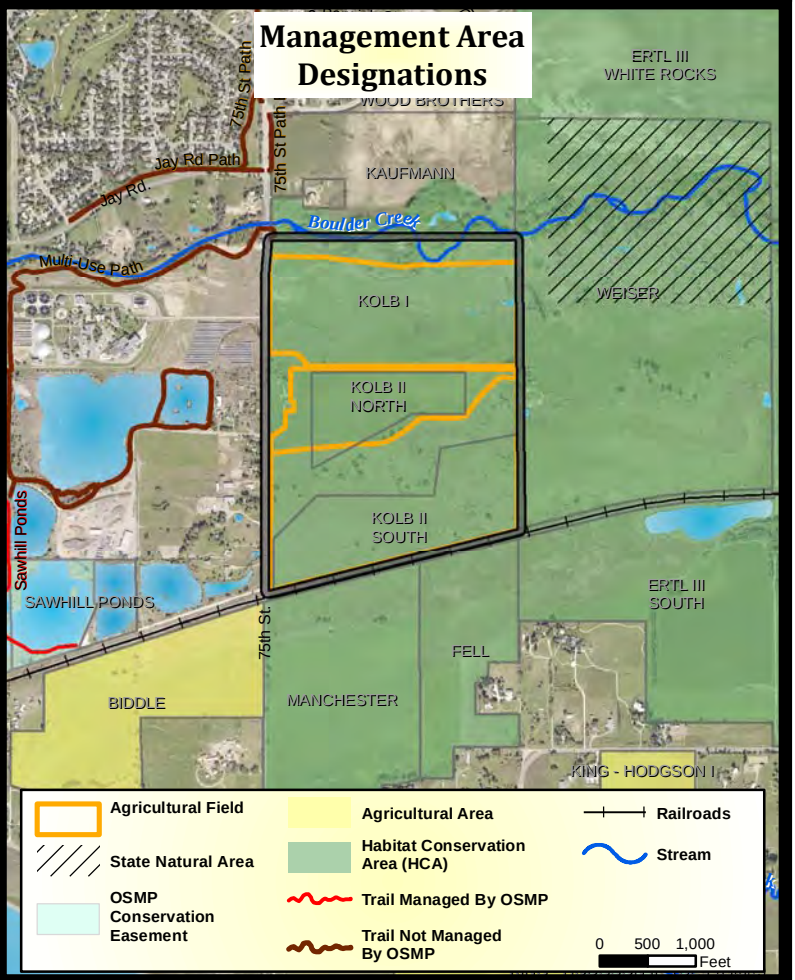
Recommendation

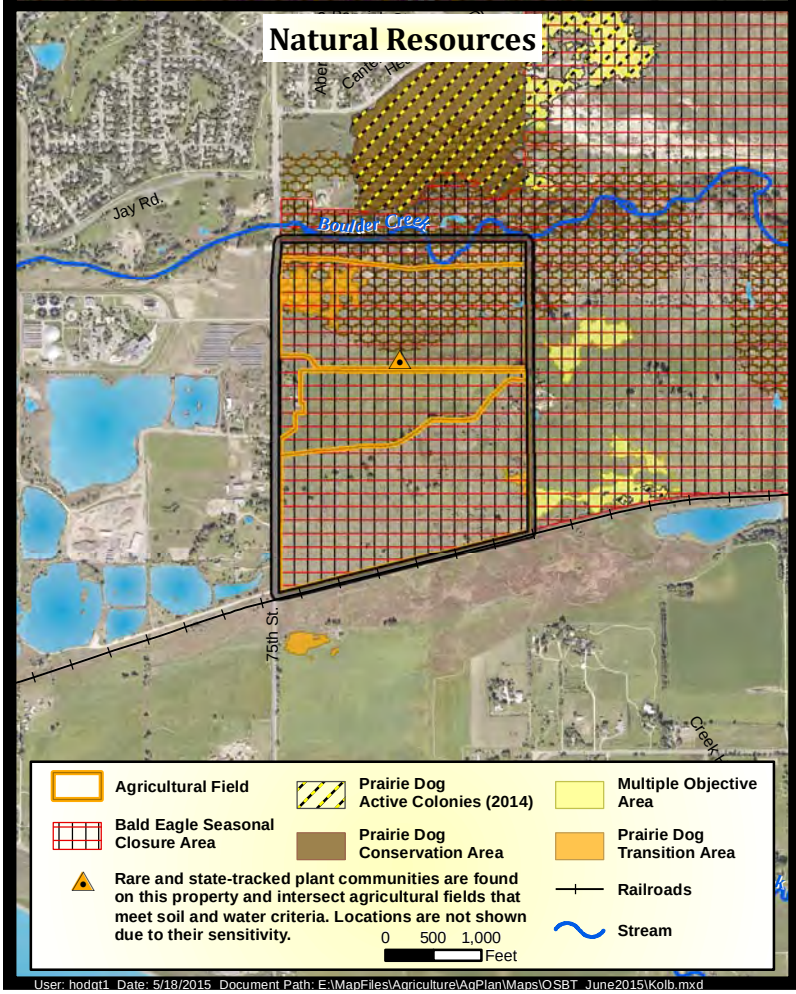
TBD

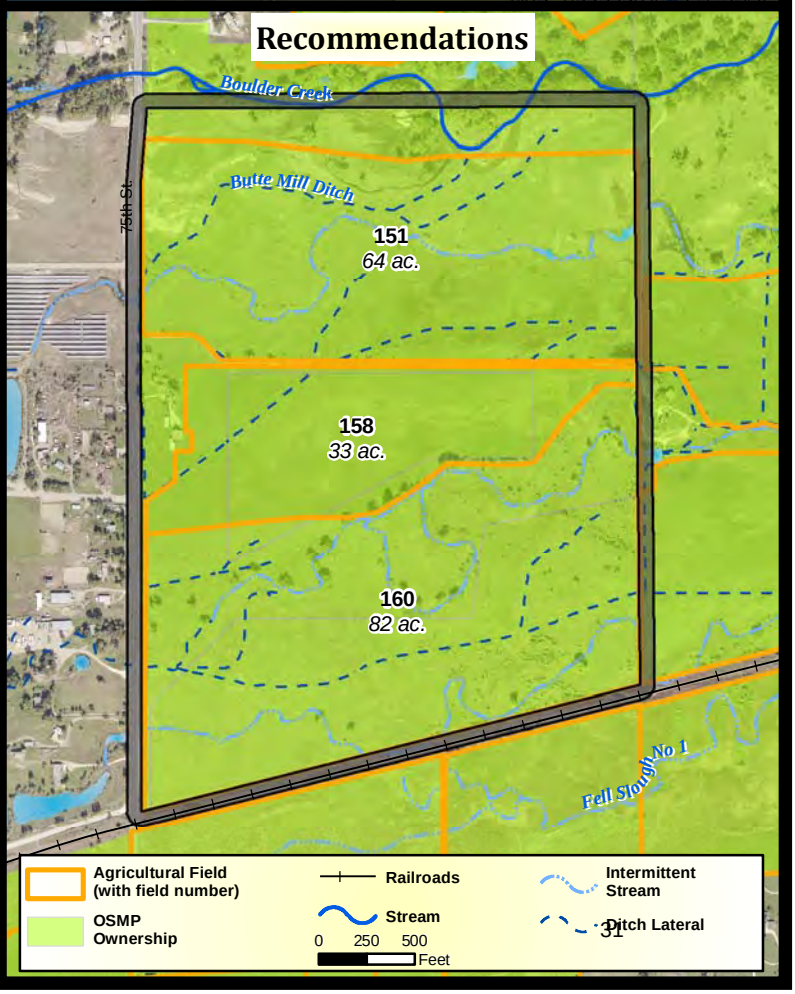
City of Boulder Open Space and Mountain Parks
Agricultural Plan

Kolb









User: hodgt1 Date: 5/18/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\Kolb.mxd

Bell I, Bell II and Teller

Essential Agricultural Characteristics

Infrastructure

No infrastructure is present on the property.

Water

For the Teller property, an adequate amount of irrigated water (≥ 1.5 acre-feet per acre) from the Leyner Cottonwood, Marshallville and Dry Creek ditches. Collectively, these ditches run from May 16 to September 12, approximately 119 days. The entirety of fields 178, 204 and 206 as well as portions of 205 and 406 are non-irrigable.

For the Bell I and II properties, an adequate amount of irrigated water (≥ 1.5 acre-feet per acre) from the Leyner Cottonwood and Cottonwood #2 Ditch is available, both run from May 6 to September 12, approximately 119 days. Field 184 (24.6 acres) is not irrigated, and fields 179 and 180 (28.9 acres) are irrigated by the Andrews-Farwell ditch, which only has irrigation water for 52 days a season.

Soils

On the Teller property there are 124.3 acres suited for diversified vegetable production spread over fields 186, 187, 200, 205, 207, 210 and 406. The soils are a mixture of Manter sandy loam with 1-3% slopes, Capability Class III, Manter sandy loam with 3-9% slopes, Capability Class III, Hargreave fine sandy loam with 1-3% slopes, Capability Class III, Ascalon sandy loam with 0-1% slopes, Capability Class I, Ascalon sandy loam with 1-3% slopes, Capability Class II, and Ascalon sandy loam with 3-5% slopes, Capability Class III.

Eighteen acres on the Bell I property are suited for diversified vegetable production. Field 189 is comprised of a mixture of Manter sandy loam with 1-3% slopes, Capability Class III, Manter sandy loam with 3-9% slopes, Capability Class III, and Ascalon sandy loam with 1-3% slopes, Capability Class II.

On the Bell II property, 33.5 acres are suitable for diversified vegetable production. Fields 190 and 193 are comprised of Manter sandy loam with 1-3% slopes, Manter sandy loam with 3-9% slopes, Ascalon sandy loam with 3-5% slopes, all Capability Class III and Ascalon sandy loam with 1-3% slopes, Capability Class II.

Compatibility with Other Resources and Management Goals

Management area designation	Agricultural
Presence of visitor infrastructure	• OSMP East Boulder/Teller Farm Trail • BVCP conceptual trail: East Boulder Trail
Prairie dog colony management area designation	Transition Area
Prairie dog occupation	Subset occupied
Bobolink management area designation	TBD
Presence of sensitive species	• Teller property – northern leopard frog habitat • Rare and state-tracked plant communities are found on the Teller property and intersect with agricultural fields that meet the soil and water criteria.
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

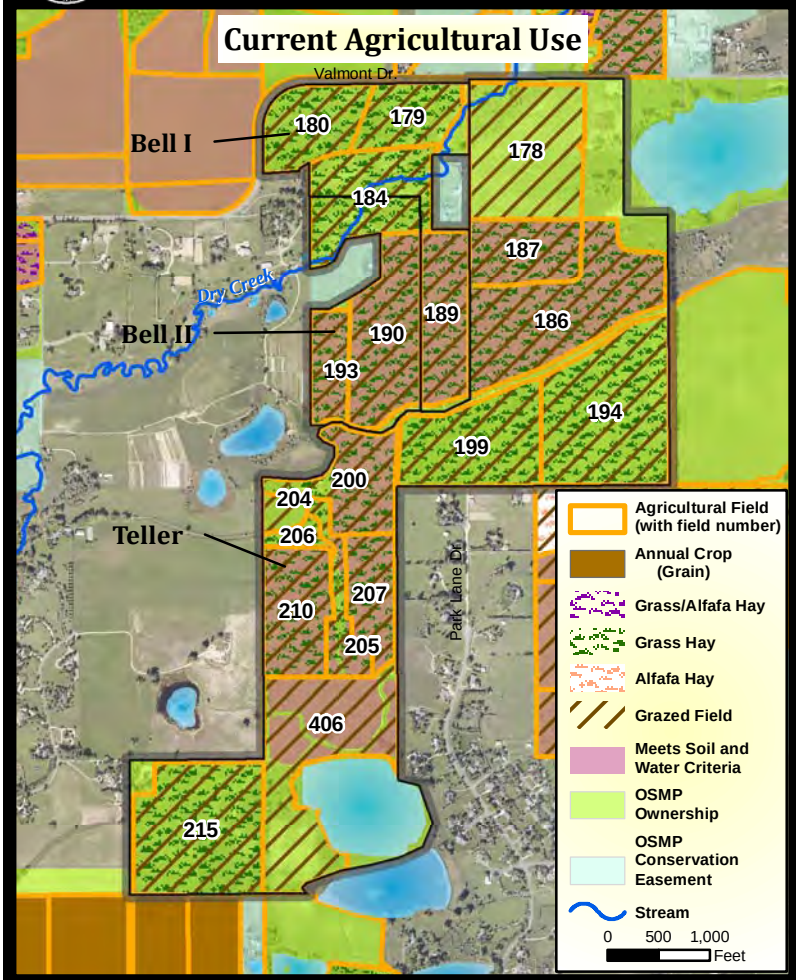
- Clean up property
  - Cost Estimate: $5,000
- Construct a small (1/10 acre-foot) irrigation pond near the vegetable cropping area to facilitate the delivery of irrigation water to any planting beds. There are several cropping areas on each property
  - Cost Estimate: $5,000 per pond
- Construct a fence to separate the cropping area of a diversified vegetable farming operation from the rest of the property which may be hayed/ grazed
  - Cost Estimate: $ 25,000

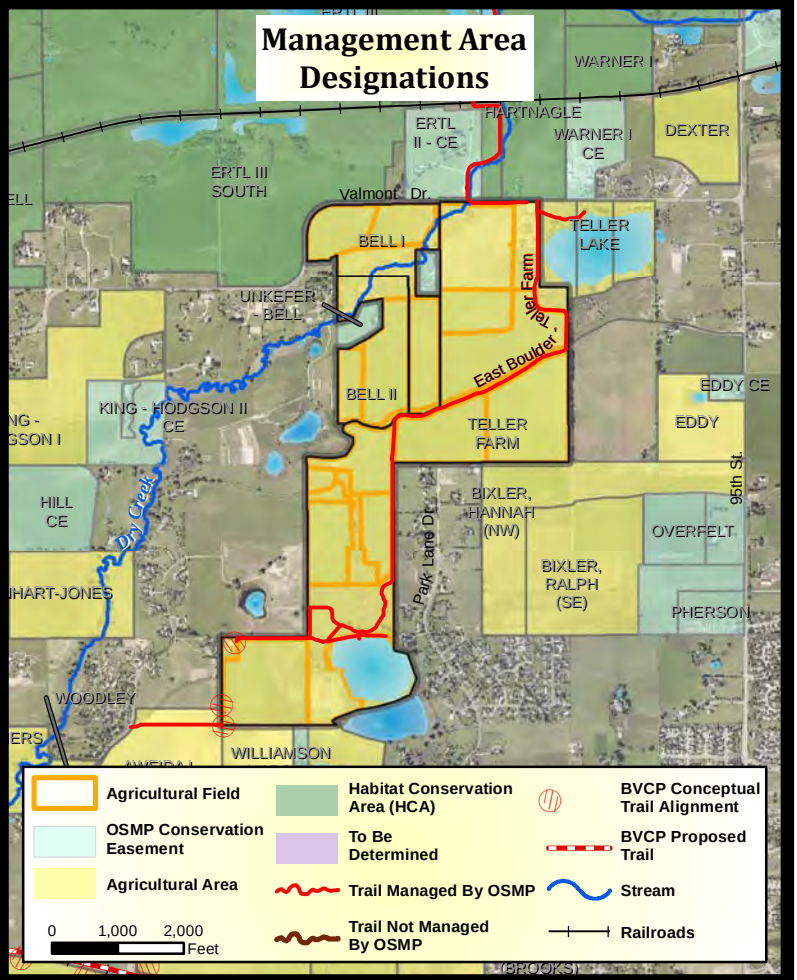
Total Cost Estimate: $35,000-$50,000

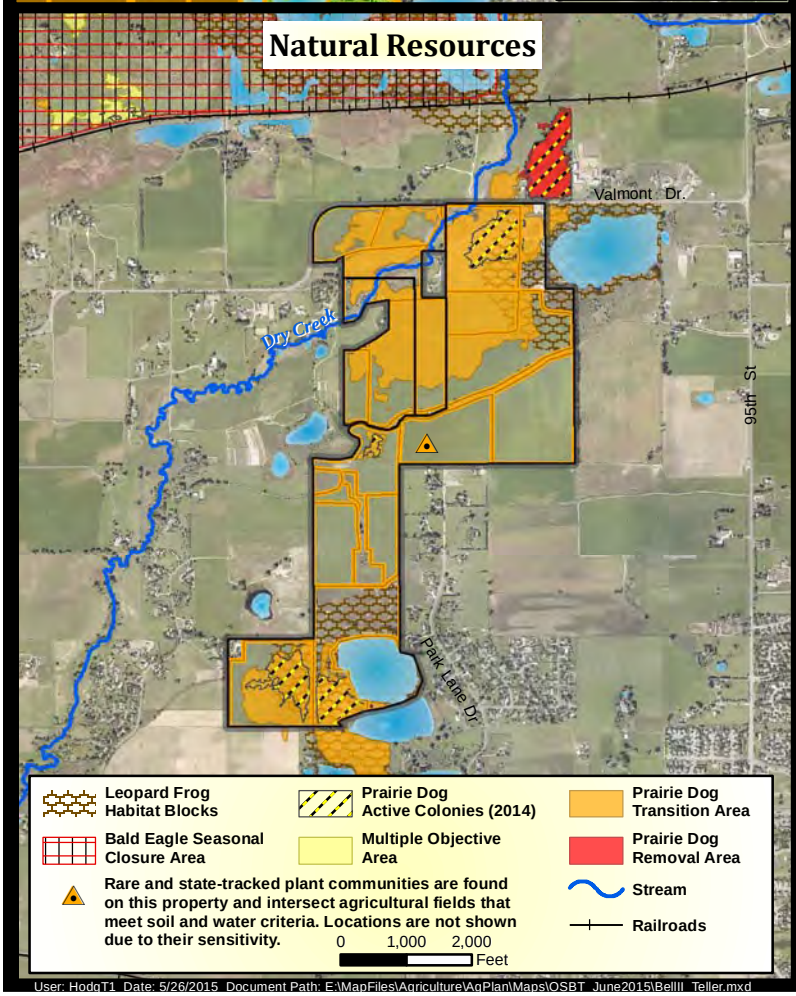
Recommendation

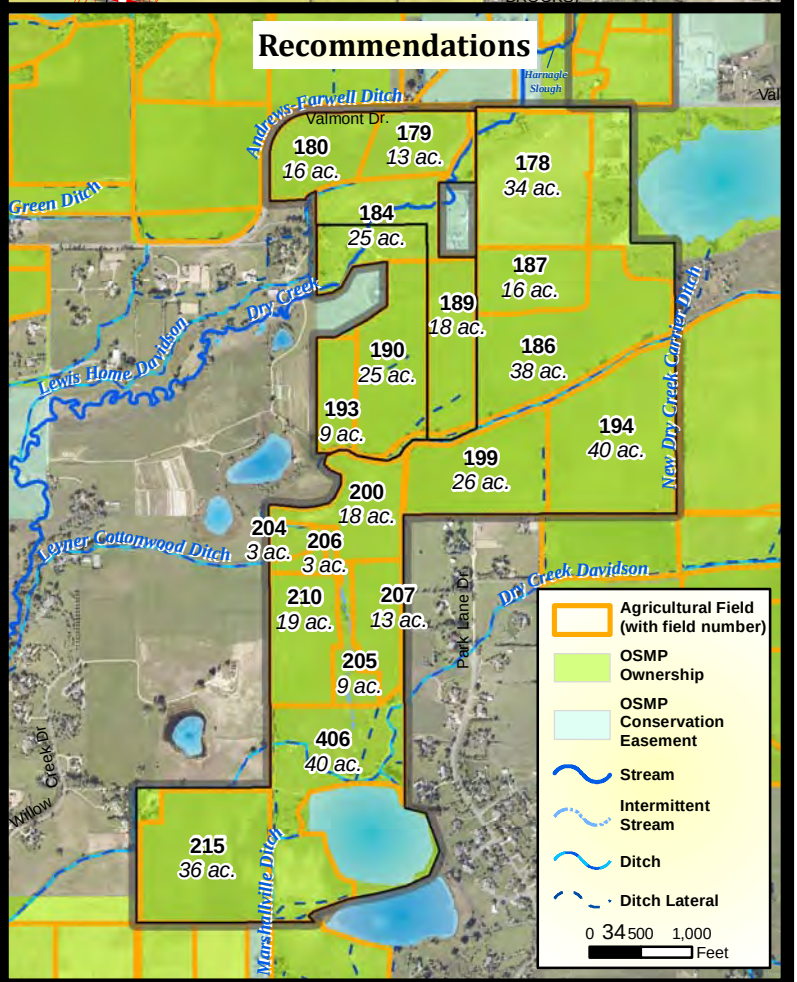
TBD

Bell, Teller Farm









User: HodgT1 Date: 5/26/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\BellII_Teller.mxd

King Hodgson I

Essential Agricultural Characteristics

Infrastructure

No infrastructure is present on the property.

Water

An adequate amount of irrigated water (≥ 1.5 acre-feet per acre) from the Cottonwood #2 and Butte Irrigation and Milling Ditches is available from May 16 to September 12, approximately 119 days.

Soils

Ninety-nine acres on the King Hodgson property are suitable for diversified vegetable production. Fields 185, 188, 192, 196, 197 and 432 (52 acres) are comprised entirely of Ascalon sandy loam with 1-3% slopes, Capability Class II. Field 198 (47 acres) is comprised of a mixture of Ascalon sandy loam with 1-3% slopes and Ascalon–Otero Complex with 3-5 % slopes, Capability Classes II and III, respectively.

