

Land Use

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856 Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.org

<u>Docket DC-18-0002: Amendments to the Boulder County Land Use Code</u> for Solar-related Uses and Regulations

Request: Review of draft Land Use Code Text amendments regarding Solar Energy System uses and related provisions. (Staff planner: Sinead O'Dwyer)

Dear Stakeholder/Interested Party,

On May 10, 2018, the Board of County Commissioners authorized Land Use staff to pursue text amendments to the Boulder County Land Use Code specific to solar-related uses and regulations.

Why: Staff identified a need for updating the existing language and structure of the code, increasing the opportunity for community solar gardens in the county, and better facilitating solar development on buildings and parking areas.

Summary of Proposed Text Amendments:

- Change principal use categories for improved organization
- Change ground-mounted size categories from an electrical capacity basis to an acreage basis
- Allow Medium and Large Solar in more zoning districts (T, B, ER and RR un-subdivided)
- Revise provisions for Forestry and Agricultural zones
- Reduce review requirements where appropriate
- Allow solar on Significant Agricultural Lands given additional provisions

Attachments

	Description		
Attachment A	Existing Solar-Related Land Use Code text		
Attachment B	Proposed Solar-related Land Use Code text		
Attachment C	Relevant Maps Zoning Districts, BCCP Significant Agricultural Lands, Critical Wildlife Habitat, Natural Landmark and Natural Areas		
Attachment D	Summary Table of Agricultural Lands of Significance		

This is the initial referral draft of the proposed regulations to garner feedback and make necessary changes to the draft before it is recommended for adoption through the public hearing process. The existing text and a draft of the proposed text amendments is attached to this letter for your review. You may also view the proposed draft text amendments and future revisions in our office or online at: https://www.bouldercounty.org/property-and-land/land-use/planning/land-use-code-update/dc-18-0002/

The docket review process for the proposed amendments will include a public hearing before the Boulder County Planning Commission and the Boulder County Board of County Commissioners. Public comments will be taken at both hearings. Confirmation of hearing dates and times will be published online at the link above and in local newspapers.

The Land Use staff and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter or email with your comments. All

comments will be made part of the public record. If you have any questions regarding this docket, please contact us at (303) 441-3930 or sodwyer@bouldercounty.org.
Please return responses by August 20, 2018. Late responses will be reviewed as the process permits.
We have reviewed the proposal and have no conflicts Letter is enclosed.
SignedPRINTED Name
Agency or Address

Article 4:

4-101 Forestry, 4-102 Agricultural, 4-110 Commercial, 4-111 Light Industrial, 4-112 General Industrial

(F) Additional Provisions

5. Small Wind-Powered Energy Collectors Systems, and Small Solar Energy Collectors Systems or Solar Gardens, Medium Solar Energy Systems or Solar Gardens, and Large Solar Energy Systems can be approved on parcels with existing principal uses without Special Review approval, however, these uses shall be reviewed using the process and standards described in the Utility and Public Service Uses classification in this Code.

4-103 Rural Residential, 4-104 Estate Residential, 4-105 Suburban Residential, 4-106 Multi-family, 4-107 Manufactured Home Park, 4-108 Transitional, 4-109 Business, and 4-117 Mountain Institutional

(F) Additional Provisions

5. Small Wind-Powered Energy Collectors Systems, and Small Solar Energy Collectors Systems or Solar Gardens can be approved on parcels with existing principal uses without Special Review approval, however, these uses shall be reviewed using the process and standards described in the Utility and Public Service Uses classification in this Code.

4-514 Utility and Public Service Uses

F. Large Solar Energy System

- 1. Definition: A system composed of a solar energy collector which may include an energy storage facility, and components for the transmission and distribution of transformed energy, and which may be used for one or more users .
- 2. Districts Permitted: By Special Review in GI, LI, C, A, F if the system has a rated capacity greater than 2 MW but does not meet the Land Use Code definition of Power Plant
- 3. Parking Requirements: To be determined through the review
- 4. Loading Requirements: None
- 5. Additional Provisions:
 - a. This use is required to be located on a building lot or an outlot platted for this purpose.
 - b. Ground-mounted solar energy collectors may not be located within utility easements or ditch easements unless authorized in writing by the easement holder.
 - c. This use shall not have a significant adverse visual impact on the natural features or neighborhood character of the surrounding area and shall be located to minimize glare on adjacent properties and roadways.
 - d. This use is permitted in the Agricultural or Forestry zone districts will be permitted only if the area used has been contaminated or damaged making it unsuitable for agricultural, forestry, or residential uses. These areas may include former landfills, brownfields, Superfund sites, and the like.