Compatibility with Other Resources and Management Goals

Management area designation	Agricultural
Presence of visitor infrastructure	No
Prairie dog colony management area designation	N/A
Prairie dog occupation	Not occupied
Bobolink management area designation	TBD
Presence of sensitive species	No
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

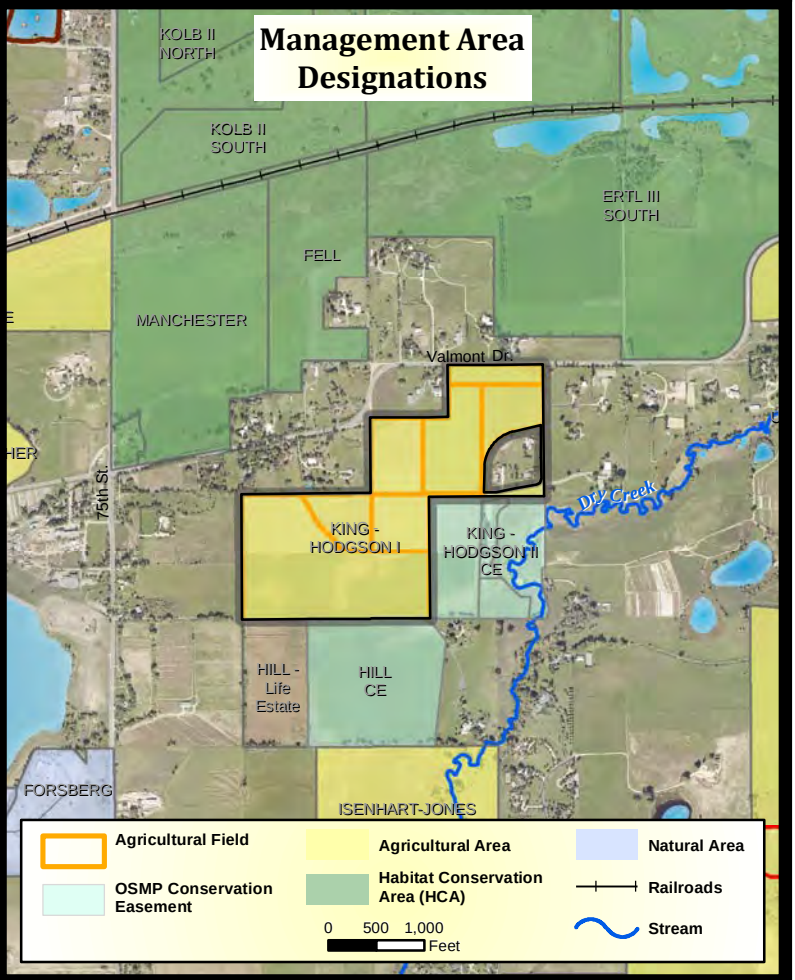
- Clean up property
  - Cost Estimate: $5,000
- Construct a small (1/10 acre-foot) irrigation pond near the vegetable cropping area to facilitate the delivery of irrigation water to any planting beds
  - Cost Estimate: $5,000
- Construct a fence to separate the cropping area of a diversified vegetable farming operation from the rest of the property which may be hayed/ grazed
  - Cost Estimate: $15,000
- Cultural Resource Survey

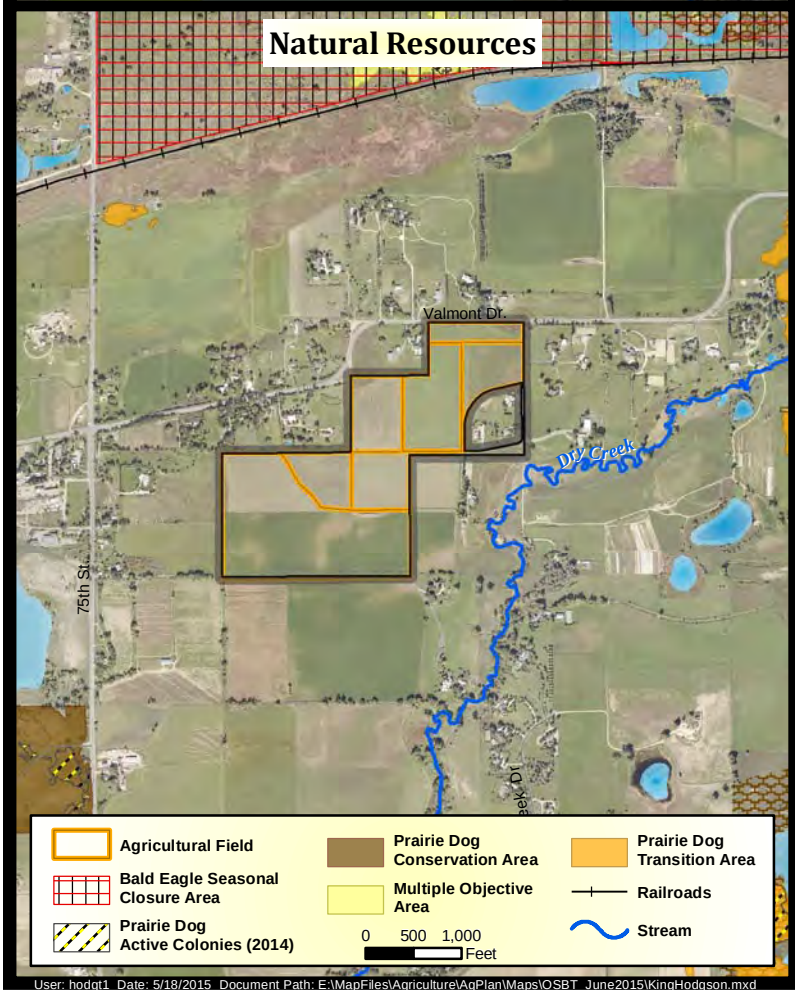
Total Cost Estimate: $25,000

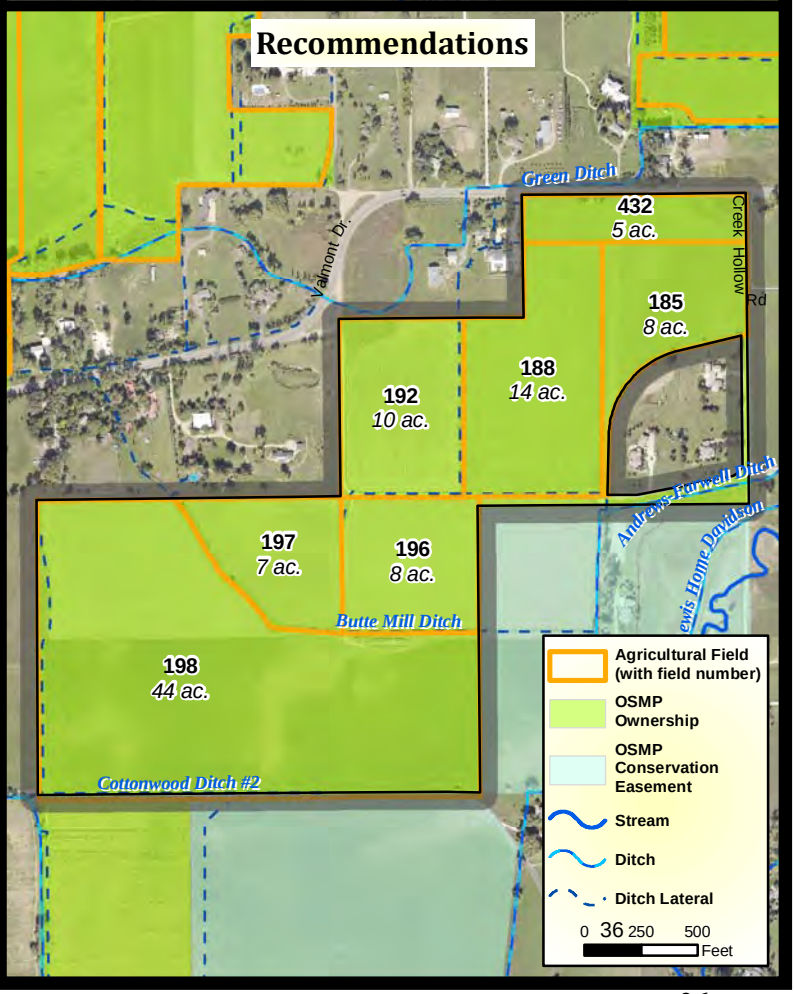
Recommendation

TBD

King - Hodgson I







User: hodgt1 Date: 5/18/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\KingHodgson.mxd

St. Walburga Abbey

Essential Agricultural Characteristics

Infrastructure

No infrastructure is present on the property.

Water

An adequate amount of irrigated water (≥ 1.5 acre-feet per acre) from the McGinn Ditch is available, which runs from April 29 to October 10, approximately 164 days. A portion of fields 303 and 308 are not irrigated.

Soils

Approximately 59 acres of the St. Walburga Abbey property are suitable for diversified vegetable production. Field 302 (27.1 acres) is comprised entirely of Nunn sandy clay loam with 0-1% slopes, Capability Class I. Field 303 has 17.3 acres of irrigated land consisting of Nunn sandy clay loam with 0-1% slopes and Valmont clay loam, 1-3% slopes, both Capability Class III. Field 308 has 14.8 acres of irrigated land comprised of Valmont clay loam with 1-3% slopes, Capability Class III.

Compatibility with Other Resources and Management Goals

Management area designation	Natural Area
Presence of visitor infrastructure	No
Prairie dog colony management area designation	N/A
Prairie dog occupation	N/A
Bobolink management area designation	TBD
Presence of sensitive species	No
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

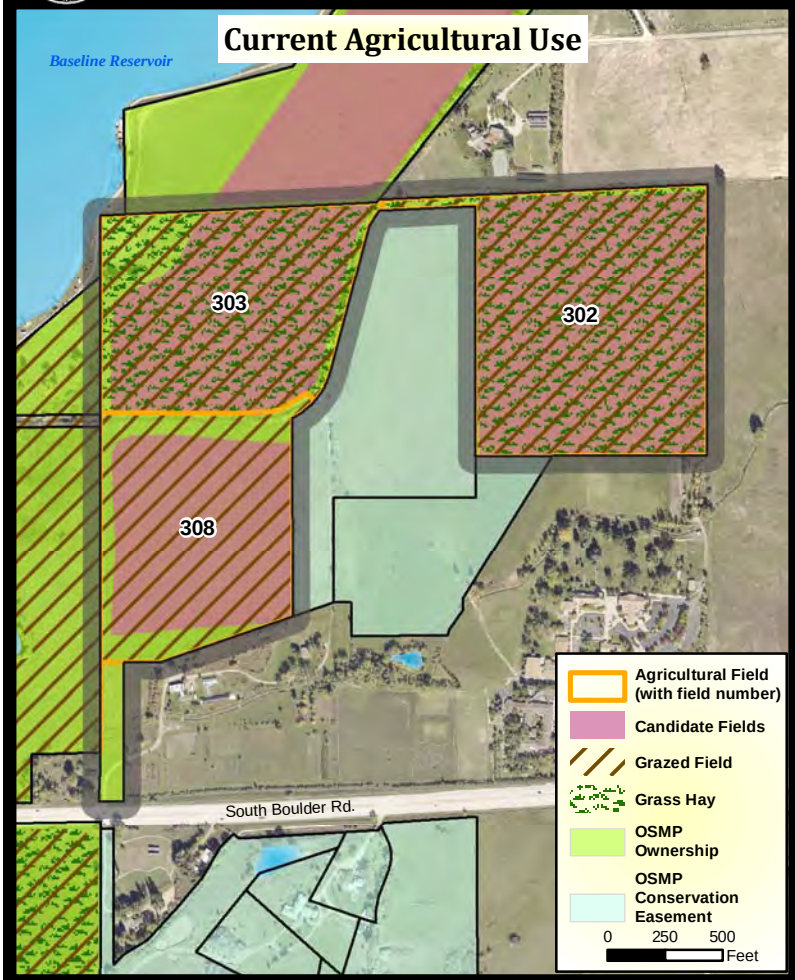
- Clean up property
  - Cost Estimate: $5,000
- Construct a small (1/10 acre-foot) irrigation pond near the vegetable cropping area to facilitate the delivery of irrigation water to any planting beds. There are three fields on this property
  - Cost Estimate: $5,000 per pond
- Construct a fence to separate the cropping area of a diversified vegetable farming operation from the rest of the property which may be hayed/ grazed
  - Cost Estimate: $15,000

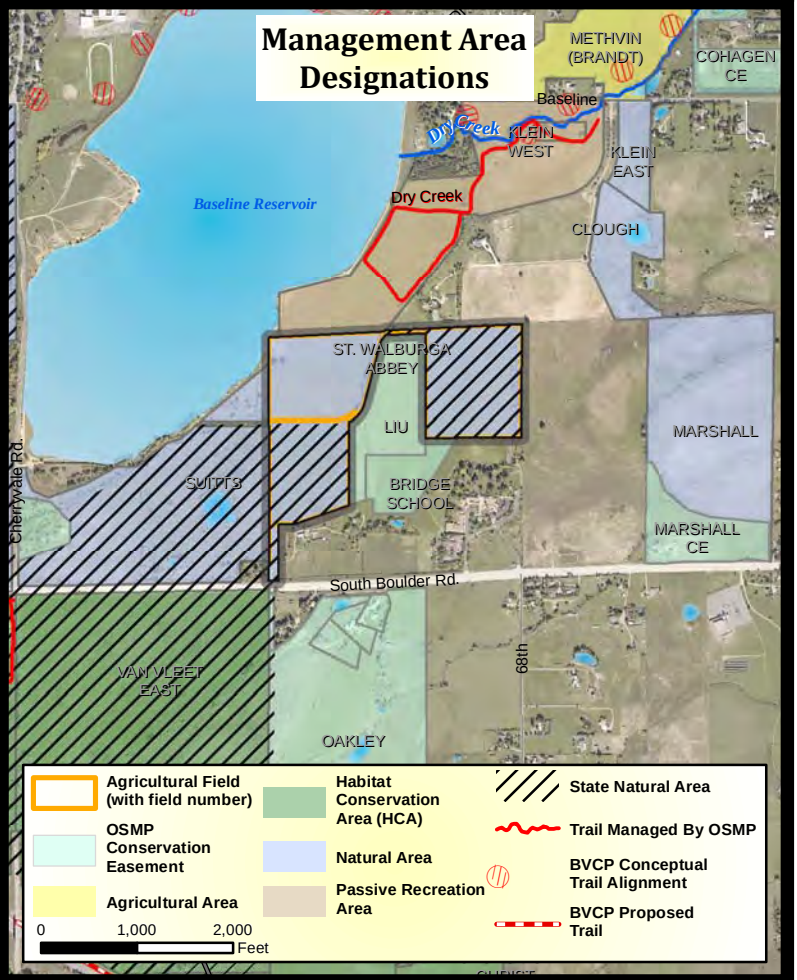
Total Cost Estimate: $ 25,000-$35,000

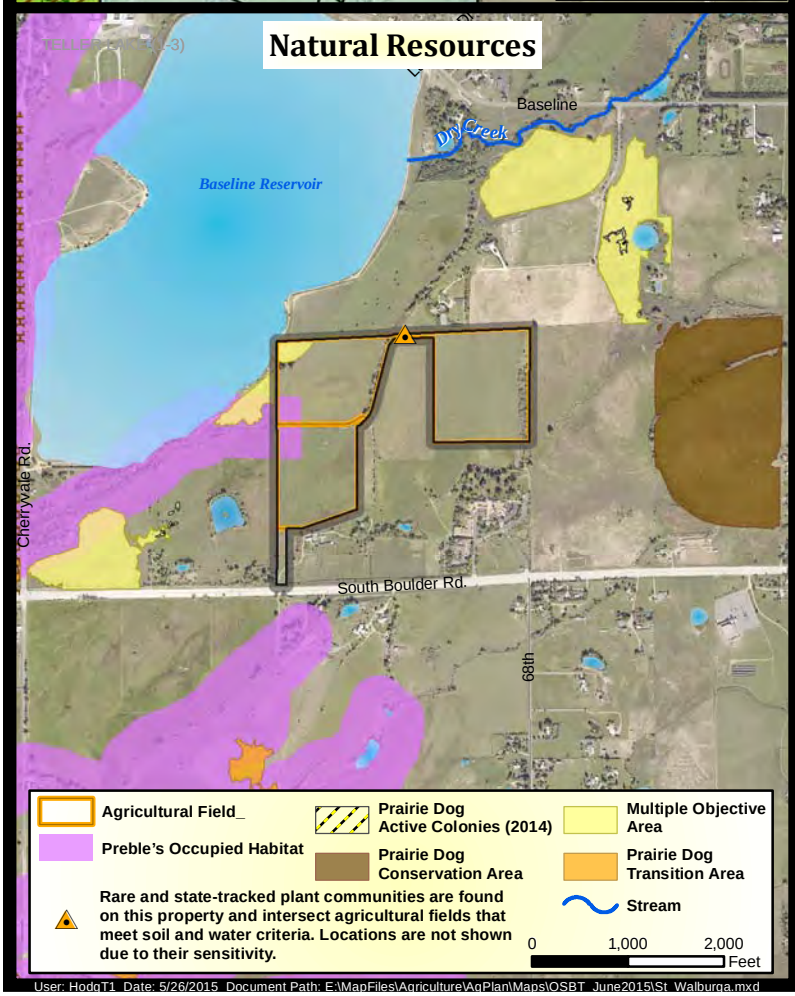
Recommendation

TBD

St. Walburga Abbey







User: HodgT1 Date: 5/26/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\St_Walburga.mxd

Biddle

Essential Agricultural Characteristics

Infrastructure

No infrastructure is present on the property.

Water

An adequate amount of irrigated water (≥ 1.5 acre-feet per acre) is available from the Green Ditch, Butte Irrigation and Milling Ditch and the Jones and Donnelly Ditch. Collectively, these ditches run from May 6 to October 28, 175 days.

Soils

Fifty-two acres are suitable for diversified vegetable production. Fields 182 and 183 are comprised of Manter sandy loam with 0-1% slopes and Loveland soils, both in Capability Class III.

Compatibility with Other Resources and Management Goals

Management area designation	Agricultural
Presence of visitor infrastructure	No
Prairie dog colony management area designation	N/A
Prairie dog occupation	N/A
Bobolink management area designation	TBD
Presence of sensitive species	Rare and state-tracked plant communities are found on the property but do not intersect with agricultural fields that meet the soil and water criteria.
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

- Clean up property
  - Cost Estimate: $5,000
- Construct a small (1/10 acre-foot) irrigation pond near the vegetable cropping area to facilitate the delivery of irrigation water to the planting beds
  - Cost Estimate: $5,000
- Construct a fence to separate the cropping area of a diversified vegetable farming operation from the rest of the property which may be hayed/ grazed
  - Cost Estimate: $15,000

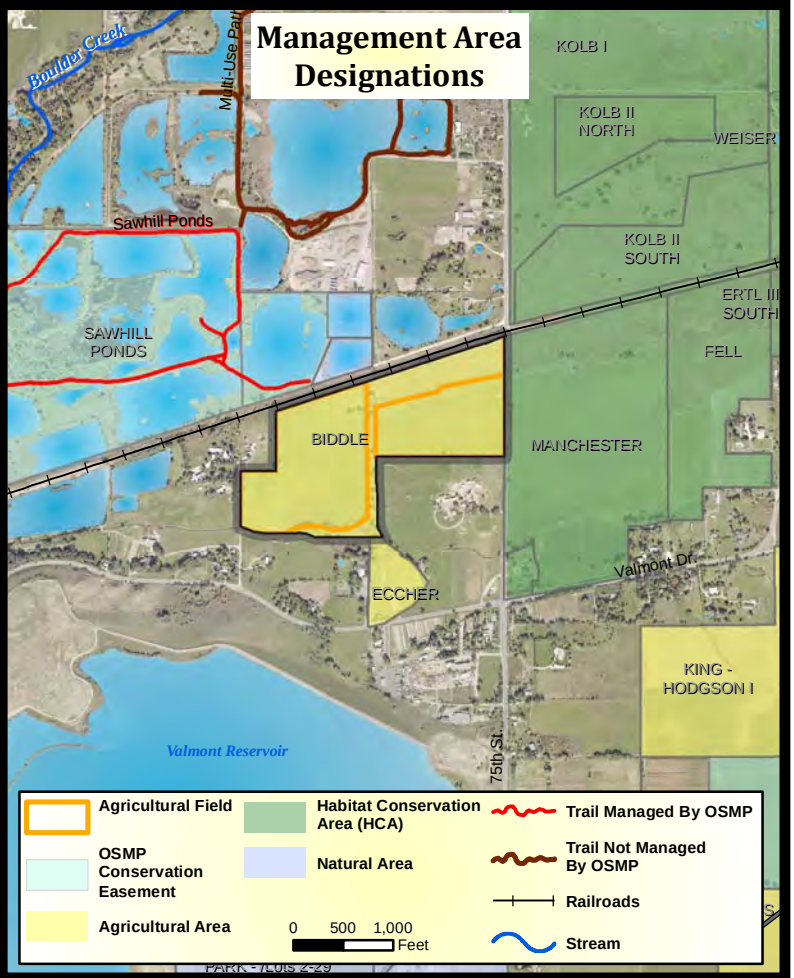
Total Cost Estimate: $25,000

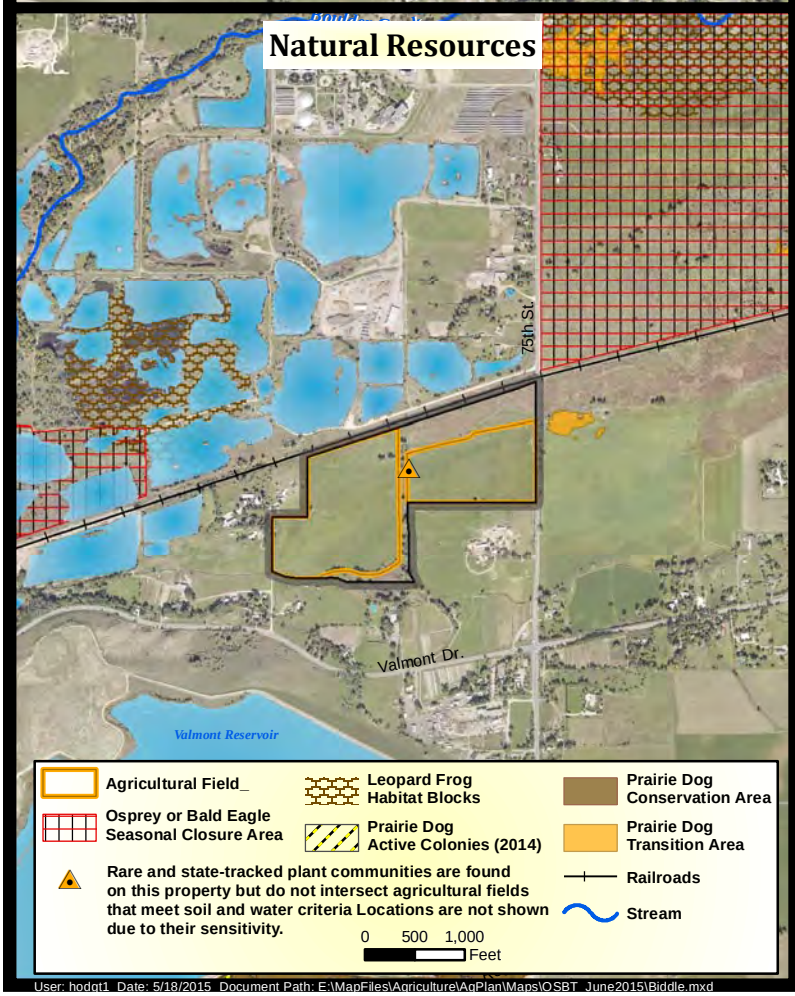
Recommendation

TBD

City of Boulder Open Space and Mountain Parks
Agricultural Plan

Biddle





User: hodgt1 Date: 5/18/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\Biddle.mxd

Fell

Essential Agricultural Characteristics

Infrastructure

There is no infrastructure on the property.

Water

An adequate amount of irrigated water (≥ 1.5 acre-feet per acre) is available from the Green Ditch, Butte Irrigation and Milling Ditch and the Jones and Donnelly Ditch. Collectively, these ditches run from May 6 to October 28, 175 days. Portions of field 174 and 181 (15.6 acres) are not irrigated.

Soils

On the Fell property, 29.6 acres are suitable for diversified vegetable productions. The acres are split between fields 174 and 181 and are comprised of a combination of Manter sandy loam with 0-1% slopes, Manter sandy loam with 1-3% slopes and Loveland soils. All of these soil types are in Capability Class III.

Compatibility with Other Resources and Management Goals

Management area designation	Agricultural
Presence of visitor infrastructure	No
Prairie dog colony management area designation	N/A
Prairie dog occupation	N/A
Bobolink management area designation	TBD
Presence of sensitive species	Rare and state-tracked plant communities are found on the property and intersect with agricultural fields that meet the soil and water criteria.
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

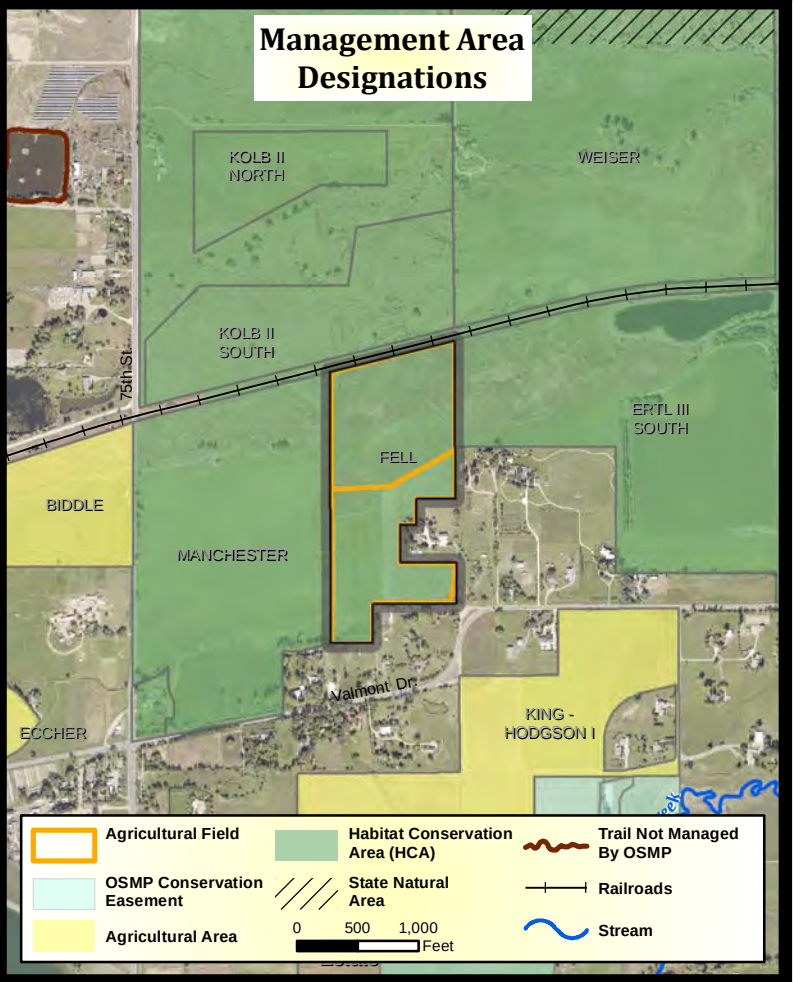
- Clean up property
  - Cost Estimate: $5,000
- Construct a small (1/10 acre-foot) irrigation pond near the vegetable cropping area to facilitate the delivery of irrigation water to the planting beds
  - Cost Estimate: $5,000
- Construct a fence to separate the cropping area of a diversified vegetable farming operation from the rest of the property which may be hayed/ grazed
  - Cost Estimate: $15,000

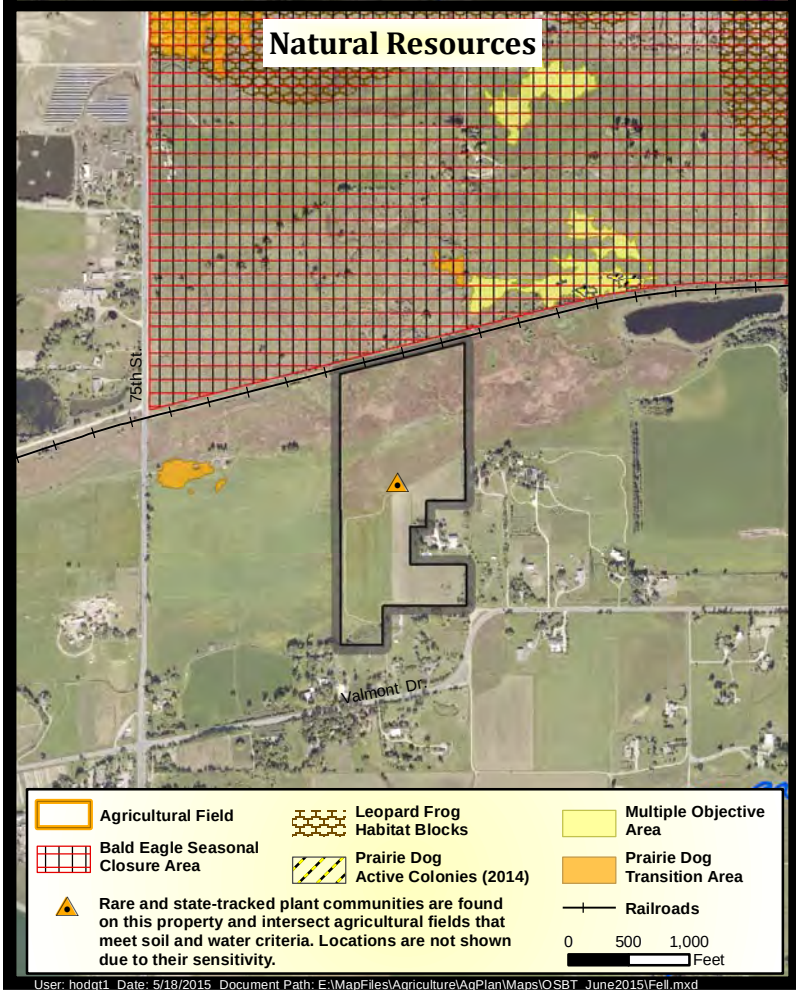
Total Cost Estimate: $25,000

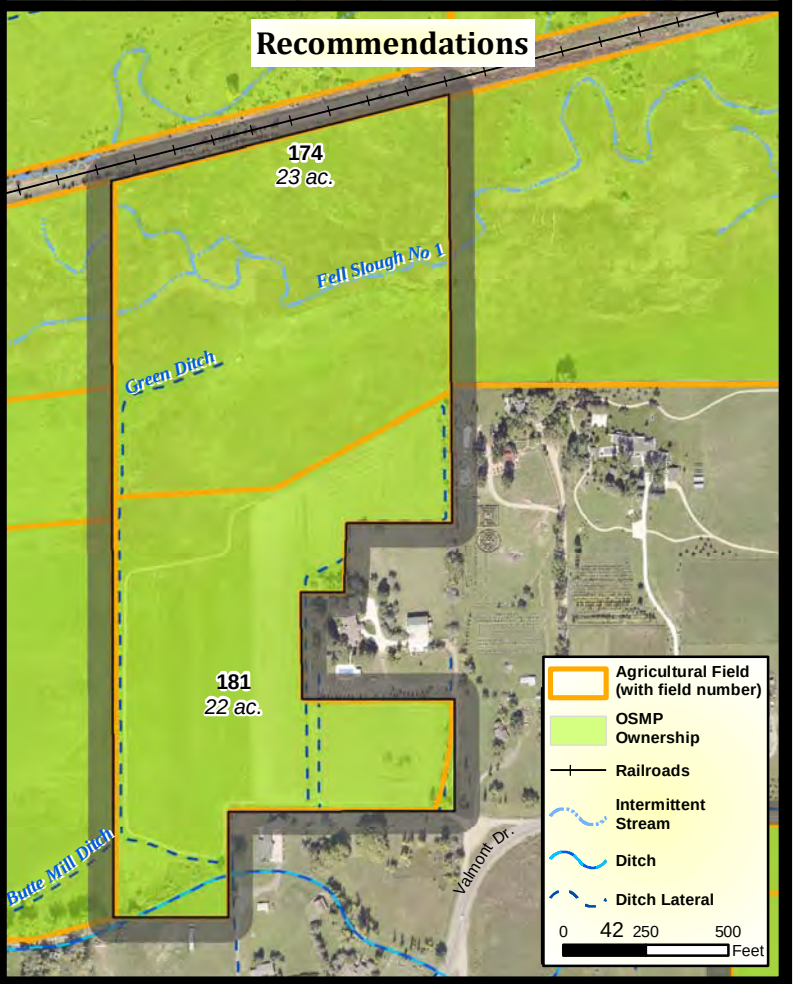
Recommendation

TBD

Fell







User: hodgt1 Date: 5/18/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\Fell.mxd

Isenhart-Jones

Essential Agricultural Characteristics

Infrastructure

No infrastructure is present on the property.

Water

There is an adequate amount of irrigated water (≥ 1.5 acre-feet per acre) from the Cottonwood #2 Ditch from May 16 to September 12, approximately 119 days. Field 139 (22.4 acres) is non-irrigable.

Soils

There are 31.3 acres suitable for diversified vegetable production. Field 82 and 91 are comprised of Ascalon sandy loam with 1-3% slopes, Capability Class II and Ascalon-Otero complex with 3-5% slopes, Capability Class III.

Compatibility with Other Resources and Management Goals

Management area designation	Agricultural
Presence of visitor infrastructure	No
Prairie dog colony management area designation	N/A
Prairie dog occupation	N/A
Bobolink management area designation	TBD
Presence of sensitive species	Rare and state-tracked plant communities are found on the property but do not intersect with agricultural fields that meet the soil and water criteria.
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

- Clean up property
  - Cost Estimate: $5,000
- Construct a small (1/10 acre-foot) irrigation pond near the vegetable cropping area to facilitate the delivery of irrigation water to the planting beds
  - Cost Estimate: $5,000
- Construct a fence to separate the cropping area of a diversified vegetable farming operation from the rest of the property which may be hayed/ grazed
  - Cost Estimate: $15,000

Total Cost Estimate: $25,000

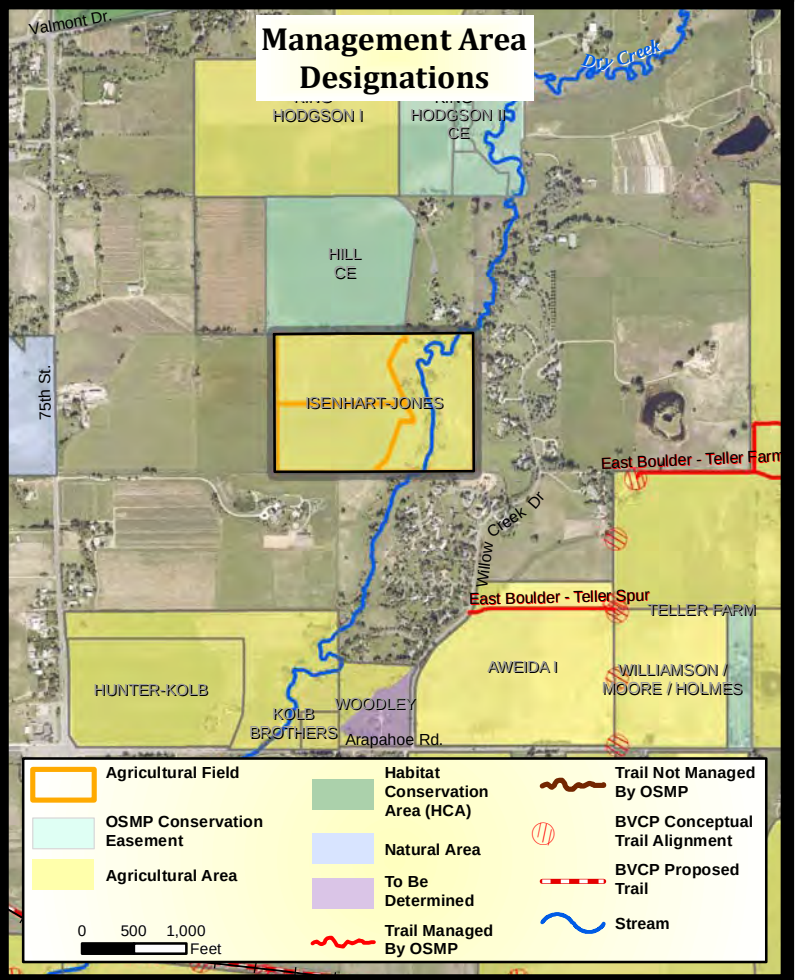
Recommendation

TBD

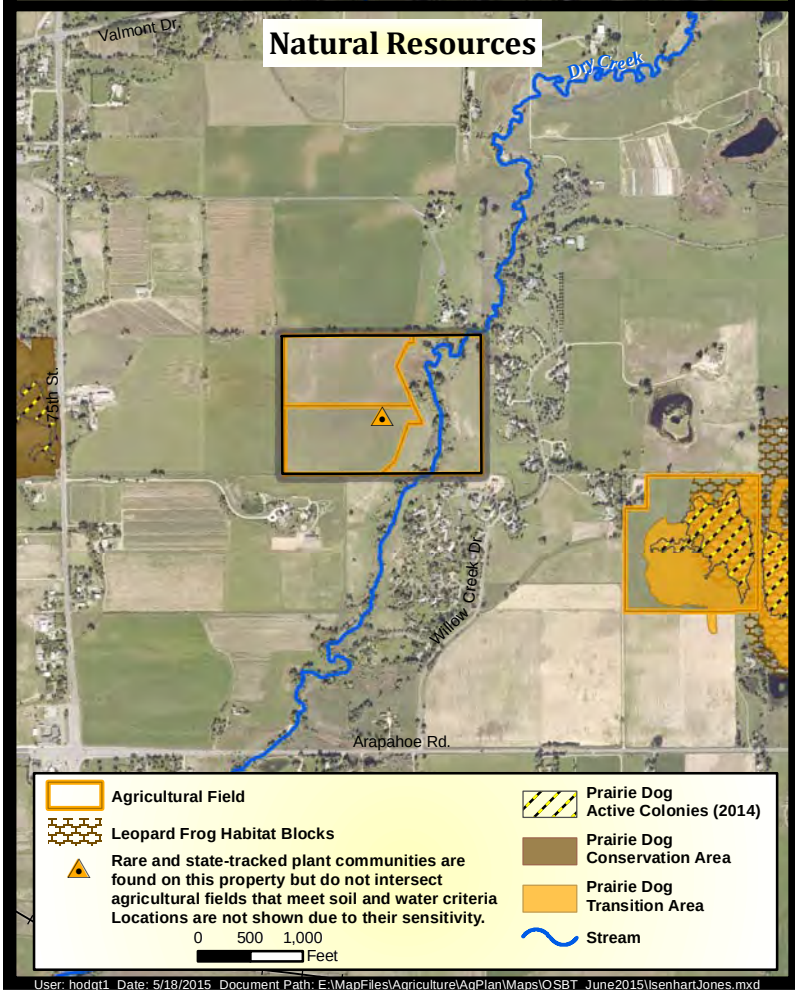
Isenhart - Jones

Current Agricultural Use

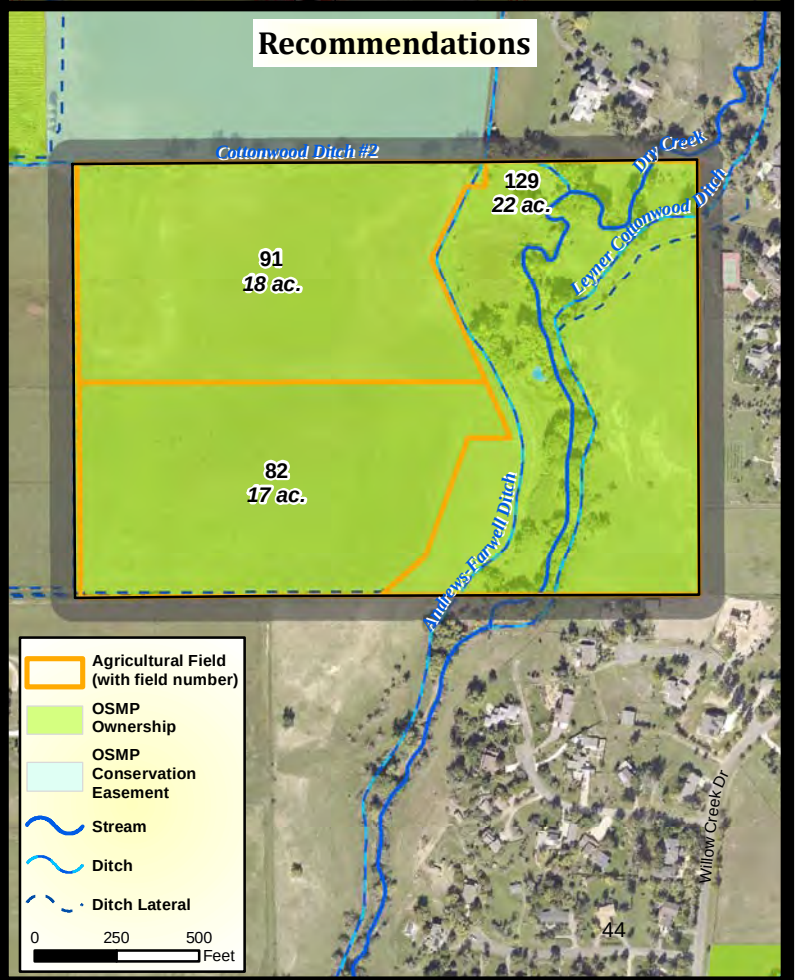
Management Area Designations



Natural Resources



Recommendations



User: hodgt1 Date: 5/18/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\IsenhartJones.mxd

Straty-Cline

Essential Agricultural Characteristics

Infrastructure

No infrastructure is present on the property.

Water

An adequate amount of irrigated water (≥ 1.5 acre feet per acre) is available from the North Boulder Farmers Ditch, from May 9 to September 28, approximately 142 days.

Soils

On the Fell property, 13.6 acres are suitable for diversified vegetable production. A portion of Field 408 is comprised of a mixture of Loveland soils, Capability Class III and Calkins sandy loam with 1-3 % slopes, Capability Class II.

Compatibility with Other Resources and Management Goals

Management area designation	Natural Area
Presence of visitor infrastructure	No
Prairie dog colony management area designation	Prairie Dog Removal Area
Prairie dog occupation	Subset is Occupied
Bobolink management area designation	TBD
Presence of sensitive species	No
Presence of State A listed noxious weeds	No

Management Actions and Cost Estimate for Conversion

- Clean up property
  - Cost Estimate: $5,000
- Construct a small (1/10 acre-foot) irrigation pond near the vegetable cropping area to facilitate the delivery of irrigation water to the planting beds
  - Cost Estimate: $5,000
- Construct a fence to separate the cropping area of a diversified vegetable farming operation from the rest of the property which may be hayed/ grazed
  - Cost Estimate: $20,000
- Cultural Resource Survey