Attachment A: Existing Solar-Related Land Use Code Text

- e. This use cannot be located on areas with the following Boulder County Comprehensive Plan designations: Agricultural Lands of National Importance, Agricultural Lands of Statewide Importance, Agricultural Lands of Local Importance, Natural Landmarks and Areas, or Critical Wildlife Habitats.
- f. Roof-mounted systems proposed as a principal use may be mounted on any legal structure, subject to review through the building permit process. Roof-mounted systems shall be mounted as flush as possible to the roof. In order to achieve proper solar orientation, panels may exceed the roofline by up to five feet or the maximum height of the zone district by up to five feet (whichever is more restrictive).
- g. Applications shall be reviewed with special consideration given to lands identified as Open Corridor, Roadside in the Boulder County Comprehensive Plan.

H. Medium Solar Energy System or Solar Garden

- 1 . Definition: A system composed of a solar energy collector which may include an energy storage facility, and components for the transmission and distribution of transformed energy, and which may be used for one or more users.
- 2 . Districts Permitted: By Special Review in GI, LI, C, A, F if the rated capacity of the system will be at least 500 kW but not more than 2 MW
- 3. Parking Requirements: To be determined through the review
- 4. Loading Requirements: None
- 5 . Additional Provisions:
 - a. This use is required to be located on a building lot or an outlot platted for this purpose.
 - b. Ground-mounted solar energy collectors may not be located within utility easements or ditch easements unless authorized in writing by the easement holder.
 - c. This use shall not have a significant adverse visual impact on the natural features or neighborhood character of the surrounding area and shall be located to minimize glare on adjacent properties and roadways.
 - d. Medium solar energy systems in the Forestry zone district will be permitted only if the area used has been contaminated or damaged in the past making it unsuitable for agricultural, forestry, or residential uses. These areas may include former landfills, brownfields, Superfund sites, and the like.
 - e. Medium solar energy systems cannot be located on areas with the following Boulder County
 - f. Comprehensive Plan designations: Agricultural Lands of National Importance, Agricultural Lan Statewide Importance, Agricultural Lands of Local Importance, Natural Landmarks and Areas, or Critical Wildlife Habitats.
- f. Applications shall be reviewed with special consideration given to lands identified as Open Corridor, Roadside in the Boulder County Comprehensive Plan.
- g. Roof-mounted systems proposed as a principal use may be mounted on any legal structure, subject to review through the building permit process. Roof-mounted systems shall be mounted as flush as possible to the roof in order to achieve proper solar orientation, panels may exceed the roofline by up to five feet or the maximum height of the zone district by up to five feet (whichever is more restrictive).

M. Small Solar Energy System or Solar Garden

1. Definition: A system composed of a solar energy collector which may include an energy storage facility, and components for the transmission and distribution of transformed energy.

Attachment A: Existing Solar-Related Land Use Code Text

- 2 . Districts Permitted: By Site Plan Review in all districts if the system will have a rated capacity of 100 kW or less . By Limited Impact Special Review in all districts if the system will have a rated capacity greater than 100 kW but less than 500 kW.
- 3. Parking Requirements: To be determined through the review
- 4. Loading Requirements: None
- 5. Additional Provisions:
 - a. This use is required to be located on a building lot or an outlot platted for this purpose.
 - b. If necessary for the system's effectiveness, ground-mounted solar energy collectors may be located within the minimum lot line setbacks for the subject property zoning district and within any applicable major road supplemental setback without the need for a variance, provided that the solar energy collector is located no less than five feet from lot lines and no less than 15 feet from road rights-of-way.
 - c. Ground-mounted solar energy collectors may not be located within utility easements or ditch easements unless authorized in writing by the easement holder.
 - d. This use shall not have a significant adverse visual impact on the natural features or neighborhood character of the surrounding area and shall be located to minimize glare on adjacent properties and roadways.
 - e. Applications shall be reviewed with special consideration given to lands identified as Environmental Resources and Open Corridor, Roadside in the Boulder County Comprehensive Plan.
 - f. If larger than 100 kW, this use cannot be located on areas with the following Boulder County Comprehensive Plan designations: Agricultural Lands of National Importance, Agricultural Lands of Statewide Importance, Agricultural Lands of Local Importance, Natural Landmarks and Areas, or Critical Wildlife Habitats.
 - g. Roof-mounted systems proposed as a principal use may be mounted on any legal structure, subject to review through the building permit process. Roof-mounted systems shall be mounted as flush as possible to the roof in order to achieve proper solar orientation, panels may exceed the roofline by up to five feet or the maximum height of the zone district by up to five feet (whichever is more restrictive).

4-516 Accessory uses

- K. Accessory Solar Energy System
- 1 . Definition: A system composed of a solar energy collector which may include an energy storage facility, and components for the distribution of transformed energy, which may be attached to a residence or other structure.
- 2 . Districts Permitted: By right in all districts for roof-mounted systems. By Site Plan Review Waiver for ground-mounted systems.
- 3. Parking Requirements: None
- 4. Loading Requirements: None
- 5. Additional Provisions:
 - a. Ground-mounted systems are considered structures and must meet applicable setbacks for the zone district except as provided in 5 .d . below .
 - b. Ground-mounted systems shall not have a significant adverse visual impact on neighboring private and public property.

Attachment A: Existing Solar-Related Land Use Code Text

- c. Roof-mounted solar energy systems shall be mounted as flush as possible to the roof. In order to achieve proper solar orientation, panels may exceed the roofline by up to five feet or the maximum height of the zone district by up to five feet (whichever is more restrictive).
- d. If necessary for the system's effectiveness, ground-mounted solar energy collectors may be located within the minimum lot line setbacks for the subject property zoning district and within any applicable major road supplemental setback without the need for a variance, provided that the solar energy collector is located no less than five feet from lot lines and no less than 15 feet from road rights-of-way.
- e. Ground-mounted solar energy collectors may not be located within utility easements or ditch easements.

4-802 Applicability and Scope of Site Plan Review Process for Development

A. Site Plan Review shall be required for (unless not required or waived pursuant to sections B and C below):

13. A small solar energy system as a principal use

C. Site Plan Review may be waived for the following circumstances if the Land Use Director determines that there is no potential for any significant conflict with the criteria listed in Article 4-806 of this Code:

7. Any ground-mounted accessory solar energy system.

4-1003 Non-conforming uses-solar energy device

- (C) Enlargement or Alteration of a Nonconforming Use
- 2. An impermissible enlargement or alteration shall not include the following:
 - d) the addition of a solar energy device to a structure containing a nonconforming use; or

Article 18 - Definitions:

18-198 Solar Access

The ability to receive sunlight across real property for any solar energy device.

18-199 Solar Energy Device

A device which converts the sun's radiant energy into thermal, chemical, mechanical, or electric energy.

18-185 Power Plant

An electrical energy generating facility with generating capacity of more than 50 megawatts and any appurtenant facilities.

DC-18-0002:

Proposed Solar-related Land Use Code Text

3-203 Standards for Submittal Requirements

- I. Solar Energy System Development Report
 - 1. A solar energy system development report is required for an application for a ground mounted solar energy system with an area of disturbance greater than one-half (0.5) acre on lands designated as Significant Agricultural Lands under the Boulder County Comprehensive Plan. The solar energy development report must include:
 - a. An installation plan describing the installation method for the solar energy system, including a site plan showing the proposed area of disturbance (as defined in Article 18) and the applicable items listed in Article 3-203(E)(2). The installation plan must include a proposal to minimize soil disturbance and compaction through best management practices.
 - b. A management plan including:
 - (i) A baseline soil test
 - (ii) A soil and vegetation management plan demonstrating proposed methods of maintaining or improving the existing soil quality and agricultural integrity of the land.
 - (iii) A description of how the location and configuration of the solar installation on the property will facilitate and permit agricultural uses either co-located with the solar energy system, or on other areas of the property including but not limited to crops, grazing, and pollinator habitat.
 - (iv) A weed control plan.
 - c. A reclamation plan describing revegetation for the area of disturbance. Abandoned systems must be removed from the site in compliance with any deconstruction regulations in place at that time.