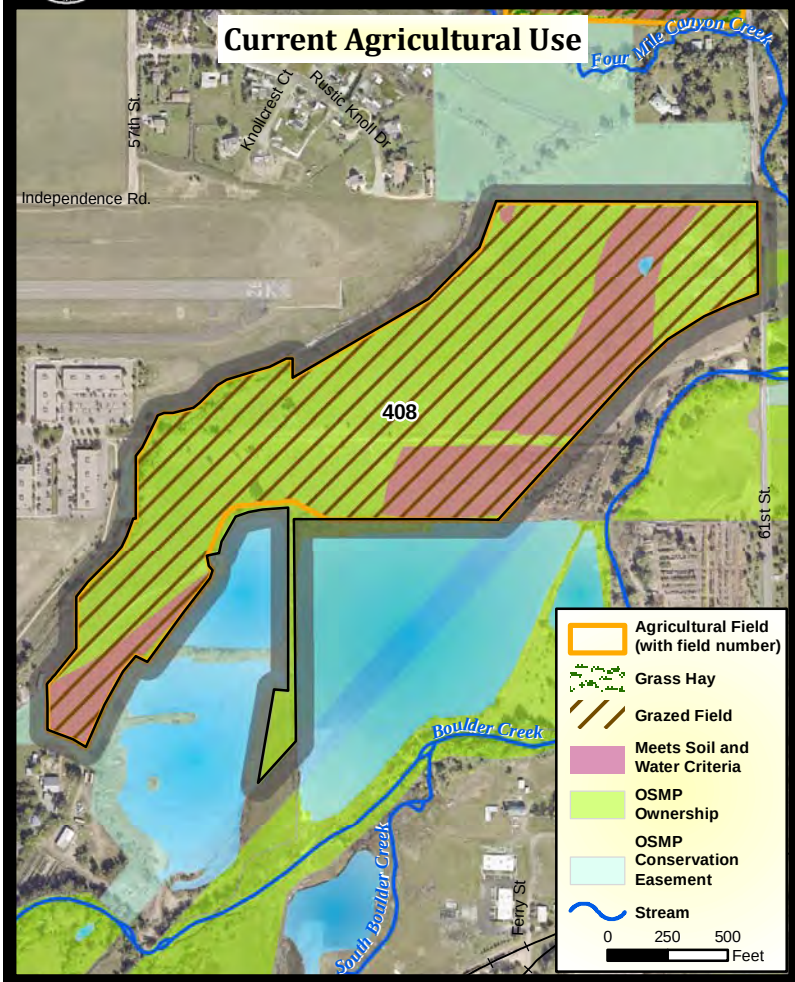
  Total Cost Estimate: $30,000

Recommendation

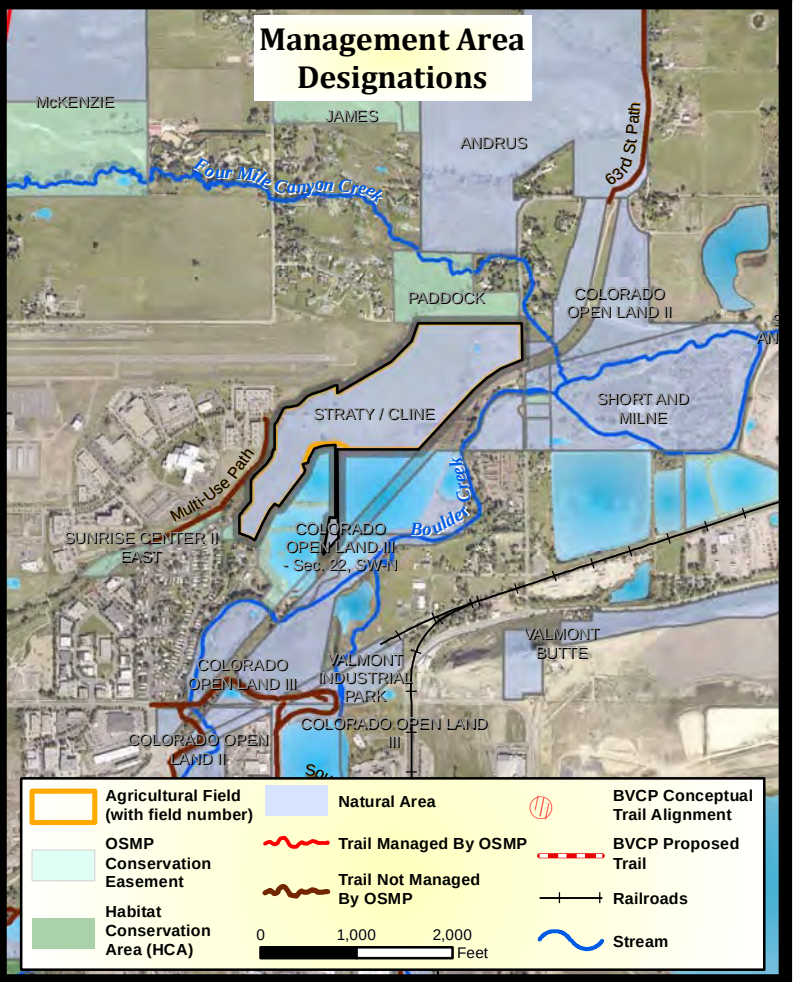
TBD

Straty-Cline

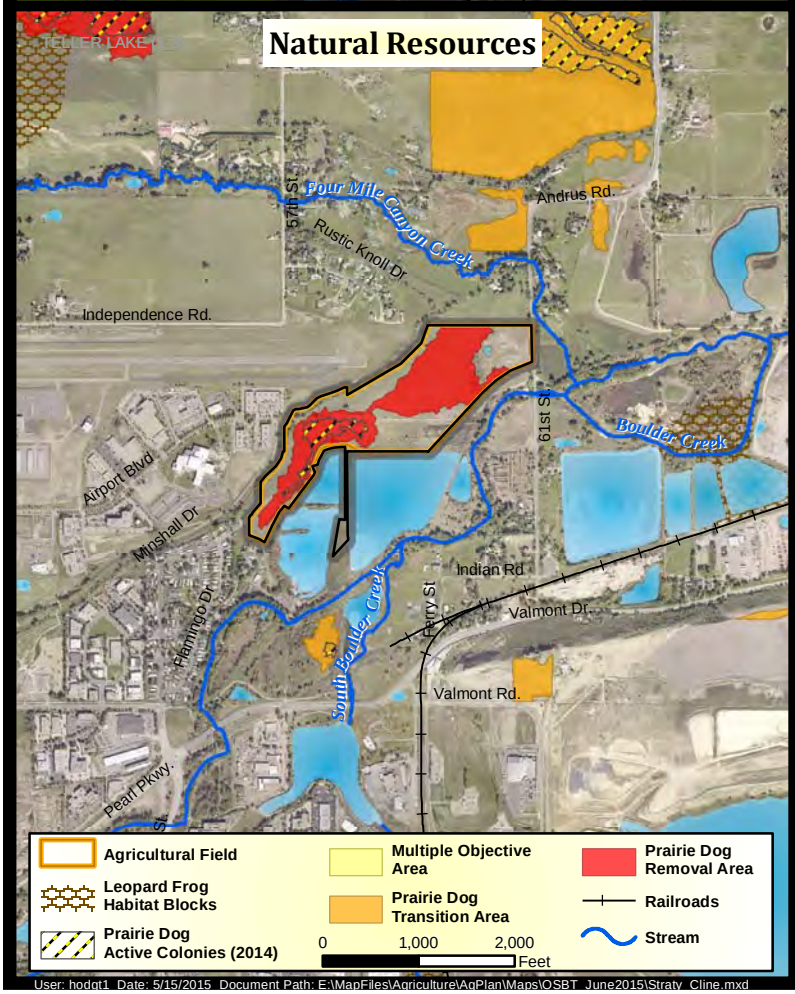
Current Agricultural Use



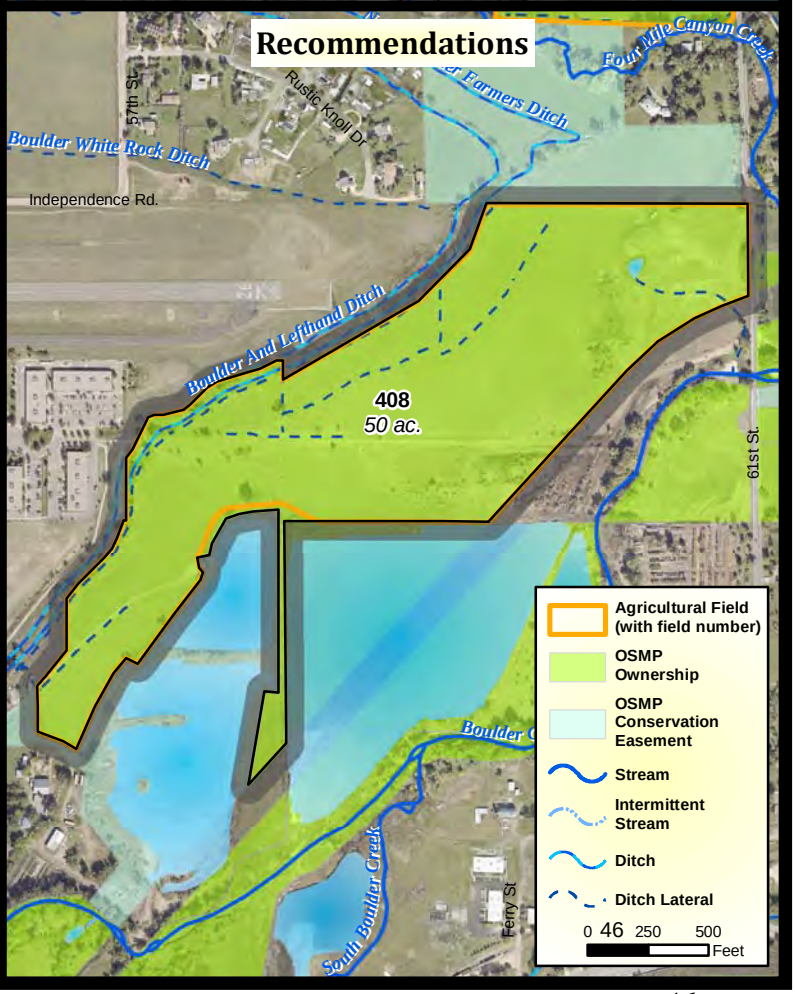
Management Area Designations



Natural Resources



Recommendations



User: hodgt1 Date: 5/15/2015 Document Path: E:\MapFiles\Agriculture\AgPlan\Maps\OSBT_June2015\Straty_Cline.mxd

Appendix A: Soil Capability Classes

Capability Class I: soils have slight limitations that restrict their use.
NnA: Nunn Sand clay loam, 0-1 percent slopes
AcA: Ascalon sandy loam, 0-1 percent slopes

Capability Class II: soils have moderate limitations that reduce the choice of plants or require moderate conservation practices.
NuA: Nunn clay loam, 0-1 percent slopes (shallow, droughty, or stony[14])
NnB: Nunn sandy clay loam, 1-3 percent slopes (erosion)
NuB: Nunn clay loam, 1-3 percent slopes (shallow, droughty, or stony)
WIA: Weld loam, 0-1 percent slopes (shallow, droughty, or stony)
WeB: Weld fine sandy loam, 1-3 percent slopes (erosion)
AcB: Ascalon sandy loam, 1-3 percent slopes (erosion)
AoB: Ascalon-Otero complex, 0-3 percent slopes (erosion)
WIB: Weld loam, 1-3 percent slopes (erosion)
CsB: Colby silty clay loam, 0-3 percent slopes (excess water)
Mm: McClave clay loam, 0-1 percent slopes (excess water)
NuC: Nunn clay loam, 3-5 percent slopes (erosion)
CaA: Calkins sandy loam, 0-1 percent slopes (excess water)
CaB: Calkins sandy loam, 1-3 percent slopes (excess water)
CoB: Colby silty clay loam, 1-3 percent slopes (erosion)
Nv: Nunn-Kim complex, 0-3 percent slopes (erosion)
WoB: Weld-Colby complex, 0-3 percent slopes (erosion)
Me: Manvel loam, 1-3 percent slopes (erosion)
HeB: Heldt Clay, 0-3 percent slopes (erosion)

Capability Class III: soils have severe limitations that reduce the choice of plants or require special conservation practices or both.
MdA: Manter sandy loam, 0-1 percent slopes (erosion)
MdB: Mater sandy loam, 1-3 percent slopes (erosion)
WdB: Weld loamy sand, 1-4 percent slopes (erosion)
AcC: Ascalon sandy loam, 3-5 percent slopes (erosion)
AoC: Ascalon-Otero complex, 3-5 percent slopes (erosion)
VaB: Valmont clay loam, 1-3 percent slopes (erosion)
HaB: Hargreave fine sandy loam, 1-3 percent slopes (erosion)
Lv: Loveland soils, 01- percent slopes (excess water)
MdD: Manter sandy loam, 3-9 percent slopes (erosion)
VaC: Valmont lcay loam, 3-5 percent slopes (erosion)

Capability Class IV: soils have very severe limitations that restrict the choice of plants or require very careful management or both.
AcD: Ascalon sandy loam, 5-9 percent slopes (erosion)

[14] Limitations listed in parenthesis

AoD: Ascalon-Otero complex, 5-9 percent slopes (erosion)
WoC: Weld-Colby complex, 3-5 percent slopes (erosion)
GaB: Gaynor silty clay loam, 1-3 percent slopes (shallow, droughty, or stony)
KuD: Kutch clay loam, 3-9 percent slopes (erosion)
RnB: Renohill silty clay loam, 1-3 percent slopes (shallow, droughty, or stony)
RnD: Renohill silty clay loam, 3-9 percent slopes (erosion)
GaD: Gaynor silty clay loam, 1-3 percent slopes (erosion)

Capability Class V: soils have little or no hazard of erosion but have other limitations, impractical to remove, that limit their use mainly to pasture, range, forestland, or wildlife food and cover.
VcC: Valmont cobbly clay loam, 1-5 percent slopes (shallow, droughty, or stony)

Capability Class VI: soils have severe limitations that make them generally unsuited to cultivation and that limit their use mainly to pasture, range, forestland, or wildlife food and cover.
ReD: Renohill loam, 3-9 percent slopes (erosion)

Class VII: soils have very severe limitations that make them unsuited to cultivation and that restrict their use mainly to grazing, forestland, or wildlife.
Te: Terrace Escarpments, (shallow, steep, stony, erosion)

Class VIII: soils and miscellaneous areas have limitations that preclude their use for commercial plant production and limit their use to recreation, wildlife, or water supply or for esthetic purposes.

Appendix B: Visitor Master Plan Management Area Goals

Agricultural Area Goals:

- Maintain the efficiency of agricultural production and operation.
- Manage agricultural production and operation to ensure safety for operators and visitors in the vicinity.
- Provide, where appropriate, public access and passive recreational opportunities that have minimal impacts on agricultural production and operation or other resources.
- Manage visitor access in areas of intensive agricultural production or operation to ensure visitor safety.
- Eliminate undesignated trails when they are redundant or damaging to resources.

Passive Recreation Area Goals:

- Provide a high level of public access to destinations and connection through designated trails.
- Maintain or improve passive recreational and educational opportunities, while protecting and preserving natural lands and resources.
- Accommodate high levels of visitor use with appropriate management, trails and trailheads, and services.
- Reduce conflicts among visitor activities.
- Minimize the number of undesignated or "social trails," eliminate undesignated trails when they are duplicative or damaging to resources.

Natural Areas Goals:

- Accommodate low-impact visitor activities where adequate trails exist or can be built, and resource impacts can be minimized.
- Provide opportunities for passive recreational and educational activities that require topographic relief or a natural setting.
- Protect the quality of natural and agricultural resources (especially where high value resources exist).
- Eliminate undesignated trails when they are redundant or damaging to resources.

Habitat Conservation Areas (HCA) Goals:

- Maintain, enhance, and/or restore naturally functioning ecological systems.
- Maintain, enhance, and restore habitat for species of concern identified in the Boulder County and the Boulder Valley Comprehensive Plans.
- Provide public access and passive recreational opportunities that foster appreciation and understanding of ecological systems and have minimal impacts on native plant communities and wildlife habitats or other resources.
- Eliminate all undesignated trails, unless they are made part of the designated trails system or provide specialized access to appropriate low-use destinations.
- Where sustainable infrastructure exists, continue to allow public access to appropriate destinations.

Appendix C: Prairie Dog Colony Management Area Designations

Grassland Preserves

Grassland Preserves are areas where prairie dogs and their associated species are part of large and ecologically diverse grassland habitat blocks. These areas are considered the best opportunity to conserve prairie dogs and their associated species. In most cases, prairie dogs will be allowed to persist without removal in Grassland Preserves. However, removal will be allowed for the purposes of maintaining existing irrigation facilities such as headgates, ditches, lateral ditches, reservoirs and irrigated fields. In addition, to ensure protection of habitat within Grassland Preserves, the need for limited removal from a Grassland Preserve will be assessed if prairie dogs occupy more than 26% of the Grassland Preserve (i.e. viability drops below "Good") and indicators of vegetation composition fall below thresholds identified in the Grassland Plan. Inactive, previously occupied colonies within Grassland Preserves could serve as relocation receiving sites (where there is an existing burrow infrastructure) and if the area meets relocation criteria (identified in the Grassland Plan). However, prairie dogs will not be relocated into irrigated fields nested within Grassland Preserves. Following a die-off or other disappearance of prairie dogs from an area, they could be excluded to allow for habitat restoration or to protect existing habitat restoration projects.

Multiple Objective Areas

In Multiple Objective Areas, preservation of prairie dogs and their associated community is one of several management objectives. Prairie dogs will be allowed to persist without removal except for the purpose of maintaining existing irrigation facilities such as headgates, ditches, lateral ditches, reservoirs or irrigated fields. Multiple Objective Areas will not be used as receiving sites for relocated prairie dogs. Exclusion of prairie dogs attempting to re-colonize a Multiple Objective Area could occur to allow habitat recovery.

Prairie Dog Conservation Areas

Prairie Dog Conservation Areas are areas where the conservation of the prairie dog is the primary management objective and are managed opportunistically for associated species. These areas would serve as receiving sites for relocation with the requirements described in the Grassland Plan. No removal of prairie dogs would occur in Prairie Dog Conservation Areas except for the purpose of maintaining an existing irrigation facility such as a headgate, ditch, lateral ditch, reservoir or irrigated field. Prairie dogs will not be relocated into irrigated agricultural fields within Prairie Dog Conservation Areas.

Transition Areas

Transition Areas are grassland areas where the preservation of resources other than the prairie dog and associated community takes precedence. Prairie dogs may inhabit transition areas, but will be relocated away from the property when feasible (i.e. relocation receiving site is available). Following relocation, die-off or other natural events such as dispersal that leads to a reduction of the population and result in uninhabited areas, re-colonization could be prevented or discouraged using barriers, re-seeding, grading, burrow destruction, passive relocation or other methods available to the department. After efforts are made to trap and relocate all remaining prairie dogs, removal through lethal control will be

allowed in accordance with applicable regulations and policies, and if numbers do not exceed 20 individuals. Removal would be allowed at any time for maintenance of existing irrigation facilities such as a headgate, ditch, lateral ditch, reservoir or irrigated field. Continued irrigation will also be allowed in irrigated fields regardless of prairie dog occupancy.

Removal Areas

In removal areas, prairie dogs are incompatible with OSMP management objectives. The designation of a property as a Removal Area provides the option to remove prairie dogs from the property in accordance with applicable regulations and policies. Following removal, efforts would occur to prevent re-colonization including restoration or irrigation of the property, destruction of burrow system, exclusion structures, etc. Continued irrigation will be allowed in irrigated fields regardless of prairie dog occupancy.

Alternative Agriculture Policy

Purpose and Need

An Alternative Agriculture Policy will provide direction on the types of agriculturally related activities/enterprises permitted on city open space. Examples of alternative agriculture are agritainment (corn mazes, petting zoos, etc.), farm stands, community gardens and farm dinners or events. A more complete list along with more detailed descriptions is provided below in the "Definitions" section.

Alternative agriculture can provide opportunities for agricultural producers to diversify their income and market their products. Providing farmers and/or ranchers with these opportunities may increase the success of local food producers and contribute to an increase in local food and/or vegetable production, consistent with Boulder Valley Comprehensive Plan policies. These activities also provide opportunities for members of the public to connect with the land and agricultural heritage of the Boulder Valley. These types of agriculturally related enterprises have also been increasing in popularity nationwide thus increasing the relevance of these activities to OSMP lands and the departmental need to assess their suitability. However, the umbrella term of alternative agriculture covers a wide range of activities/enterprises with substantial differences among them. This analysis will evaluate each type of alternative agriculture activity/enterprise to determine its suitability on OSMP lands.

Definitions

- ### Agritainment (agritourism, agrotourism)
  Agritainment refers to a variety of commercial enterprises that provide an opportunity for entertainment or recreation in an agricultural setting. The most common agritainment activities include pumpkin patches, corn mazes, u-pick enterprises, petting zoos and hay rides. These activities are often provided together, or in groups, as the combination of activities/entertainment options tends to attract more customers.

- ### Farm Event
  Farm events are defined by the Boulder County Land Use (BCLU) Code as a group between 26 and 99 people participating in an event where the farm is used as a venue. This includes farm to table dinners, weddings, wedding receptions, and any other gathering where eating and socializing occur and where the majority of the food served at the event is made with ingredients grown or raised locally often by the host farmer(s).

- **Farm Stand/Store**
  Farm stands are places where agricultural and horticultural products are sold. Farm ***stands*** are defined by the BCLU Code as operating 42 days or less annually. Farm ***stores*** are defined as operating more than 42 days annually. The BCLU Code requires that agricultural and horticultural products must comprise at least 90% of annual sales.

- **Demonstration Farm**
  A demonstration farm is a farm used primarily to demonstrate, teach, or evaluate various farming, ranching and agricultural techniques. Many demonstration farms not only have crops, but may also have various types of livestock. Participants often sign up for a series of classes or workshops. These farms may also offer programs to the general public to increase public awareness of food production and preparation practices. Demonstration farms are typically owned and operated by educational institutions or public agencies and the educational benefits are of greater focus than profits from agricultural production.

  A farm camp (overnight camps not included) is similar to a demonstration farm however it is generally geared toward non-industry related participants such as youth or the general public. While providing an educational experience, the camps can also be for-profit ventures. Farm camps generally do not evaluate various techniques but instead focus on teaching or sharing basic farming practices.

- **Food Forest (aka forest gardens, edible forest gardening)**
  Food forests are similar to orchards, but modified in accordance with permaculture principles. Permaculture is a systems approach where agricultural systems are modeled from natural ecosystems. Food forests are primarily composed of perennial food-producing plants, including fruit and nut trees, vines and shrubs and perennial and annual vegetables, and are arranged in a way that functionally and structurally mimics woodland ecosystems. The diversity has been shown to improve resiliency and reduce maintenance when compared to traditional orchards. Food forests are open to the public and are seen as a way to transform unused lots or more typical ornamental-focused parks into food-producing areas that promote land stewardship and create ties between community members and food production.

- **Community Gardens**
  Community Gardens are composed of land divided into individual or shared plots for people to grow vegetables, fruits, nuts, grains and ornamental plants. Community Gardens are seen as a way to transform unused lots or more typical ornamental-focused parks into food-producing areas that promote land stewardship and create ties between community members and food production. Community gardens allow community members to play a direct role in growing food locally. Land for these gardens may be public or private and is often located near schools, hospitals, neighborhoods, or parks.

Policy Background

City Charter

Section 176 of the City Charter lists the purposes of open space which includes, "Preservation of agricultural uses and land suitable for agricultural production." For the past 40 years, OSMP policy has been to limit the activities allowed under an agricultural lease to agricultural production and those activities necessary to support the operation.

The City Charter also lists "Preservation of land for passive recreational use, such as hiking, photography or nature studies, and if specifically designated bicycling, horseback riding, or fishing" as a purpose of open space lands. Agritainment, or its most common activities, were not listed among the passive recreational activities.

Visitor Master Plan

In 2005 City Council approved the OSMP Visitor Master Plan (VMP). The VMP introduced a management zoning system for all OSMP lands. Among the four zoning designations was the Agricultural Area designation. The goals for lands designated as Agricultural Areas are:

- Maintain the efficiency of agricultural production and operation.
- Manage agricultural production and operation to ensure safety for operators and visitors in the vicinity.
- Provide, where appropriate, public access and passive recreational opportunities that have minimal impacts on agricultural production and operation or other resources.
- Manage visitor access in areas of intensive agricultural production or operation to ensure visitor safety.
- Eliminate undesignated trails when they are redundant or damaging to resources.

Passive recreation and the necessary infrastructure, i.e. trails, are permitted in all OSMP Management Area designations, including Agricultural Areas.

Assessment Methodology

In order to evaluate the various alternative agricultural activities and determine their suitability on OSMP lands staff applied a slightly modified version of the Passive Recreation Activity Assessment (Activity Assessment), as all of the activities with the exception of the farm stand/store are activities with a recreational/entertainment component. The criteria identified in the Activity Assessment have been used to evaluate potential activities since the adoption of the Visitor Master Plan in 2005, providing staff and the community with a consistent method of evaluation and starting point for the discussion on whether and how new activities should be considered passive recreation. The alternative agricultural activities were assessed with criteria in four categories:

Category	Criterion
Relationship to setting	Dependence on an agricultural setting and/or OSMP lands
	Ability to increase people's appreciation of agriculture or understanding of Open Space purposes.
Compatibility with resource protection	Compatibility with the preservation of agricultural resources
Compatibility with existing facilities and services	Compatibility with a low level of existing facilities and services (e.g. parking, minimal maintenance, enforcement, monitoring, etc.)
	Compatibility with providing a safe recreational experience
Compatibility with other activities	Compatibility with other recreational activities and other visitor's experiences

For each criterion, the activity was identified as having either "Considerations" or "No Consideration." For criteria with considerations, staff identified potential mitigating strategies to determine if the activity could be made more compatible.

A distinction was made between activities that OSMP may provide and those that an agricultural producer or lessee may provide. Agritainment, farm events, farm stands/stores, and farm camps are activities that an agricultural producer or potential lessee may be interested in providing, as they could increase the profitability of their agricultural operation. When evaluating the activities that an agricultural lessee could provide, staff determined that in order to remain consistent with the charter purposes, agricultural production would need to remain the primary use of the property and these other activities would need to be accessory uses. Staff interprets the City Charter's reference to "agricultural uses" as agricultural production and those activities directly supporting an agricultural operation. Staff believes maintaining agricultural production as the primary use on agricultural lands is aligned with the intent of the Charter, and that if other more recreation-oriented activities became the dominant use of agricultural land it would not be consistent with the intent of the charter. Therefore the activity assessments for agritainment, farm events, farm stores and farm camps are limited to evaluating those uses as accessory, occurring only on farms where agricultural production is the primary purpose.

Agritainment

Dependence on an agricultural setting and/or OSMP lands
Considerations: • Agritainment depends upon an agricultural setting. • OSMP lands are not the only agricultural lands in Boulder County. • There are currently opportunities in Boulder County to participate in agritainment activities on private agricultural property.
Ability to increase peoples' appreciation of agriculture or understanding of Open Space purposes
Considerations: • Agritainment may increase visits to open space; these visits may lead to an increased awareness of agricultural open space lands. However, these activities are generally not designed to be educational, they may or may not aid in a visitor's understanding of agricultural production or the agricultural importance of open space lands. The educational benefit may be limited to answering basic questions a small child may have about farming. • U-pick operations may be different in nature from the other activities as visitors engage in an aspect, harvesting, of agricultural production which could foster an appreciation or understanding of the growing and harvesting of food/commodities and the types of food grown locally.
Compatibility with the preservation of agricultural and other resources
Considerations: • With the exception of u-pick operations, agritainment is not directly related to an aspect of agricultural production - the growing, harvesting, or selling of agricultural products; it is not an extension of an activity directly related to agricultural production. • Agritainment would require land, which could not simultaneously be used for agricultural production (e.g. corn or hay maze).   ○ *U-pick operations would not take land out of agricultural production; on the contrary it is reliant upon lands remaining in agricultural production.* • Depending on the activities offered and number of customers, agritainment could interfere with the efficiency of farming operations.
Mitigation Tools: • Agritainment could be allowed only in areas unsuitable for agricultural production, in pasture areas, and/or in farmstead areas. However, limiting agritainment to farmstead areas might create more interference with the efficiency of farming operations.
Compatibility with a low level of existing facilities and services (e.g. parking, minimal maintenance, enforcement, monitoring, etc.)
Considerations: • Agricultural operations require a higher level of facilities/infrastructure than passive recreational activities. Agritainment does not require a higher level of facilities than agricultural operations, but requires a higher level of facilities than other passive recreational activities permitted on OSMP lands. • Agritainment requires a parking area. • Unlike the other types of recreational activities on OSMP lands which are free, agricultural

operators would likely charge a fee. While commercial operators often charge a fee, participants and other OSMP visitors also have an opportunity to engage in the activity for free on OSMP lands without the services provided by the commercial outfitter. o *While u-pick operations would charge a fee, it would be in exchange for goods/produce.*
Mitigation Tools: • Prohibit lessees from charging admission fees. However, diversifying income is the main incentive/purpose for the lessee.
Compatibility with providing a safe recreational experience
Considerations: • If the activities are allowed in farmstead areas participants would be in an area with farmers operating equipment some of which is motorized and/or mechanical. The concentration of these two uses in a single area may not be safe for participants.
Mitigation Tools: • Limit the hours of operation to times when activities related to agricultural production are not occurring. (e.g. weekends or evenings)
Compatibility with other activities/other visitor's experiences
Considerations: • While OSMP farms are open to the public they are not currently popular destinations for OSMP visitors. The lack of visitor activity leads to the conclusion that there would not be a high level of visitor conflicts with participants in other activities. However, the concentrated nature of these activities would make it difficult for visitors to enjoy/engage in other activities. o *Visitors could still walk through u-pick agricultural operation as operations are not closed to the public, they would only be unable to take food/goods which is consistent with current regulations.*

U-pick operations are more compatible with agricultural production as this activity relies on land remaining in agricultural production. U-pick operations also do not require specialized infrastructure, and while they charge a fee it is in exchange for agricultural products. Any operations would be required to comply with the applicable sections of the Boulder County Land Use code which provides guidelines for parking requirements. All operations would also require the approval of OSMP staff.

Due to compatibility issues with agricultural production, i.e. land being removed from agricultural production and interference with the efficiency of farming operations and the high level of visitor facilities and services required, staff recommends that of the activities in the category Agritainment, only u-pick operations be allowed on OSMP lands, and only as an accessory use.

Farm Events

Dependence on an agricultural setting and/or OSMP lands
Considerations: • Farm events are by definition dependent upon occurring on a farm. • Most agricultural producers/lessees wanting to host an event do not own an alternative venue. However, some OSMP lessees operate farms on other lands they own, which could serve as alternative locales to OSMP lands. • There are currently opportunities in Boulder County to participate in farm events on privately owned farms.
Ability to increase peoples' appreciation of agriculture or understanding of Open Space purposes

Considerations:
• Farm events may increase visits to open space. Depending on the type of event, they may or may not aid in a visitor's understanding of agricultural production or the agricultural importance of open space lands.
  ○ Events such as celebrations, corporate dinners and weddings may not offer a suitable platform for the farmers to market their products and/or CSA membership, nor for participants to engage with the farmer. Typically at celebrations/corporate dinners the main focus of the event is not the food/farm itself.
  ○ Events such as farm-to-table dinners are more likely to provide a better platform for farmers to share with participants information about the farm's agricultural operation and products, market their CSA, and more directly engage with participants. At farm dinners the main focus of the event is the food/farm itself.

Mitigating Tools: • Create a distinction between the various types of farm events, farm-to-table dinners – hosted by the farmer, versus other events where the farm is mostly used as venue.
Compatibility with the preservation of agricultural and other resources
Considerations: • Farm events are not directly related to an aspect of agricultural production – the growing, harvesting, or selling of agricultural products; they are not an extension of an activity directly related to agricultural production. • Farm-to-table dinners, hosted by the farmer are directly related to the selling of agricultural production; they are an extension of an activity directly related to agricultural production. • Farm events depending on the size and frequency could interfere with the efficiency of agricultural production.
Mitigating Tools: • Confine farm events to farmstead areas. • Limit the number of annual occurrences to avoid disruption of efficient agricultural operations.
Compatibility with a low level existing facilities and services (e.g. parking, minimal maintenance, enforcement, monitoring, etc.)
Considerations: • Farm events would require parking and an event space.

○ The event space could be in an existing permanent structure such as a barn or farm residence or could be a temporary structure such as a tent. • The level of facilities and services increases with the size of the event. • Farm events would require some level of oversight by OSMP staff. • While farm events charge a fee, it is not for access but in exchange for a meal with products grown on-site.
Mitigating Tools: • Require lessee to provide all temporary facilities (e.g. tents). • Limit the size of the events to reduce the level of facilities and services needed. • Limit parking to the farmstead area or area approved by OSMP staff
Compatibility with providing a safe recreational experience
Considerations • If the activities are allowed in farmstead areas, participants would be in an area with farmers operating equipment some of which is motorized and/or mechanical. The concentration of these two uses in a single area may not be safe for participants.
Mitigating Tools: • Evenings and weekends, the times farm events and dinners are likely to occur, are not common hours of operation for farming.
Compatibility with other activities/other visitor's experiences
Considerations: • While OSMP farms are open to the public, they are not currently popular destinations for OSMP visitors. The lack of visitor activity leads to the conclusion that there would not be a high level of visitor conflict with participants in other activities. ○ Visitors could still walk through the farm as operations are not closed to the public, they would only be unable to participate in the dinner/taking food without paying which is consistent with current regulations.

Due to compatibility issues with agricultural operations and the potential high levels of visitor facilities and services, staff is recommending allowing farm-to-table dinners, but no other farm events. Staff recommends that farm-to-table dinners be permitted with conditions since they offer educational benefits to the community and direct marketing opportunities for lessees.

Farm to Table Event Conditions:

- Only permitted on properties with farmstead infrastructure appropriate for accommodating this use.
- All activities will be confined to within the farmstead area.
- OSMP leasees would be limited to two farm-to-table dinners annually.[1]
- Dinners would be limited to 50 persons.

[1] Agricultural Properties in Boulder County are permitted per the Boulder County Land Use Code, as a use-by-right, six farm events annually, and possibly 7-12 with additional review. A venue hosting 12 or more events is considered a Reception Hall or Community Facilities Meeting Use.

- Dinners with fewer than 26 people, and not considered events per the Boulder County Land Use Code, would still require compliance with these conditions as long as a fee is exchanged for goods.
- Rent must be up to date.
- All outstanding management issues (identified by OSMP staff) must be addressed.
- All events must be approved by OSMP staff.
- Events with 1-26 participants require OSMP staff approval and count toward the maximum (=2).

Farm Stand/Store

Dependence on an agricultural setting and/or OSMP lands
Considerations: • Farm stands/stores do not require an agricultural setting (e.g. farmer's market). • Most agricultural producers have alternative venues to sell their products such as CSAs and farmer's markets.
Ability to increase peoples' appreciation of agriculture or understanding of Open Space purposes
Considerations: • Farm stands/stores may increase visits to open space. Their presence could aid in a visitor's, or persons passing by, understanding of agricultural production on OSMP lands and the locally grown products available. • Farm stands/stores may connect people, who live near or frequently pass by the farms, to the agricultural production occurring in their surrounding community.
Compatibility with the preservation of agricultural and other resources
Considerations: • Farm stands/stores are directly related to an aspect of agricultural production, i.e. selling; it is an extension of an activity directly related to and supporting agricultural production. • Farm stands/stores provide farmers additional venues and opportunities to directly sell their products to consumers.
Compatibility with a low level existing facilities and services (e.g. parking, minimal maintenance, enforcement, monitoring, etc.)
Considerations: • Farm stands/ stores would require a structure. The stand or store could be in an existing permanent structure such as a barn or other outbuilding existing on the farm or could be in a temporary structure such as a tent. • The level of facilities and services increases with the size and frequency that the store is operated. • Farm stands/stores would require some level of oversight by OSMP staff. The most staff time is anticipated during the initial Boulder County Land Use review/approval process and site set up.
Mitigating Tools: • Require lessee to provide all temporary facilities (e.g., tents).
Compatibility with providing a safe recreational experience
No Considerations
Compatibility with other activities/other visitor's experiences
No Considerations

Staff is recommending permitting farm stands/stores on locations approved by staff and in compliance with the BCLU Code. Farm stands/stores are both compatible with agricultural production and may directly help connect the products to local consumers.

Demonstration Farms and Farm Camps

Dependence on an agricultural setting and/or OSMP lands
Considerations: • Demonstration farms and farm camps require an agricultural setting. • Boulder County Parks and Open Space staff runs a demonstration farm. • Farm Camps, catering to youth, are offered on private farms in Boulder County.
Ability to increase peoples' appreciation of agriculture or understanding of Open Space purposes
Considerations: • Demonstration farms and farm camps would aid in a participant's knowledge of agricultural production on OSMP lands, as the purpose is to share, teach, or evaluate farming practices or techniques.
Compatibility with the preservation of agricultural and other resources
Considerations: • Demonstration farms are directly related to an aspect of agricultural production i.e. evaluating farming practices or techniques and teaching those techniques to farmers.   ○ Farm camps are not directly related. Farm camps generally do not evaluate various techniques but instead focus on teaching or sharing basic farming practices to non-industry or youth participants. • Providing farmers and/or interested people the opportunity to learn about farming techniques can contribute to the long-term sustainability of agriculture in the Boulder Valley, the success of local farms and engage the next generation of farmers or local food enthusiasts. • Demonstration farms and farm camps would need suitable land and all the accompanying structures and infrastructure. It is unlikely a traditional agricultural operation could simultaneously operate as a demonstration farm or farm camp (using the same facilities/ outbuildings). The activities related to a camp or demonstration farm may interfere with the efficiency of agricultural operations and production.
Mitigating Tools: • In order to keep land leased to agricultural operators in agricultural production, demonstration farms and farm camps on OSMP lands could be limited to those administered by the department and/or a department/educational institution partnership.
Compatibility with a low level of existing facilities and services (e.g. parking, minimal maintenance, enforcement, monitoring, etc.)
Considerations: • Demonstration farms and farm camps would require parking. • Demonstration farms and farm camps would require the typical farmstead/agricultural structures. • Demonstration farms and farm camps, if administered by the department, would require a substantial amount of staff time. However, outreach and education is an established and important OSMP service provided to the community.
Compatibility with providing a safe recreational experience
No Considerations

Compatibility with other activities/other visitor's experiences
No Considerations • While OSMP farms are open to the public, they are not currently popular destinations for OSMP visitors. The lack of visitor activity leads to the conclusion that there would not be a high level of visitor conflict with participants in other activities. Visitors could still walk through the farm as operations are not closed to the public; they would be unable to participate in the demonstration/camp without paying or registering which is consistent with current regulations.

Due to demonstration camps' and farm camps' compatibility with agricultural production, interference with daily agricultural operations, staff is recommending these activities continue to not be permitted on OSMP leased agricultural lands. However, due to the educational benefits, support to the farming community and potential benefits to agricultural production, staff recommends that demonstration farms be permitted on OSMP lands/farmsteads operated by OSMP staff or in partnership with OSMP.

Community Gardens

Dependence on an agricultural setting/OSMP lands
Considerations: • Community gardens do not depend upon an agricultural setting. The preferred locations for community gardens are locations in close proximity or adjacent to high/medium density residential areas. Participants are often seeking a convenient and proximal location to their residence. • There are currently opportunities in the City of Boulder and Boulder County to participate in community gardening.
Ability to increase peoples' appreciation of agriculture or understanding of Open Space purposes
Considerations: • Community gardens may increase visits to open space. These visits may lead to an increased awareness of open space lands and knowledge about gardening/growing food. However, it would not aid in a visitor's understanding of agricultural production or the agricultural importance of open space lands.
Compatibility with the preservation of agricultural and other resources

Considerations:
• Community gardens would require land to be taken out of traditional agricultural production.
  ○ Although the land used for community gardens might still be considered to be in agricultural production, as successful participants would harvest food, it is up to the participant's discretion to decide what to plant and not all participants will be successful in producing food.
  ○ The land will be removed from cultivation by an experienced/proven farmer and instead be cultivated by interested people with varying levels of skills, interests and time.
• The properties suitable for community gardens are limited by soil and water requirements and are the same as those suitable to be leased for diversified vegetable farming. Prime farmland which meets the soil and water requirements is uncommon on OSMP lands.
• Community gardens would remove prime farmland from traditional agricultural production.

Compatibility with a low level of existing facilities and services (e.g. parking, minimal maintenance, enforcement, monitoring, etc.)
Considerations: • Community gardens would require a parking area and irrigation infrastructure. • Community gardens would require a very high level of visitor services. • Staff would have many "lessees" in a relatively small area. In more traditional forms of agricultural stewardship, a single lessee has responsibility for large areas. Establishing, operating and maintaining a program would require substantial and additional staffing.
Mitigating Tools: • A site could be could be leased to a community group which could in turn, sublet garden plots and address the operation and maintenance of the program.
Compatibility with providing a safe recreational experience
No Considerations

Compatibility with other activities/other visitor's experiences
Considerations: • Community gardening would likely have no more impacts to other visitors than vegetable farms. The properties could potentially remain open to non-participating members of the public.

Due to compatibility issues with agricultural production, i.e. taking prime farmland out of agricultural production, the high level of visitor facilities and services community gardens would require and preferable existing and potential locations on other lands, staff recommends that community gardens not be permitted on OSMP lands.

Food Forests

Dependence on an agricultural setting and/or OSMP lands
Considerations: • Food forests do not depend upon an agricultural setting. • There are currently no food forests in the City of Boulder or Boulder County. An edible educational demonstration garden is planned for City lands.
Ability to increase peoples' appreciation of agriculture or understanding of Open Space purposes
Considerations: • Food forests may increase visits to open space. These visits may lead to an increased awareness of open space lands and knowledge about permaculture principles. However, such visits by themselves would not aid in a visitor's understanding of agricultural production or the agricultural importance of open space lands.
Compatibility with the preservation of agricultural and other resources
Considerations: • Food forests would require either land to be taken out of traditional agricultural production or the conversion of other open space land with suitable soils and water. • Although the land used for food forests might still be considered to be in agricultural production, the primary purpose is not agricultural production but recreational in nature. • Converting a *non*-agricultural property into a food forest would require the planting of a garden of non-native plants on natural open space lands. One of the purposes of OSMP is the preservation and restoration of natural ecosystems. • Visitors to the food forest are encouraged/allowed to pick and eat fruit which might require the visitor to travel off trail. Extensive or repeated off-trail travel could lead to areas denude of ground vegetation. Encouraging visitor to be off trail in some areas of OSMP would be contrary to direction in the VMP encouraging on-trail visitation.
Mitigating Tools: • Create a trail system to serve the food forest. This would likely be a higher density of trails than found on other OSMP properties as the trails would need to wind through the forest to be effective in mitigating the ground disturbance created by visitors going to the base of the various trees and shrubs.
Compatibility with a low level of existing facilities and services (e.g. parking, minimal maintenance, enforcement, monitoring, etc.)
Considerations: • Food forests would require a garden/orchard of perennial food-producing trees and shrubs. Typically the only visitor infrastructure provided for passive recreation activities are trails and trailheads. Activities which require more infrastructure are not considered passive recreation. • Food forests, depending on the site, might require irrigation infrastructure. • A trail and/or access for visitors would be required. • Food forests would require pruning and ongoing maintenance, a higher level of ongoing maintenance than the natural ecosystems comprising open space.

Mitigating Tools: • Only permit food forests in areas that have adequate groundwater conditions to support perennial trees and shrubs without added irrigation infrastructure. • The land could be leased by a community group that would be responsible for maintenance, similar to a structure often used by community gardens. However, leasing land to interested community groups in order to provide their desired recreational visitor experience (even if shared by OSMP) and maintaining the infrastructure is inconsistent with the department's past practices and operational policies.
Compatibility with providing a safe recreational experience
No Considerations
Compatibility with other activities/other visitor's experiences
Considerations: • Visitors would typically be either hiking, biking, or riding a horse through a food forest. Food forests provide an alternative landscape/backdrop to the currently permitted passive recreational opportunities.

Due to compatibility issues with the preservation of agricultural and natural resources and the high level of visitor facilities and services, staff is recommending that food forests not be permitted on OSMP lands.

Agricultural Structures

Purpose and Need

The City Charter allows for structures and other improvements on Open Space lands for permitted uses, as long as they are necessary for *open agricultural use*. The types of agricultural structures permitted, especially greenhouses and hoophouses, have come into question with more frequency as there has been an increased desire to diversify the types of agricultural operations on OSMP lands to include more diversified vegetable farming. In 2010 City Council directed staff to explore whether City Charter provisions related to structures on Open Space should be amended to allow for infrastructure to increase the length of the growing season.

This analysis is intended to provide clarity surrounding the agricultural structures permitted on city Open Space, including answering the question of the appropriateness of greenhouses and hoophouses on OMSP lands. This analysis also provides a framework for evaluating proposed new or replacement agricultural structures.

Existing Policy Guidance

The Boulder City Charter (Charter) Section 176 prohibits the improvement of open space land after it has been acquired by the city unless the improvements are necessary to protect or maintain the land or to provide for passive recreational, open agricultural, or wildlife habitat use of the land.

The City Council approved 1995 Open Space and Mountain Parks Long Range Management Policies (LRMP) also address agricultural facilities through the following policies:

- Facilities can be constructed on OSMP land if necessary to support approved activities as specified in an Open Space management plan (and in accordance with the Charter Section 176).
- Structures should be consistent with Open Space purposes, be compatible with natural processes, functional, energy efficient and cost-effective.
- Existing buildings will be considered before new construction is contemplated.
- All facility costs including initial construction, refurbishment, or restoration, ongoing maintenance and operational costs should be considered.
- Facilities will be integrated into the Open Space environment so as to result in minimum impact.
- Facilities will be designed and developed to avoid competing with or dominating Open Space features.

Definitions

Greenhouses (aka Glass Houses)

Greenhouses are used to extend the growing season earlier in the spring and later in the fall.
They are permanent structures. The frames are made of aluminum, galvanized steel, or wood. Glazings are glass, rigid clear plastic, or polyethylene. Greenhouses have heat, mechanical ventilation, artificial light, and irrigation systems. Greenhouses offer a controlled environment and plants are not typically grown directly in the ground.

Hoop Houses (aka High Tunnels)

Like greenhouses, hoop houses are used to extend the growing season. They are typically tall enough to allow walk-in access. The frame is PVC, aluminum, or galvanized steel, with wood for hip and baseboards. The frames are then covered in plastic. Plants are typically grown directly in the ground. Hoop houses lack the precision of an environmentally-controlled greenhouse, as they rely on passive heating and cooling.

Analysis

Open Agriculture

While there is not a standard definition for open agriculture, OSMP staff interprets it to mean:
Agricultural production where the products are grown (or raised) in a manner in which they can interact with the environment.

Staff considers hoophouses and the crops grown in them as open agriculture because the crops are grown in the ground and while the covering moderates temperatures it is not a tightly controlled environment. Using the same criteria, greenhouses do not meet the standard for open agriculture. However, the issue becomes more complex if crops are only started in a greenhouse and then transplanted to an open space field. The City Attorney's Office issued an opinion that crops started in a greenhouse and then transplanted to Open Space could classify as open agriculture. In response, staff has included both types of structures in the evaluation.

Necessary for Open Agriculture

Under the most strict or narrow interpretation, neither hoophouses or greenhouses are *necessary* for an open agricultural operation. There are multiple types of agricultural operations such as livestock, hay or other perennial production that do not require hoophouses or greenhouses. Annual vegetable farms do not *require* hoophouses or greenhouses. The growing season is generally long enough in the Boulder Valley to produce a limited selection of vegetables. However, structures to extend the growing season are necessary for vegetable farms to be economically viable and competitive. The primary factors that contribute to the viability are the longer season of production and the broader diversity of crops. The value of these structures for agricultural production predates the current and increasing interest in local foods as the Charter seems to anticipate the need for improvements to support agricultural operations. In that regard and acknowledging the city's interest in increasing vegetable and local food production, staff considers hoophouses and under certain limited circumstances greenhouses consistent with the relevant sections of the Charter.