Article 4:

4-101 Forestry, 4-102 Agricultural, 4-110 Commercial, 4-111 Light Industrial, 4-112 General Industrial, 4-103 Rural Residential, 4-104 Estate Residential, 4-105 Suburban Residential, 4-106 Multi-family, 4-107 Manufactured Home Park, 4-108 Transitional, 4-109 Business, and 4-117 Mountain Institutional

(F) Additional Provisions

5. Small Wind-Powered Energy Collectors Systems and Solar Energy Systems can be approved on parcels with existing principal uses without Special Review approval, however, these uses shall be reviewed using the process and standards described in the Utility and Public Service Uses classification in this Code.

4-514 Utility and Public Service Uses

K. Solar Energy System-Building Mounted

- 1. Definition: A solar energy system mounted on or integrated into the construction of a structure, such as, but not limited to, a roof-mounted solar energy system.
- 2. Districts Permitted: By right in all districts
- 3. Parking Requirements: None

- 4. Loading Requirements: None
- 5. Additional Provisions:
 - a. Building-mounted systems may be mounted on an existing or new legal structure, subject to review through the building permit process.
 - b. Building-mounted systems are allowed as a secondary principal use on parcels with existing principal uses, without Special Review approval.
 - c. A building mounted solar energy system proposed on a non-conforming structure, or a structure containing a non-conforming use, will not be considered enlargement or alteration of a nonconforming structure or use under sections 4-1002 and 4-1003. Note that improvements to nonconforming structures in the floodplain may have additional restrictions or requirements.
 - d. Roof-mounted systems shall be mounted as flush as possible to the roof. In order to achieve proper solar orientation, panels may exceed the roofline by up to five feet, or the maximum height of the zone district by up to five feet, whichever is more restrictive.
 - e. Building mounted solar energy systems on a structure that is non-conforming because it does not meet or is currently at the minimum setback may not project from the building more than one foot further into the setback.

L. Solar Energy System- Ground Mounted

1 . Definition: A solar energy system mounted on a rack or poles that rests on or is attached to the ground, but not including a solar energy system mounted on parking canopies.

2. Districts Permitted:

Zoning District	Small < 2.5 acres	Medium 2.5 to 10 acres	Large 10+ acres
MF, MH, MI, SR, H	SPR	Not allowed	Not allowed
A, ER, RR, F	SPR/SU*	LU/SU*	SU*
LI, GI, C, B, T	SPR	SPR	LU

^{*}Note: Special Review is required for Significant Agricultural Lands, as listed in additional provisions. Medium and Large systems are not permitted in platted subdivisions in ER and RR.

- 3. Parking Requirements: To be determined through the review
- 4. Loading Requirements: None
- 5. Additional Provisions:
 - a. This use is required to be located on a building lot, an outlot platted for this purpose, or Right-of-way as found appropriate.
 - b. Solar energy systems with an area of disturbance greater than one-half-acre cannot be located on areas designated by the Boulder County Comprehensive Plan as Natural Landmarks and Natural Areas, or Critical Wildlife Habitats and Migration Corridors.
 - c. Ground-mounted solar energy systems cannot be located on lands encumbered by a conservation easement, except as may be expressly allowed in the conservation easement and permitted by the conservation easement holder.
 - d. Ground-mounted solar energy systems are allowed as a secondary principal use on parcels with existing principal uses, subject to the applicable review process for the proposed size and zone district required under this use.
 - e. Ground-mounted solar energy systems must not exceed fifteen feet in height, except as needed to accommodate site specific needs and as approved through review. Applications requesting to exceed 15