Alternatives Comparison

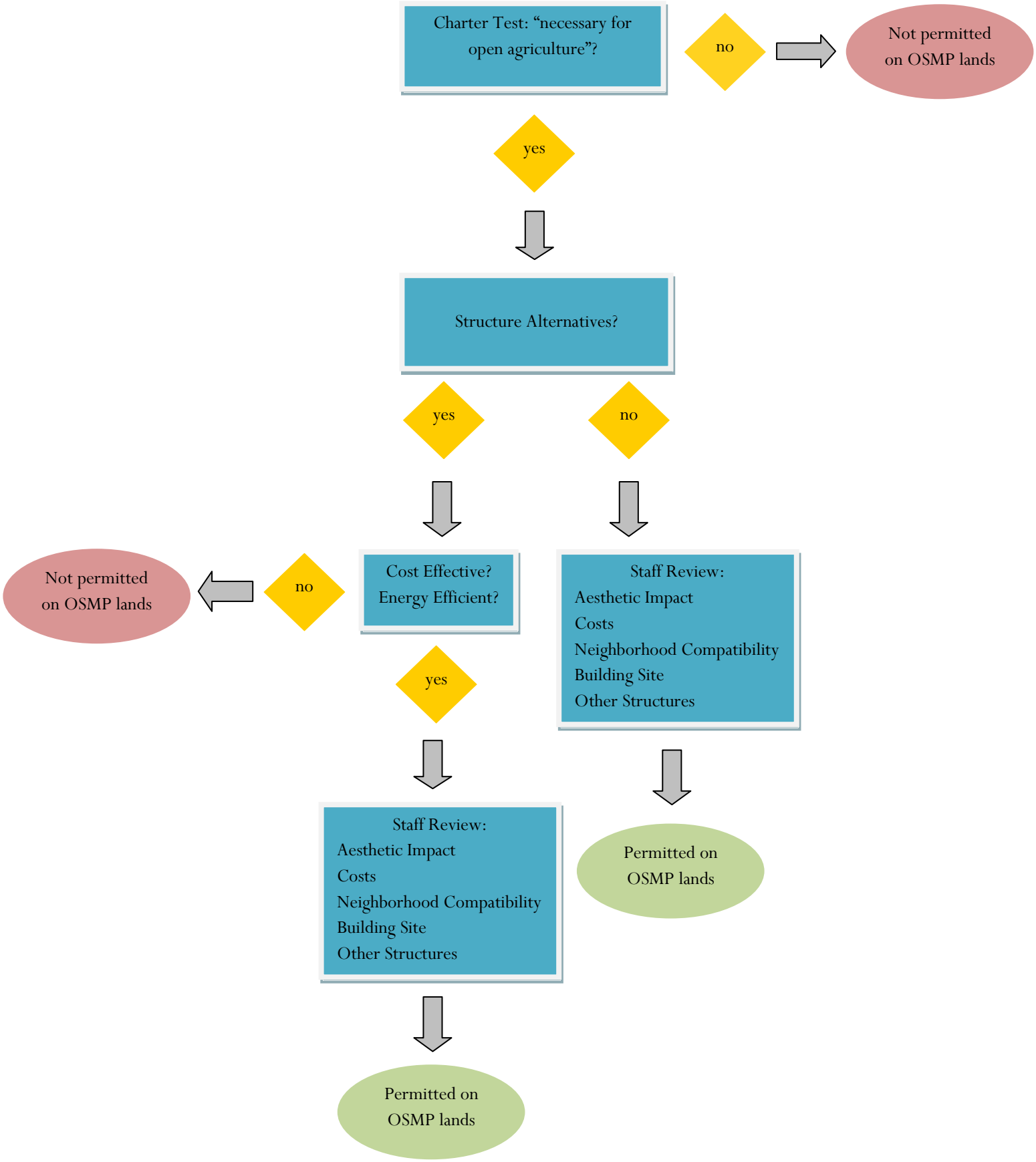
Recognizing the necessity of hoophouses or greenhouses for successful vegetable farms, staff focused next on selecting the most appropriate type of structure to meet the need. When choosing between alternative structure types, staff looked to the guidance provided by the Open Space LRMP, and determined that energy efficiency and cost effectiveness were the key criteria for comparing alternatives. In regards to hoophouses and greenhouses there are significant differences in both energy efficiency and cost effectiveness. Traditional greenhouses are notorious energy hogs,[1] both for heating and supplemental lighting, while passive solar and net zero greenhouses lack the production capacity of traditional greenhouses and cost 13 times more per square foot to construct.[2] The construction costs and energy used per unit area are much higher for greenhouses. One study estimated glass-panel greenhouse construction at over $30.00 per square foot. Given the suitability of hoophouses to extend the growing season at much lower initial and ongoing costs including less energy, staff is recommending hoophouses be permitted on OSMP lands with staff approval and greenhouses be prohibited on OSMP lands.

The following flowchart illustrates the process for determining if a type of structure is appropriate for OSMP lands.

---

[1] Kinney, L., Hutson, J., Stiles, M., and Glute, G. Energy Efficient Greenhouse Breakthrough: 2012 Summer Study on Energy Efficiency in Building, and Ladd, C. "Giant Greenhouses Mean Flavorful Tomatoes All Year." *New York Times.* 30 March 2010. http://www.nytimes.com/2010/03/31/dining/31tomoato.html?pagewanted=all&_r=0

[2] Pena, JG. Grrenhouse Vegetable Production Economic Consideration, Marketing and Financing. http://aggie-horticulture.tamu.edu/greenhouse/hydroponics/economics.html


Charter Test: "necessary for open agriculture"?
no
Not permitted on OSMP lands
yes
Structure Alternatives?
yes
no
Cost Effective? Energy Efficient?
no
Not permitted on OSMP lands
yes
Staff Review:
Aesthetic Impact
Costs
Neighborhood Compatibility
Building Site
Other Structures
Permitted on OSMP lands
Staff Review:
Aesthetic Impact
Costs
Neighborhood Compatibility
Building Site
Other Structures
Permitted on OSMP lands

Agricultural Structures Policy

The types of structures permitted on OSMP agricultural lands must be consistent with Open Space purposes, necessary for open agriculture, and a cost effective and energy efficient way to meet the agricultural need.

The following types of structures are permitted on OSMP lands

- Barns
- Corrals
- Loafing sheds
- Livestock shelter
- Hoophouses
- Outbuildings
- Storage sheds
- Irrigation water distribution structures

The following types of structures are not permitted on OSMP lands:

- New residences (residences on Open Space are limited to those existing on the properties at the time of acquisition)
- Greenhouses

Replacement or new structures/facilities on agricultural properties may be allowed, but first require OSMP staff approval and be allowed per the Boulder County Land Use Code. OSMP staff will consider the following when making a determination on a case-by-case basis:

- Structures/facilities shall not remove land from agricultural production.
- Structures/facilities will be integrated into the Open Space environment so as to result in minimum impact. Facilities will be designed and developed to avoid competing with or dominating Open Space features.
- All structure/facility costs including initial construction, refurbishment, or restoration, ongoing maintenance and operational costs.
- Neighborhood compatibility.
- Proximity to building sites.
- Number of and uses of existing structures.

OPEN SPACE BOARD OF TRUSTEES
Minutes
Meeting Date May 13, 2015

BOARD MEMBERS PRESENT

Shelley Dunbar	Frances Hartogh	Kevin Bracy Knight	Tom Isaacson

STAFF MEMBERS PRESENT

Tracy Winfree	Jim Reeder	Mark Gershman	Kelly Wasserbach
Jim Schmidt	Steve Armstead	Annie McFarland	Don D'Amico
Deryn Wagner	Don D'Amico	Alyssa Frideres	Alycia Knutson
Leah Case			

GUESTS
Annie Noble, Greenways Program Coordinator
Kurt Bauer, Engineering Project Manager
Kristin Dean, Utilities Planner
Jeff Arthur, Director of Public Works for Utilities
George Gerstle, Boulder County Transportation
Julian Maskeroni, Central Federal Lands Highway Division of the U.S. Dept. of Transportation

AGENDA ITEM 1 – Approval of the Minutes
Frances Hartogh said in the first paragraph on page two it should read, "Frances Hartogh expressed her concern that the HCA designation of Joder Ranch was not finalized after the Board and City Council voted unanimously for that designation."

Tom Isaacson moved the Open Space Board of Trustees to approve the minutes from April 8, 2015 as amended. Frances Hartogh seconded. This motion passed unanimously.

AGENDA ITEM 2 – Public Participation for Items not on the Agenda
Crif Crawford, Boulder, said he applauds the Open Space Board of Trustees (OSBT) ongoing efforts to protect Open Space. He encouraged the Board to allow the use of a narrow strip of Open Space for the proposed berm, which in turn will protect the citizens of the City of Boulder.

Pete Palmer, Boulder, said the frequency of severe weather events is going to continue to increase and the likelihood of another flood is high. He asked the Board to expedite the construction of the proposed berm.

Chuck Howe, Boulder, said we were lucky not to have any fatalities from the September 2013 flood. He thanked all groups involved who are focusing on this project and working to identify a solution.

Joyce Davies, Boulder, asked the Board to support the mitigation plan to help eliminate future flooding of Frasier Meadows and other neighborhoods located in the flood plain. She said PLAN-Boulder County highlights that Open Space lands can be used to protect lives of the citizens living in flood hazard areas.

Bruce Thompson, Boulder, asked the Board to support the staff recommendation. He noted that roughly 40 residents from Frasier Meadows who also support this recommendation were in attendance.

Mike Barrow, Boulder MountainBike Alliance (BMA), said there is a positive change in how Open Space and Mountain Parks (OSMP) staff is interacting with the public. He expressed his thanks for all of the updates staff has been providing for ongoing projects.

DRAFT

Janet Streater, Boulder, said the proposed changes to the National Institute of Science and Technology (NIST)/National Oceanic and Atmospheric Administration (NOAA) protected areas were not on the agenda as she was expecting. She asked staff to move forward with the foot bridge over Anderson ditch. The process of designating trails should not also make areas off limits.

Suzanne Webel, Boulder County, thanked staff and the Board for bringing forward the proposed trailhead designs for Chapman Drive and Joder Ranch; she said she looks forward to these becoming a reality.

AGENDA ITEM 3 – Matters from Staff
Draft 2016 Work Plan/CIP
Tracy Winfree, Open Space and Mountain Parks Director, gave an update on the 2016 Work Plan.

Frances asked when the overarching issues will be addressed. Tracy said likely not until after the North Trail Study Area (TSA) plan is completed.

Progress report on projects
Annie McFarland, Visitor Access Coordinator, gave a presentation on the status of closed trails due to the recent rain.

Frances asked how staff encourages people to stay on trail in muddy conditions. Annie said this is a hard thing to enforce; staff will post signage at the trailhead as well as on the website to alert people of the trail's condition. If it seems there is a social trail developing long-term, staff can put in structures to deter people from continuing to use the additional trail. Frances suggested having the neighbors do an adopt-a-trail program to help with signage and notifying staff of poor conditions. Tom said in some cases closing the trail may be the best solution as damage can occur very quickly. Annie agreed that this is an effective method; there are two new staff members focused on monitoring muddy trails which will allow staff to be more responsive. Shelley asked if staff can put together a press release when a trail is too muddy to notify users before they get there. Annie said right now Twitter and Facebook are used for this purpose.

Kelly Wasserbach, Engineering Manager, gave a presentation on the possible trailhead designs for Chapman Drive and Joder Ranch.

Tom asked if people will still be able to park at Olde Stage. Kelly said no, Boulder County has requested that staff puts up no parking signs. Shelley asked if the infrastructure being put in will be used when the plan is final. Kelly said staff will install it with the intent for it to be permanent.

North Trail Study Area Update
Steve Armstead, Environmental Planner, gave an update on the status of the North TSA planning process.

Frances suggested posting the schedule for the Inspire Boulder comment window. Shelley added that an e-mail could be sent out to the North TSA e-mail list with the dates for when people can submit comments.

AGENDA ITEM 4 – Matters from the Board
Kevin said the public meeting OSMP held for the North TSA was really great. He encouraged the public to come to these meetings in the future; this is a great way to be involved.

Feedback regarding televising OSBT meetings
The Board agreed that the pilot program of televising the OSBT meetings has been a great success; it provides a great way to be more inclusive. Board members expressed their support for this to continue.

DRAFT

2016-2021 Greenways Capital Improvement Program
Tom Isaacson and Annie Noble, Greenways Program Coordinator, summarized information from the Greenways Capital Improvement Program (CIP)**.**

AGENDA ITEM 5 – Public hearing and consideration of a recommendation to City Council regarding the South Boulder Creek Major Drainageway Flood Mitigation Plan
Don D'Amico, Ecological Systems Supervisor, and Kristin Dean, Utilities Planner, gave a presentation regarding the South Boulder Creek Major Drainageway Flood Mitigation Plan.

Public Comment
Chuck Wellman, Boulder, said the community was lucky to not have any loss of life from the September 2013 flood. He said he feels heartened to hear that a solution has been discussed and agrees that the staff recommendation is the best solution and very reasonable.

Kathie Joyner, South Boulder Creek Action Group, said every month that goes by and there is no relief is very worrisome. She encouraged the Board to move quickly on making a decision and getting a structure put in.

David McGuire, Boulder, said he is looking forward to a solution being made for saving lives. There are several excellent alternatives to benefit both Open Space and the neighborhoods located in the flood plain.

Rick Mahan, Boulder, re-emphasized the severity of the 2013 flood. This is a huge public safety factor and appreciates that this is being considered.

Steve Karakitsios, Boulder, said the staff recommendation seems like a good solution; Open Space will be affected slightly, but it will easily recover. He asked the Board and staff to move forward quickly.

Tim Johnson, Boulder, thanked the Board for their willingness to listen to the community. He would echo that a decision needs to be made in an expedited fashion; the fear of the next flood event is still very prevalent.

Karl Ahuta, Boulder, said flood retention is an important use of Open Space; acquisition was never intended to trump life safety. This time period is already too drawn out; please move ahead quickly.

Raymond Bridge, on behalf of the Boulder County Audubon Society, said he was glad to see that staff had revised the berm language; he is skeptical that this would be accomplished without disruption to the native grasslands. He urged the Board to not approve this recommendation without first making sure there are safeguards in place. All funding for this project needs to come from outside Open Space.

Return to the Board
Frances asked how the berm can be constructed without impacting Open Space land. Don said the concept plan envisions this to take place totally within the right-of-way; he said there may be temporary impacts to Open Space but staff would make sure there is a good plan for restoration. Tom asked if the proposed option pushes the berm farther east. Don said yes, this moves it farther away from the creek and critical habitat for the Preble's meadow jumping mouse. He said this will also lessen the project footprint. Tom asked what the height of the berm will be. Kristin said the height of the berm, at the highest, would be 18ft from the base of the underpass (from the Open Space side the height would be 29ft). She said the majority of this berm should not change the experience/view driving into Boulder. Shelley asked if there is a possibility to make the berm look more natural. Don said if the berm is constructed with soil and an appropriate slope, there might be an option to plant native vegetation. Frances asked how long it would

DRAFT

take the detention area to drain in a big rain event. Kurt said they are only allowed to retain water for 72 hours or less, so that would be the longest it would hold water. Frances asked about effects on plants and wildlife. Don said there should not be significant long-term effects. Frances asked what the cost to OSMP will be. Tracy said this is a Utilities project so there will be no cost to OSMP.

Frances said it is hard to vote on something like this when the impacts are unknown. Kurt said this is not the last time the Board has a say in this; there are still several steps (including a public process and a community environmental assessment). Kevin said he is concerned about the idea of this as well; the Charter states opposite to what is being proposed; he said he would have hoped for more of a balance. Frances added that there is line between sacrificing Open Space and protecting homes; this is a much broader issue than bringing residents out of the flood plain. Shelley said she feels comfortable with the staff recommendation. The perspective from a trail user will barely be affected, and the bike experience will be enhanced. She asked staff to bring back design specifics from multiple perspectives, and for the Board to be involved as discussions move forward. Tom read some comments from Molly Davis who was unable to attend the meeting; she expressed her support for the staff proposal.

Motion
Tom Isaacson moved the Open Space Board of Trustees to support staff's recommendation for City Council to accept the South Boulder Creek Major Drainageway Flood Mitigation Plan, specifically Option D (single berm using Colorado Department of Transportation Right of Way - and requiring no disposal of City of Boulder Open Space and Mountain Parks lands) which significantly lessens environmental impacts to Open Space lands for regional detention at US 36. This is conditioned upon staff returning to the Open Space Board of Trustees in the event staff determines construction will involve non-trivial impacts to Open Space. Shelley Dunbar seconded. This motion passed four to zero; Molly Davis was absent for this meeting.

AGENDA ITEM 6 – Recommendation to dispose of an interest in Open Space lands pursuant to Boulder City Charter Section 177 through the conveyance of three (3) acres of Right of Way plus an additional 7 acres for the associated slope easements to Boulder County for the realignment and rebuilding of Lefthand Canyon Drive between Buckingham Park and Jamestown Road and a further recommendation to accept fee ownership to all lands currently owned by Boulder County between the south boundary of the new Right of Way and Left Hand Creek.
George Gerstle, Boulder County Transportation, gave a presentation to the Board regarding this possible disposal.

Tom asked how long this road would need to be closed for construction. George said it would remain open with the exception of a few short scheduled closures. Frances asked if raising the height of the slope would affect the way wildlife moves in this area. Mark Gershman said in the aquatic habitat this will improve mobility; it will also provide more room in the creek corridor which provides better functionality.

Public Comment
None.

Return to the Board
No further comment.

Motion
Tom Isaacson moved the Open Space Board of Trustees approves and recommends that City Council approves 1) the disposal of an interest in Open Space lands pursuant to Boulder City Charter Section 177 through the conveyance of no more than five (5) acres of Right of Way plus an

DRAFT

additional seven (7) acres for the associated slope easements to Boulder County for the realignment and rebuilding of Lefthand Canyon Drive between Buckingham Park and James Canyon Drive, and 2) acceptance of fee ownership to all lands currently owned by Boulder County between the boundary of the new Right of Way and Left Hand Creek. Kevin Bracy Knight seconded. This motion passed four to zero; Molly Davis was absent for this meeting.

AGENDA ITEM 7 – Consideration of a motion to approve and recommend that City Council approves the disposal of an interest in Open Space lands pursuant to Boulder City Charter Section 177 through the grant of easements to Public Service Company of Colorado for overhead power lines along Thomas Lane and on the T.H.P. Open Space property, as described in Attachment D, conditioned upon Public Service Company of Colorado executing a quit claim deed in a form acceptable to the city terminating whatever rights and interest it may have to the Lower Big Bluestem power line access route.
Jim Schmidt, Property Agent, gave a presentation on this possible disposal.

Kevin asked what other options there might be for access (other than Big Bluestem). Jim said one idea may be to reconstruct the bridge that goes north out of South Mesa trailhead. Shelley asked what the existing power line poles are made of. Jim said wood; the new poles will look very similar.

Public Comment
None.

Return to the Board
No further comment.

Motion
Frances Hartogh moved the Open Space Board of Trustees approves and recommends that City Council approves the disposal of an interest in Open Space lands pursuant to Boulder City Charter Section 177 through the grant of easements to PSCo for overhead power lines along Thomas Lane and on the T.H.P. Open Space property, as described in Attachment D, conditioned upon PSCo executing a quit claim deed in a form acceptable to the city terminating whatever rights and interest it may have to the Lower Big Bluestem power line access route. Shelley Dunbar seconded. This motion passed four to zero; Molly Davis was absent for this meeting.

ADJOURNMENT – The meeting adjourned at 9:53 p.m.

These draft minutes were prepared by Leah Case.

DRAFT

CITY OF BOULDER
OPEN SPACE BOARD OF TRUSTEES AGENDA ITEM

MEETING DATE: June 15, 2015

AGENDA TITLE: Consideration of a motion regarding North Trail Study Area Plan Sideboards

PRESENTER/S
Tracy Winfree, Director, Open Space and Mountain Parks
Mark Gershman, Environmental Planning Supervisor
Steve Armstead, Environmental Planner

EXECUTIVE SUMMARY

The North Trail Study Area (TSA) sideboards will define the decision space for the North TSA planning process. Sideboards clarify what is "on the table" for discussion, and what is beyond the scope of the plan. They provide critical guidance answering questions such as: 1) What constraints must the plan account for? 2) What considerations are essential for the plan to be supported as a viable set of recommendations?

An initial draft of the North TSA sideboards was created using the Open Space Board of Trustees (OSBT)-approved sideboards for the West TSA Plan and updated to include information and guidance relevant to the North TSA. The initial draft of the sideboards was made available for public feedback at two community workshops for the North TSA Plan and was posted on Inspire Boulder, the city's digital town hall. The sideboards were revised to include suggestions made by a range of stakeholders (see Attachment A).

Final sideboards are desired before the next community engagement phase covering plan "Interests" which will begin the week of June 22, 2015. This is important because the sideboards allow community discussions about interests to be consistent and within the plan's scope.

STAFF RECOMMENDATION

Staff requests Open Space Board of Trustees consideration of this matter and recommends action in the form of the following motion:

Motion to approve the sideboards for the North Trail Study Area Plan as attached to this memo including modifications made by OSBT at its June 15, 2015 meeting.

COMMUNITY SUSTAINABILITY ASSESSMENTS AND IMPACTS

- Economic – Open Space and Mountain Parks (OSMP) lands contribute to the economic vitality of the city by providing a valuable amenity and recreation opportunities that add to the quality of life in the Boulder area. The North TSA Plan will identify ways to ensure the long-term sustainability of this economic asset.
- Environmental – The preservation and restoration of natural lands is a key part of the OSMP charter and contributes to the city's environmental sustainability goals. The North TSA Plan will focus on how to manage visitor use and trails in a way that supports environmental sustainability. The North TSA provides the management tools to provide a high-quality visitor experience and recreation opportunities while protecting sensitive natural resources.
- Social – OSMP lands, facilities, and programs contribute to the community's sustainability because they provide recreation opportunities that are accessible to all members of the community. The North TSA Plan supports the Visitor Master Plan's framework to maintain and enhance recreational opportunities that are compatible with natural, cultural and agricultural resource conservation.

OTHER IMPACTS

- Fiscal – The North TSA sideboards have minimal fiscal impact. Establishing sideboards for the North TSA Plan was a deliverable staff included in the expenses for plan development.
- Staff time – Staff time was needed to develop and revise sideboards after community feedback. Staff time was allocated in the annual workplan to accomplish this task as part of developing the North TSA Plan.

PUBLIC COMMENT AND PROCESS

OSMP provided opportunities for public feedback on proposed sideboards at two community workshops and through the city's digital town hall forum Inspire Boulder. Community members also provided comment through the North TSA website. A compendium of comments is available on the project website.

Several themes were apparent in the public feedback staff received:

- Provide links to sideboard documents and example information where available;
- Clarify the constraints that exist when planning on jointly-owned lands;
- Include information about *anticipated* OSMP acquisitions;
- Clarify why the Joder interim trail is included as a sideboard describing the OSBT recommendation for the trail and the inclusion of this trail in the list of current projects; and
- Clarify how OSMP coordinates with Boulder County and other land owners/managers to enhance North TSA outcomes.

This item is being heard as part of this public meeting advertised in the *Daily Camera* on Sunday, June. 14, 2015.

ANALYSIS

Background

A sideboard is a pre-existing requirement or commitment affecting the development of recommendations for a project or plan—in this case, for the the North TSA Plan. The North TSA Plan must be consistent with the City of Boulder Charter, laws, regulations, legal requirements and agreements, and City Council approved plans and policies. Sideboards define the scope of a plan and affect how decisions can be made during the planning process.

Sideboards are necessary to ensure that all participants in the planning process have a shared understanding of the plan's scope. Sideboards provide guidance that will answer questions such as:

- What area is covered by the plan?
- What types of changes are within or outside the scope of the plan?
- What constraints must the plan account for?
- What considerations are essential for the plan to include?

The North TSA Sideboards fall into three general categories:

1. Geographic Scope,
2. Legal Requirements (Laws, Regulations and Legal Agreements), and
3. Existing Commitments (Plans, Policies and Current Projects).

Geographic Scope

The North TSA Plan includes all lands managed by the City of Boulder as OSMP north of Linden Avenue and north of the Colorado Highway 119 (Longmont Diagonal). The North TSA Plan base map included as Attachment B depicts the geographic scope of the North TSA.

Legal Requirements (Laws, Regulations and Legal Agreements)

The North TSA Plan recommendations must comply with relevant laws and regulations. If there are situations where laws, such as city ordinances, preclude improvements to the situation in the North TSA, the plan can recommend changes or the reevaluation of the relevant laws. However, the inclusion of such recommendations is no assurance that changes will ultimately be made. Examples of relevant laws and legal requirements include:

- Federal, State or County Laws,
- The City of Boulder Charter,
- City of Boulder Laws and Legal Requirements, and
- City Council Authority.

Existing Commitments (Plans, Policies and Current Projects)

The North TSA planning process is taking place amidst the implementation of other city plans, policies and projects. These include several 2013 flood recovery projects and projects included in the annual work plan. The on-the-ground actions contained in these plans and projects affect the scope of the North TSA Plan. Work on projects started prior to the beginning of the planning process will not be altered by North TSA Plan.

Generally, guidance from the different plans and policies are compatible, but there may be situations where guidance from different plans requires reconciliation in the TSA planning process. Examples of existing commitments considered as sideboards include:

- Adopted City of Boulder plans and policies,

- OSBT recommendations for the Joder Property,
- Design, construction, and maintenance standards and best management practices, and
- Existing OSMP projects.

Changes to the Draft Sideboards

Staff modified the draft sideboards in response to stakeholder feedback. The changes include:

- The addition of links to specific documents and plans where these are available in digital form.
- The addition of the Left Hand Creek Watershed Master Plan to the "current projects" list.
- Changes to the geographic scope sideboard to clarify:
  - Properties owned jointly with Boulder County are included in the North TSA if OSMP is the identified property manager, and
  - Acquisitions in the North TSA planning area during the planning process will be evaluated as part of the North TSA if there is adequate information available about the property.
- Added clarifying language about the inclusion of the Joder interim trail as a "current project" to indicate the construction and opening of the trail are outside the scope of the North TSA, however the long-term plans for the trail are within the plan's scope.

There were also public comments requesting that the sideboards include additional details about properties jointly owned with Boulder County and about coordination with Boulder County. If OSMP does not manage a property, the TSA Plan will not include that property in the scope of the plan. Properties not managed by OSMP could be included in a plan recommendation if needed to address opportunities to achieve desired outcomes for plan. OSMP will actively coordinate with Boulder County on plans for jointly-owned properties.

Recommendation

Staff requests that the OSBT approve the sideboards as attached to this memo or as modified by the OSBT.

Submitted by:

JReeder for Tr Winfree

Tracy Winfree, Director

Mark Gershman, Environmental Planning Supervisor

Steve Armstead, Environmental Planner

ATTACHMENTS:

A. North Trail Study Area Plan Sideboards
B. North Trail Study Area Basemap

City of Boulder Open Space and Mountain Parks
North Trail Study Area Plan

Sideboards

June 10, 2015

What is a "Sideboard?"

For the purposes of Trail Study Area (TSA) planning, a **sideboard** is a pre-existing requirement affecting the development of a plan. Developing a plan is not like painting on a blank canvas – it must be consistent with the City of Boulder Charter, laws, regulations, legal requirements and agreements and City Council-approved plans and policies. Sideboards define elements of the decision space for the planning process. They are useful in understanding what is appropriate to consider as part of the plan as well as what is beyond its scope.

Sideboards *can* potentially be modified, but vary with regard to the ease, process, and time necessary to make changes. For example, an Open Space and Mountain Parks (OSMP) policy that is determined to be inconsistent with the objectives of the plan is easier to change than a federal regulation. Changes to sideboards can happen. In past TSA plans when a change to a sideboard was determined to be feasible and beneficial for a plan outcome, the resulting plan included a corresponding recommendation to address the sideboard.

Why are Sideboards Needed?

Sideboards are necessary to ensure that all the participants have a shared understanding of the plan's scope and provide guidance that will answer questions such as:

- What area is covered by the plan?
- What constraints must the plan account for?
- What types of changes and actions might be considered to produce a viable set of recommendations?

The Sideboards Are:

1. **Geographic Scope**
   The North TSA Plan includes all lands managed by the City of Boulder as OSMP north of Linden Avenue and north of the Colorado Highway 119 (Longmont Diagonal).

2. **Legal Requirements (Laws, Regulations and Legal Agreements)**
   The North TSA Plan must comply with relevant laws and regulations. If there are situations where laws, such as city ordinances, preclude improvements to the situation in the North TSA—the plan can recommend changes or the reevaluation of the relevant laws. However, the inclusion of such recommendations is no assurance that changes will ultimately be made. Examples of legal requirements include but are not limited to
   - *Federal, state or county laws*
   - *The City of Boulder Charter*
   - *City of Boulder laws and legal requirements*
   - *City Council authority*

3. **Existing Commitments (Plans, Policies and Current Projects)**
   The North TSA planning process is taking place amidst the implementation of other city plans, policies and projects. The policies and on-the-ground actions contained in these plans affect the scope of the

North TSA Plan. Work on most projects started prior to the beginning of the North TSA planning process will continue and not be altered as part of the North TSA Plan.

Guidance from the different plans and policies are generally compatible, but there may be situations where guidance from plans' directions conflict. This requires reconciliation in the TSA planning process. Examples of existing commitments include:

- *Adopted City of Boulder plans and policies*
- *OSBT recommendations for the Joder property*
- *Design, construction, and maintenance standards and best management practices*
- *Existing OSMP projects*

North Trail Study Area Plan Sideboards

Geographic Scope	
Sideboard	**Clarification/Examples**[1]
OSMP-Managed Lands in the North TSA.	The North TSA Plan property map includes the OSMP-managed properties in the North TSA planning area. Properties owned jointly with Boulder County are included in the North TSA when an intergovernmental agreement identifies OSMP as the property manager and therefore the rules, regulations, policies and plans of the managing agency apply to the property. The North TSA includes other properties where OSMP has joint ownership or legally is identified as the land manager. If OSMP is not the property owner or manager, the property will not be included in the North TSA. See North TSA Basemap. If a property is purchased or a public access agreement is acquired within the North TSA planning area during the planning process, OSMP will evaluate and provide recommendations if adequate information is known about the conditions and resources of the property for it to be included in the North TSA Plan. Recommendations referring to areas outside of the North TSA must be consistent with, or reflect a reasonable potential for management agreements with other land owners or amendments to existing agreements.

Legal Requirements (Laws, Regulations and Legal Agreements)	
Sideboard	**Clarification/Examples**
Federal, State, and County Laws and Legal Requirements. *The North TSA Plan must abide with OSMP's obligations to comply with federal, state, and county laws and regulations.*	• The Endangered Species Act. For example, projects in Preble's meadow jumping mouse suitable habitat or Ute ladies'-tresses occupied habitat may require authorization and permits from the United States Fish and Wildlife Service, • The Federal Clean Water Act regarding stream, wetlands and water body protection, • State laws and federal regulations preventing the removal or damage to cultural resources, • Boulder County's land use and flood plain requirements, and • The Americans with Disabilities Act (ADA).
City of Boulder Charter and Open	Article XII of the City of Boulder Charter describes:

[1] Examples provide readers with an idea of some relevant sideboards in a broad category to improve their understanding of the category. The examples are not meant to be comprehensive or all inclusive.

Legal Requirements (Laws, Regulations and Legal Agreements)	
Sideboard	**Clarification/Examples**
Space Provisions. *The North TSA Plan must be consistent with all applicable sections of the Boulder City Charter and the Article XII provisions for the purposes of OSMP lands.* *As called for in the Charter, the North TSA Plan must recommend the locations, if any, where bicycling, horseback riding and fishing should be allowed.*	• The functions of the Open Space department (Sec. 171), • The roles and functions of the Open Space Board of Trustees (OSBT) (Secs. 172 - 175), • The process and role of OSBT for any proposed disposal of open space land including the opportunity for a referendum to oppose such a disposal (Sec. 177), and • The purposes and uses of open space (Sec. 176). Open Space and Mountain Parks land shall be acquired, maintained, preserved, retained and used only for the following purposes: ▪ Preservation or restoration of natural areas characterized by or including terrain, geologic formations, flora, or fauna that is unusual, spectacular, historically important, scientifically valuable, or unique, or that represent outstanding or rare examples of native species, ▪ Preservation of water resources in their natural or traditional state, scenic areas or vistas, wildlife habitats or fragile ecosystems, ▪ Preservation of land for passive recreation use, such as hiking, photography or nature study, and if specifically designated, bicycling, horseback riding or fishing, ▪ Preservation of agricultural uses and land suitable for agricultural production, ▪ Utilization of land for shaping the development of the city, limiting urban sprawl and disciplining growth, ▪ Utilization of non-urban land for spatial definition of urban areas, ▪ Utilization of land to prevent encroachment on floodplains, and ▪ Preservation of land for its aesthetic or passive recreational value and its contribution to the quality of life of the community. Open Space land may not be improved after acquisition unless such improvements are necessary to protect or maintain the land or to provide for passive recreational, open agricultural or wildlife habitat use of the land.
City of Boulder Laws and Legal Requirements. *The North TSA Plan must abide with OSMP's obligations to comply with the City of Boulder Revised Code.*	• Stream, wetlands and water body protection ordinances, • Wildlife protection ordinances (prairie dogs), • City laws protecting historic structures and cultural resources, and • Agreements with the United Tribes of Colorado and State of Colorado Historical Preservation Office to protect certain cultural resources.
Boulder City Council, OSBT and OSMP Authority. *The Boulder City Council has authority for adopting the North TSA Plan as called for in the City of Boulder Charter and Boulder Revised Code.*	The adoption of the North TSA Plan is subject to the authority and discretion of the Boulder City Council. The Open Space Board of Trustees provides recommendations to City Council.

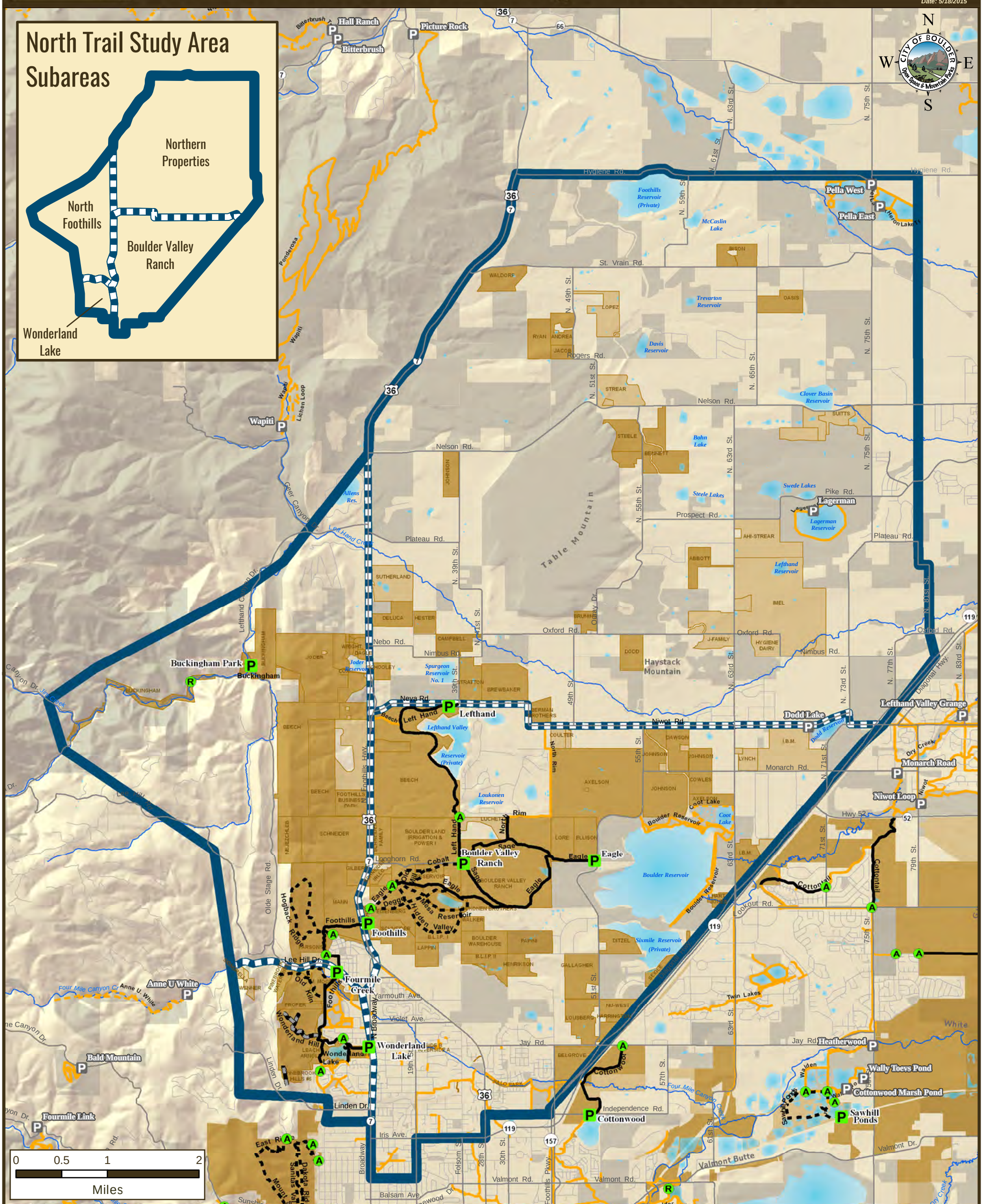
Legal Requirements (Laws, Regulations and Legal Agreements)	
Sideboard	**Clarification/Examples**
Adopted City of Boulder Plans and Policies. *The North TSA Plan will consider and integrate the information and management direction in City Council adopted plans relevant to the North TSA.*	OSMP's adopted plans provide information about the resources being managed and management policies, objectives, strategies and recommended actions to implement. Adopted OSMP plans and policies include but are not limited to: • Open Space Long Range Management Policies, • Visitor Master Plan, • North Boulder Valley Area Management Plan, • Forest Ecosystem Management Plan, • Grassland Ecosystem Management Plan, • Acquisition Plan, and • Agricultural Resources Management Plan (in progress).
OSBT Recommendations for the Joder Property. *The North TSA Plan will integrate the OSBT recommendations for an interim trail and trailhead on the Joder property into plan recommendations. The North TSA Plan will consider the designation of the Joder II property as a Habitat Conservation Area (HCA).*	On Dec. 10, 2014, the OSBT recommended that staff construct an interim trail between Foothills Highway and Olde Stage Road across the Joder property. The board's recommendation was made with the understanding that all uses of the Joder property, including this interim trail would be evaluated as part of the North TSA planning process. The usual HCA rules, including the on-trail requirement, will apply to the Joder property and the interim trail through the conclusion of the North TSA process. Dogs will be required to be leashed on the Joder portion of the interim trail. Voice and Sight regulations will remain in effect on the Buckingham Property portion of the interim trail. The North TSA process will consider whether to keep these designations in effect. The OSBT expressed its understanding and appreciation of the historic use of the Joder property for equestrians and believes that this historic use should be honored and accommodated through the TSA process. The OSBT stated that the designation of the Joder II property as an HCA was made with minimal public process and that the North TSA should take a fresh look at the Joder property's management area designation.
Design, Construction, and Maintenance Standards and Best Management Practices.	OSMP has design, construction and maintenance standards that provide a framework for managing and assessing the condition of visitor infrastructure and facilities so that they are physically sustainable with regular maintenance. Examples of the types of design resources used include trail design and management guidelines, trailhead infrastructure guidelines, and a sign graphics manual. OSMP intends to address and improve infrastructure to be more consistent with design guidelines. Exceptions or variances may be appropriate when site specific conditions, terrain or environmental trade-offs preclude the feasibility of achieving the desired standard (e.g., a trail reroute would create too many resource

Legal Requirements (Laws, Regulations and Legal Agreements)	
Sideboard	**Clarification/Examples**
	impacts - steep terrain limits options). OSMP uses the Forest Service Trail Accessibility Guidelines (FSTAG) in designing trails and trailheads for people with disabilities. OSMP has also developed guidance for the ecological best management practices for trail planning, design, construction, maintenance and closure.
Existing Trail and Cultural Resource Project Commitments. *The North TSA Plan will not recommend changes to trail, natural resource or cultural resource projects underway or in the bidding process in the North TSA.*	OSMP has existing projects that are 2013 flood recovery commitments with possible funding reimbursement from FEMA. These trail or flood restoration projects include, but are not limited to: • Old Kiln Trail, • Foothills Trail and a bridge/culvert for Fourmile Canyon Creek, and • Implementation of the Left Hand Creek Watershed Master Plan. Other OSMP Trail and Trailhead Projects: • The interim Joder trail and trailhead will be constructed and opened during the development of the North TSA Plan. The long-term plan for the trail and trailhead will be included in the North TSA Plan. OSMP has been working with Boulder County on trail connectors on OSMP land in the North TSA for many years. These projects are managed by Boulder County: • IBM connector trail, and • Fourmile connector trail. OSMP is assessing and preparing plans for the repair and maintenance of historic and cultural resources in the North TSA. Projects include, but are not limited to: • Foothills Nature Center (including the trailhead), and • Old Lime Kiln (Fourmile Canyon Creek).

City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan

Date: 5/18/2015



NORTH TRAIL STUDY AREA BASEMAP

- OSMP Trailhead
- OSMP Access Point
- OSMP Recreational Feature Access
- Boulder County Trailhead
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- OSMP Gliding Access
- Non-OSMP Managed Hiking Trail
- Non-OSMP Managed Multi-Use Trail
- NTSA Boundary
- NTSA Subarea
- OSMP Fee and Managed Property
- OSMP Easement or Jointly Owned, County-Managed Land

User: csekj1 Date: 5/18/2015 Path: E:\MapFiles\TSA\NorthTSA\NorthTSA_Basemap.mxd

C I T Y O F B O U L D E R
OPEN SPACE BOARD OF TRUSTEES AGENDA ITEM

MEETING DATE: June 15, 2015

AGENDA TITLE Review of and recommendation regarding the 2016 Open Space and Mountain Parks Department Capital Improvement Program Budget and a portion of the Lottery Fund Capital Improvement Program Budget.

PRESENTERS
Tracy Winfree, Director, Open Space and Mountain Parks
Michael Orosel, Temporary Financial Services Support, Central Services
Stephany Westhusin, Temporary Capital/Work Program Support, Open Space and Mountain Parks

PURPOSE
This is a request for the Open Space Board of Trustees (OSBT) to:

Review, approve and recommend that the Planning Board approve the Open Space and Mountain Parks (OSMP) Department's 2016 Capital Improvement Program (CIP) budget of $11,490,300 and make a recommendation concerning allocation of a portion of the city's Lottery Fund Capital Improvement Program Budget in the amount of $355,300 in 2016.

EXECUTIVE SUMMARY
The purpose of this agenda item is for the OSBT to review the 2016 CIP budget and make recommendations.

OSMP's share of the total combined revenue from sales and use tax collected by the city makes up approximately 92 percent of the department's revenue. The Open Space Fund sales tax base of 0.88 percent currently is made up of three components: 0.33 percent that will be reduced to 0.22 percent with no sunset at the end of 2018; 0.15 percent that will sunset at the end of 2019; and 0.40 percent that has no sunset. Most recently, the Budget Division projected 2015 sales tax revenue to increase 4.17 percent from 2014 actual sales tax revenue. The 2015 sales tax revenue is currently projected to be $29,286,214, an increase of $860,539 over actual 2014 sales tax revenue of $28,425,675. Through March 2015, sales and use tax revenue for the year to date is 12.40 percent above actual revenue over the same period in 2014. Sales and use tax accruing to the Open Space Fund in 2016 is projected to be $30,140,002.

Future years' revenue accruing to the Open Space Fund varies because 0.11 percent of the Open Space Fund's 0.33 percent tax will go to the General Fund beginning 2019 and the elimination of the 0.15 percent tax beginning in 2020.

The proposed 2016 Capital Improvement Plan (CIP) budget for the OSMP Department maintains funding for the Real Estate Acquisition CIP at $5,400,000, with the Mineral Rights and Water Rights CIPs remaining at $100,000 and $200,000 respectively. The balance of the OSMP CIP is allocated to projects in the following categories: agricultural projects - $170,000; cultural and historic projects - $100,000; flood recovery projects - $2,008,300; non-flood recovery projects - $360,000; projects committed to by approved contracts - $2,500,000; and studies and implementation of plans - $652,000. The Lottery Fund CIP funding for capital projects within the mountain backdrop is at $355,300 for 2016.

STAFF RECOMMENDATION

Staff requests Open Space Board of Trustees consideration of this matter and action in the form of following motion:

Motion to approve, and recommend that Planning Board approve an appropriation of $11,490,300 in 2016 from the Open Space Fund CIP as outlined in this memorandum and related attachments; and recommend that $355,300 be appropriated from the city's Lottery Fund CIP in 2016 as outlined in this memorandum and related attachments.

COMMUNITY SUSTAINABILITY ASSESSMENTS AND IMPACTS

- Environmental: Open Space and Mountain Parks is a significant community-based program that preserves open space land contributing to the environmental sustainability goal of the City Council.
- Economic: The Open Space and Mountain Parks program contributes to council's economic sustainability goal because it provides the physical context for the diverse and vibrant economic system that supports services for residents. The land system and the quality of life it represents attract visitors and help businesses to recruit and retain quality employees.
- Social: The Open Space land system is accessible to all members of the community and therefore helps support council's community sustainability goal because all residents "who live in Boulder can feel a part of and thrive in" this aspect of their community.

OTHER IMPACTS

- Fiscal: Sufficient funds are available in the Open Space Fund to cover the proposed 2016 Capital Improvement Program budget as summarized in the attached Open Space Fund Financial 2014–2021 (Attachment A).
- Staff Time: The budget is the financial representation of the departmental work plan. Preparation and management of the budget are part of the normal work plan.

PUBLIC FEEDBACK

This item is being heard at this public meeting advertised in the *Daily Camera* on June 14, 2015. On July 30, 2015 the city Planning Board is tentatively scheduled to review the 2016-2021 CIP

as recommended by staff and reviewed by the various city boards. On August 11, 2015 the City Council will hold its CIP study session.

ANALYSIS

Department Priority Projects for 2016

While core service delivery continues throughout the year, OSMP also is pursuing high profile community initiatives in support of Board and council goals. Those community initiatives translated into department priority projects are as follows:

- Continue Flood Recovery of Trails and Habitat (will continue into 2017, including county coordination);
- Submit final North Trail Study Area (TSA) Plan to council for approval by mid 2016;
- Following North TSA approval by council, begin Visitor Master Plan update to be recast as Open Space Master Plan, establishing policy guidance, priorities and measures of success across services and programs, and addressing overarching issues such as night time and temporal use;
- Implement Top Priorities of West TSA, North TSA, Agricultural Resource Management Plan, and Forest and Grassland Management Plans;
- Continue to Improve the Visitor Experience distinguishing between new initiatives and existing services; and
- Develop Regional Trails through strategic property acquisition, coordination with other agencies, and other avenues as needed, e.g., Eldorado to Walker Ranch, Joder to Heil Ranch and the Boulder Creek Path extension

For additional information, the OSBT received a memo on the 2016 Work Plan, including a draft of the 2016 – 2021 Capital Improvement Program, in its May 13, 2015 meeting packet. https://documents.bouldercolorado.gov/weblink8/0/doc/128806/Electronic.aspx.

Open Space Fund 2016 Capital Improvement Plan

For 2016, the CIP for the OSMP is recommended to include $5,400,000 for land acquisition, $200,000 for water rights acquisition, $100,000 for mineral rights acquisition and $5,790,300 for other projects (Attachment B). Additionally, the department recommends appropriation of its share of the Lottery Fund in the amount of $355,300 in 2016 (Attachment B). Together the 2016 proposed operating and capital budgets seek to implement the department's mission, consistent with the voter-supported charter, implementing the above-listed community priorities as well as the core services required for continued strategic acquisition and quality stewardship of OSMP's diverse set of properties.

Within the Real Estate Acquisition program, properties acquired since 2000, including lands in Jefferson County, have been purchased under the guidance of the Accelerated Acquisition Program and the Acquisition and Management Plan 2000 - 2006 as it had been extended through 2011. Staff anticipates acquiring an additional 8,731 acres under the Acquisitions Update 2013-2019 subject to availability of funds. In 2014, the city sold $10,000,000 of open space acquisition bonds. Approximately $6.8 million remain available from that bond sale to supplement its 2016-2021 CIP to fulfill the goal of acquiring additional land under the Acquisitions Update 2013-2019.

Under this plan, additional Open Space will be acquired within the following acquisition areas: Boulder Valley Comprehensive Planning Area, Mountain Parks, Table Mountain and Jefferson County Partnerships, as approved by the OSBT and City Council.

The Water Rights Acquisition program provides funding to purchase additional water rights from private owners or others for use on Open Space for agricultural and environmental purposes, as water becomes available in the Coal Creek, South Boulder, Boulder and Lefthand Creek watersheds. Funds also will be used for professional, legal and engineering fees, related analysis and other costs as may be necessary to manage and protect the water rights portfolio. OSMP staff will continue to work with other city departments to assist in enhancing in-stream flow where possible.

The Minerals Rights Acquisition program provides funding to purchase underlying mineral interests from private owners, as they become available on the real estate market. Many of these interests in minerals, gas, oil and aggregates were severed from the properties before purchase by the city and could cause future management issues. Funds are also used for research, mapping and analysis of potential acquisitions.

The balance of the CIP totaling $5,790,300 provides funding for non-acquisition capital projects. The capital projects seek to complete flood recovery – both trail infrastructure repair and habitat restoration - by the end of 2017 for FEMA and community expectation purposes; institutionalize additional, sound stewardship in agricultural systems, cultural and historic resources and other OSMP-owned facilities; deliver on contractual/partnership commitments; and adequately invest in system planning/implementation including an OSMP master plan.

The proposed 2016 projects and associated categories are as follows:

- Agricultural Projects
    - Agricultural facilities - $110,000
    - Farm site improvements - $60,000
- Cultural and Historic Projects
    - Hartnagle House restoration - $100,000
- Capital Infrastructure Projects
    - Flood Repair Projects
        - Boulder and South Boulder Creek area flood restoration - $100,000
        - Boulder Creek above 95th Street flood restoration - $500,000
        - Chautauqua flood trail repair - $75,000
        - Small flood trail repairs - $200,000
        - South Mesa Road/Trail flood repair - $317,300
        - Shanahan Trails flood repair - $816,000
    - Non-flood Projects
        - OSMP facility modifications (space needs) - $200,000
        - South Mesa Trailhead bridge (contract management) - $60,000
        - Systemwide visitor infrastructure - $100,000
- Projects committed by approved contracts
    - South Boulder Creek in-stream flow - $2,000,000
    - Boulder Creek bike path extension - $500,000

- Studies and Implementation
    - West TSA implementation - $350,000
    - North TSA plan and implementation - $50,000
    - OSMP master plan update - $252,000

Lottery Fund 2016 Capital Improvement Plan
The Historic Structures and Trails Stabilization and Restoration program uses lottery funds to identify, analyze, stabilize and rehabilitate significant historic structures and trails and protect other sites and artifacts identified in cultural resource inventories. These funds will be utilized to supplement the Visitor Infrastructure CIP.

OSMP's appropriation from the Lottery Fund is $355,300 in 2016. It is expected that funding will be $355,300 per year from 2016 through 2021. Lottery Fund revenues are evaluated and projected each year and appropriations are adjusted based on an analysis of revenues and maintaining sufficient reserves in order to offset any short-term funding shortfall. Lottery funds are allocated in 2016 for the following projects:

- Lower Big Bluestem Trail flood repair - $155,300
- Foothills Nature Center refurbishment - $200,000

Relationship of CIP to Operating Budget
The Open Space and Mountain Parks Visitor Master Plan was adopted in April 2005 and outlines a significant capital expenditure plan in order to address identified needs within the six-year CIP schedule. This, together with the Open Space Long Range Management Policies adopted in 1995, sets the management direction for the OSMP Department. These policy level plans, along with area and resource management plans, provide the framework to prioritize and budget specific resource management actions. In an effort to better support implementation of these plans and a history of other strategic initiatives and programs, the department currently is implementing a new management structure and will be pursuing an overarching OSMP Master Plan in the latter half of 2016. Board discussion items will be scheduled to review and discuss these items, likely later in 2015 and possibly at a yet-to-be-scheduled OSBT retreat.

Submitted by:

Tracy Winfree, Director

Michael Orosel, Temporary Financial Services Support

Stephany Westhusin, Temporary Capital/Work Program Support

ATTACHMENTS:

A. Open Space Fund Financial 2014 through 2021
B. Summaries of Open Space and Lottery Funds 2016-2021 Capital Improvements Program (CIP)

This page is intentionally left blank.

ATTACHMENT A
CITY OF BOULDER
2014-2021 PROPOSED BUDGET
OPEN SPACE FUND

OPEN SPACE AND MOUNTAIN PARKS

	2014 Actual	2015 Revised	2016 Projected	2017 Projected	2018 Projected	2019 Projected	2020 Projected	2021 Projected
Beginning Fund Balance	$ 17,032,351	$ 30,300,718	$ 13,412,592	$ 11,850,981	$ 16,216,771	$ 22,213,313	$ 26,936,363	$ 26,176,689
Sources of Funds								
Net Sales Tax Revenue	$ 28,425,675	$ 29,286,214	$ 30,140,002	$ 31,216,301	$ 32,331,488	$ 29,301,107	$ 24,436,628	$ 25,310,661
FEMA Flood Reuimbursement	89,839	-	-	-	-	-	-	-
Investment Income	95,131	101,247	104,000	107,120	110,334	113,644	117,053	120,565
Lease and Miscellaneous Revenue	712,242	439,109	822,978	681,932	702,389	723,461	745,165	767,520
Voice & Sight Tag Program Revenue	77,791	131,500	227,000	227,000	227,000	227,000	227,000	227,000
Bond Proceeds - 2014	10,135,898	-	-	-	-	-	-	-
General Fund Transfer	1,103,384	1,140,735	1,140,735	1,208,122	1,245,832	1,284,720	-	-
Grants	105,313	-	-	-	-	-	-	-
Total Sources of Funds	$ 40,745,272	$ 31,098,805	$ 32,434,715	$ 33,440,475	$ 34,617,043	$ 31,649,932	$ 25,525,846	$ 26,425,745
Uses of Funds								
General Operating Expenditures	$ 12,552,511	$ 15,262,996	$ 13,465,312	$ 14,922,541	$ 15,250,837	$ 15,586,355	$ 15,929,255	$ 16,279,699
Supplemental Operating	-	418,175	-	-	-	-	-	-
Carryover/ATB Operating	-	82,707	-	-	-	-	-	-
Increase to 2016 base - operating increases	-	-	2,304,154	-	-	-	-	-
Cost Allocation	1,108,400	1,348,701	1,359,291	1,427,256	1,498,618	1,573,549	1,652,227	1,734,838
Supplemental Capital	-	3,794,200	-	-	-	-	-	-
Capital-Real Estate Acquisition	1,949,381	5,400,000	5,400,000	5,400,000	5,400,000	5,400,000	5,400,000	5,400,000
Capital-Real Estate Acquisition Carryover	-	3,444,322	-	-	-	-	-	-
Capital-Real Estate Acquisition 2014 Bond	3,231,027	-	-	-	-	-	-	-
Capital-Real Estate Acq 2014 Bond Carryover	-	6,888,000	-	-	-	-	-	-
Capital-Water Rights Acquisition	205,976	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Capital-Water Rights Acquisition Carryover	-	329,115	-	-	-	-	-	-
Capital-OSMP Master Plan Update	-	-	252,000	200,000	100,000	100000	100000	100,000
Capital-South Boulder Creek Instream Flow	1,912	150,000	2,000,000	-	-	-	-	-
Capital-So Boulder Crk Instream Flow Carryover	-	246,177	-	-	-	-	-	-
Capital-North TSA	-	50,000	50,000	200,000	200,000	100,000	50,000	50,000
Capital-North TSA Carryover	-	50,000	-	-	-	-	-	-
Capital- Chautauqua Flood Repair	-	-	75,000	-	-	-	-	-
Capital-Sanitas Valley Trail	65,940	-	-	-	-	-	-	-
Capital-So. Mesa Rd./Trail Flood Repair	-	544,700	317,300	-	-	-	-	-
Capital-South Mesa Trailhead Bridge	-	-	60,000	-	-	-	-	-
Capital-Shanahan Trails Flood Repair	-	-	816,000	-	-	-	-	-
Capital-Flagstaff Summit Improvements	-	250,000	-	-	-	-	-	-
Capital-Royal Arch Trail Repair	-	150,000	-	-	-	-	-	-
Capital-Small Trail Flood Repair	-	-	100,000	-	-	-	-	-
Capital-Small Engineered Trail Flood Repair	-	-	100,000	-	-	-	-	-
Capital-Boulder Crk Bikepath Extension	-	-	500,000	-	-	-	-	-
Capital-Restore Wetland Habitats	-	59,000	-	-	-	-	-	-
Capital-Boulder and S. Boulder Creek Area Flood Restoration	-	-	100,000	-	-	-	-	-
Capital-Boulder Creek above 95th St. Flood Restoration	-	-	500,000	-	-	-	-	-
Capital-S. Boulder Creek at E.Boulder Ditch Headgate Reconfiguration Flood Repair	-	-	-	300,000	-	-	-	-
Capital-Restore So Bldr Crk Flood Damage Carryover	-	315,810	-	-	-	-	-	-
Capital-Goodhue Ditch Fish Passage	-	-	-	300,000	-	-	-	-
Capital-So. Boulder Crk. Bridge at Greenbelt	-	150,000	-	-	-	-	-	-

ATTACHMENT A
CITY OF BOULDER
2014-2021 PROPOSED BUDGET
OPEN SPACE FUND

	2014 Actual	2015 Revised	2016 Projected	2017 Projected	2018 Projected	2019 Projected	2020 Projected	2021 Projected
Capital-So. Boulder Creek West Trail	-	100,000	-	-	-	-	-	-
Capital-So Bldr Crk Habitat Stucture Flood Repair Carryover	-	125,000	-	-	-	-	-	-
Capital-Reroute Flagstaff Tr Crown Rock/Baseline Carryover	-	120,000	-	-	-	-	-	-
Capital-Reroute Saddle Rock Trail Carryover	-	65,000	-	-	-	-	-	-
Capital-Reroute Ute & Range View Trails Carryover	-	65,000	-	-	-	-	-	-
Capital-Green Mtn West Ridge Carryover	-	60,000	-	-	-	-	-	-
Capital-Greg Cnyn Access Rd Repair Carryover	-	125,380	-	-	-	-	-	-
Capital-Agriculture Facilities	-	100,000	110,000	110,000	120,000	120,000	130,000	130,000
Capital-Farm Site Improvements	-	-	60,000	60,000	60,000	60,000	60,000	60,000
Capital-Boulder/So. Boulder Crks Confluence	-	150,000	-	-	-	-	-	-
Capital-Cultural Resources/Facility Restor.	-	60,000	-	100,000	100,000	100,000	100,000	100,000
Capital-Hartnagle House Restoration	-	65,000	100,000	-	-	-	-	-
Capital-Viele House Repair	-	80,000	-	-	-	-	-	-
Capital-Innovations	-	-	-	75,000	175,000	100,000	100,000	100,000
Capital-West TSA	73,561	-	350,000	500,000	400,000	150,000	150,000	150,000
Capital-West TSA Carryover	-	494,971	-	-	-	-	-	-
Capital-East TSA	-	-	-	-	50,000	50,000	200,000	200,000
Capital-South TSA	-	-	-	-	-	-	200,000	100,000
Capital-Mineral Rights Acquisition	-	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Capital-Mineral Rights Acquisition Carryover	-	461,184	-	-	-	-	-	-
Capital-Visitor Infrastructure CIP	925,584	-	100,000	200,000	200,000	500,000	500,000	500,000
Capital-Visitor Infrastructure CIP Carryover	-	600,000	-	-	-	-	-	-
Capital-Annex/Ute Solarization	14,597	-	-	-	-	-	-	-
Capital-LIDAR/Aerial Imaging	34,406	-	-	-	-	-	-	-
Capital-OSMP Facility Mods (Space Needs)	-	-	200,000	200,000	200,000	100,000	100,000	100,000
Debt Service - BMPA	2,091,148	1,701,487	1,587,507	986,926	760,283	661,746	661,682	593,655
Debt Service - Bonds & Notes	5,222,463	4,380,006	3,789,762	3,792,962	3,805,763	2,025,231	652,356	653,456
Total Uses of Funds	$ 27,476,905	$ 47,986,931	$ 33,996,326	$ 29,074,685	$ 28,620,501	$ 26,926,882	$ 26,285,520	$ 26,551,648
Ending Fund Balance Before Reserves	$ 30,300,718	$ 13,412,592	$ 11,850,981	$ 16,216,771	$ 22,213,313	$ 26,936,363	$ 26,176,689	$ 26,050,786
Reserves								
OSBT Contingency Reserve	$ 3,500,000	$ 2,500,000	$ 3,789,762	$ 3,792,962	$ 3,805,763	$ 2,025,231	$ 652,356	$ 653,456
Pay Period 27 Reserve	50,000	146,000	242,000	338,000	434,000	530,000	626,000	722,000
Sick/Vacation/Bonus Reserve	490,000	490,000	490,000	490,000	490,000	490,000	490,000	490,000
Property and Casualty Reserve	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000
FEMA De-obligation Reserve	6,289	6,289	6,289	6,289	6,289	6,289	6,289	6,289
South Boulder Creek Flow Reserve	1,750,000	2,000,000	-	-	-	-	-	-
IBM Connector Trail	-	200,000	-	-	-	-	-	-
Vehicle Acquisition Reserve	150,000	300,000	-	-	-	-	-	-
Facility Maintenance Reserve	100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000
Total Reserves	$ 6,446,289	$ 6,242,289	$ 5,228,051	$ 5,427,251	$ 5,636,052	$ 4,051,520	$ 2,874,645	$ 3,071,745
Ending Fund Balance After Reserves	**$ 23,854,429**	**$ 7,170,303**	**$ 6,622,930**	**$ 10,789,520**	**$ 16,577,261**	**$ 22,884,843**	**$ 23,302,044**	**$ 22,979,041**

Assumptions:
Sales & Use Tax have been updated with forecast from Budget Division 5/11/2015
General Fund Transfer kept at same during 2015 budget prep. Update not received to date.

ATTACHMENT B
CITY OF BOULDER
2016-2021 CAPITAL IMPROVEMENT PROGRAM
OPEN SPACE FUND

OSMP 2016-2021 CIP Budget							
	2016	**2017**	**2018**	**2019**	**2020**	**2021**	
	Projected	**Projected**	**Projected**	**Projected**	**Projected**	**Projected**	**2016-2021**
Open Space Fund:							
Agricultural Projects:							
Agricultural Facilities Projects (on-going)	110,000	110,000	120,000	120,000	130,000	130,000	720,000
Farm Site Improvements	60,000	60,000	60,000	60,000	60,000	60,000	360,000
Subtotal Agricultural Projects:	**170,000**	**170,000**	**180,000**	**180,000**	**190,000**	**190,000**	**1,080,000**
Cultural and Historic Projects:							
Cultural Resource/Facility Restoration	0	100,000	100,000	100,000	100,000	100,000	500,000
Viele House Foundation Repair	0	0	0	0	0	0	0
Subtotal Cultural Resources Projects:	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**	**600,000**
Capital Infrastructure Projects:							
Chapman Drive	0	0	0	0	0	0	0
Boulder and S. Boulder Creek Area Restoration - Flood Resoration	100,000	**0**	0	0	0	0	100,000
Boulder Creek above 95th St. Restoration - Flood Restoration	500,000						500,000
S. Boulder Creek at E. Boulder Ditch Headgate Reconf. - Flood Rest.		300,000					300,000
Restoration of S. Boulder Creek Habitat	0	0	0	0	0	0	0
South Boulder Creek West Trail - Flood Repair	0	0	0	0	0	0	0
OSMP Small Engr. Trail Flood Repairs - BOULD33*	100,000	0	0	0	0	0	100,000
ERTL Pond Dike, Trail and water control structure	0	0	0	0	0	0	0
Shanahan Trails - Flood Trail Repair - BOULD24*	816,000						816,000
Subtotal Flood Recovery Projects:	**2,008,300**	**300,000**	**0**	**0**	**0**	**0**	**2,308,300**
Non-Flood Projects:							
OSMP Facility Modifications (Space needs)	200,000	200,000	200,000	100,000	100,000	100,000	900,000
Goodhue Ditch Fish Passage (200k Revenue Offset)		300,000					300,000
South Boulder Creek at Greenbelt Meadows	0	0	0	0	0	0	0
Flagstaff Summit Improvements	0	0	0	0	0	0	0
Visitor Infrastructure - System Wide	100,000	200,000	200,000	500,000	500,000	500,000	2,000,000
Subtotal Non-flood Recovery Projects:	**360,000**	**775,000**	**575,000**	**700,000**	**700,000**	**700,000**	**3,810,000**
Projects Committed by Approved Contracts:							
South Boulder Creek Instream Flow (on-going)	2,000,000	0	0	0	0	0	2,000,000
Viele House Foundation Repair	0	0	0	0	0	0	0
Subtotal Projects Committed by Approved Contracts:	**2,500,000**	**0**	**0**	**0**	**0**	**0**	**2,500,000**
NTSA - Planning Study	0	0	0	0	0	0	0
WTSA Implementation	350,000	500,000	400,000	150,000	150,000	150,000	1,700,000
NTSA - Plan and Implementation	50,000	200,000	200,000	100,000	50,000	50,000	650,000
ETSA - Plan and Implementation	0	0	200,000	50,000	200,000	200,000	650,000
STSA - Plan and Implementation	0	0	0	0	200,000	100,000	300,000
OSMP Master Plan Update (Visitor Master Plan)	252,000	200,000	100,000	100,000	100,000	100,000	852,000
Subtotal Plans and Implementation	**652,000**	**900,000**	**900,000**	**400,000**	**700,000**	**600,000**	**4,152,000**
Subtotal All Projects:	**5,790,300**	**2,245,000**	**1,755,000**	**1,380,000**	**1,690,000**	**1,590,000**	**14,450,300**
Acquisition:							
OSMP Real Estate Acquisition (on-going)	5,400,000	5,400,000	5,400,000	5,400,000	5,400,000	5,400,000	32,400,000
Water Rights Acquisition (on-going)	200,000	200,000	200,000	200,000	200,000	200,000	1,200,000
Mineral Rights Acquisition (on-going)	100,000	100,000	100,000	100,000	100,000	100,000	600,000
Subtotal Acquisition:	**5,700,000**	**5,700,000**	**5,700,000**	**5,700,000**	**5,700,000**	**5,700,000**	**34,200,000**
TOTAL OPEN SPACE FUND CIP	**11,490,300**	**7,945,000**	**7,455,000**	**7,080,000**	**7,390,000**	**7,290,000**	**48,650,300**
Lottery Fund							
Lower Big Bluestem - Engr. Trail Flood Repair - BOULD 33*	155,300	0	0	0	0	0	155,300
Foothills Nature Center	200,000						200,000
OSMP - Historical Structures & Trails - Stabilization and Restoration		355,300	355,300	355,300	355,300	355,300	1,776,500
TOTAL LOTTERY FUND CIP	**355,300**	**355,300**	**355,300**	**355,300**	**355,300**	**355,300**	**2,131,800**