- feet shall adequately increase the setback from property lines or demonstrate topographical screening to mitigate visual impacts.
- f. Ground-mounted solar energy systems must meet applicable setbacks for the zoning district.
- g. Ground-mounted systems with an area of disturbance greater than one-half acre are not permitted in the Forestry Zoning District unless the site has been previously contaminated or damaged making it unsuitable for agricultural, forestry, or residential uses. Qualifying areas may include properties that formerly served as landfills, brownfields, Superfund sites, and properties that have undergone intensive development; for example commercial, industrial, parking, or materials storage areas, or other areas where it is determined through the review process that installation of a ground mounted solar energy system will not have additional significant impacts.
- h. Ground-mounted systems with an area of disturbance greater than one-half acre on lands designated as Significant Agricultural Lands under the Boulder County Comprehensive Plan require special review and are subject to the following additional requirements with the intention to preserve and maintain soil and agricultural integrity:
 - i. The total area of disturbance associated with the ground mounted solar energy system cannot exceed seven (7) acres of land on parcels smaller than seventy (70) acres in size, and cannot exceed fourteen (14) acres of land on parcels larger than seventy (70) acres in size. A proposed ground mounted solar energy system may be limited to a smaller area of disturbance as determined necessary by the Director or Board of County Commissioners based on the land use impacts of the proposed system or to comply with other provisions of the Code.
 - ii. Application for the ground mounted solar energy system must contain a solar energy system development report set forth in section 3-203, including management plan for maintaining soil health and quality, which may describe co-located vegetation or agricultural uses.
 - iii. To mitigate impacts to the scenic value of agricultural lands, mitigation measures including additional setbacks from property lines, vegetative screening, and more restrictive height limitations may be required.

M . Solar Energy System- Parking Canopy

- 1. Definition: A solar energy system mounted on or integrated into the construction of a vehicle parking shade structure which exclusively covers vehicle or other multi-modal parking spaces.
- 2. Districts Permitted: By Site Plan Review in all districts
- 3. Parking Requirements: To be determined through the review
- 4. Loading Requirements: None
- 5. Additional Provisions:
 - a. This use is required to be located on an existing or approved parking lot.
 - b. Unobstructed separation of not less than 16 feet, between canopy structures, must be maintained over dedicated parking aisles. Parking space striping and other applicable requirements as described in the Multi-modal Transportation Standards must be met.
 - c. A parking canopy solar energy system and all of its component parts must not obstruct or encroach into a fire lane.
 - d. Parking canopy solar energy systems must not exceed a maximum height of 30 feet, unless otherwise approved through Site Plan Review.

e. This use cannot be located on lands encumbered by a conservation easement, except as may be expressly allowed in the conservation easement and permitted by the conservation easement holder.

4-516 Accessory uses

K. Accessory Solar Energy System

- 1 . Definition: Building-mounted, ground-mounted, and parking canopy solar energy systems providing for up to 120 percent of the on-site energy use or one-half (0.5 acres), are permitted as an accessory use.
- 2 . Districts Permitted: By right in all districts for building-mounted systems. By Site Plan Review for ground-mounted and parking canopy systems, unless waived by the Director.
- 3. Parking Requirements: None
- 4. Loading Requirements: None
- 5. Additional Provisions:
 - a. Ground-mounted systems are considered structures and must meet applicable setbacks for the zone district except as provided in 5 .b. below .
 - b. If necessary for the system's effectiveness, accessory ground-mounted solar energy systems may be located within the minimum lot line setbacks for the subject property zoning district and within any applicable major road supplemental setback without the need for a variance, provided that the solar energy system is located not less than five (5) feet from lot lines and no less than fifteen (15) feet from all roads.
 - c. Accessory ground-mounted solar energy systems may not exceed 15 feet in height, except to accommodate site specific needs and as approved through review. Applications requesting to exceed 15 feet shall adequately increase the setback from property lines or demonstrate topographical screening to mitigate visual impacts.
 - d. Accessory solar energy systems must meet all other applicable provisions of section 4-514 for building-mounted, ground-mounted, or parking canopy solar energy systems as principal uses.

4-802 Applicability and Scope of Site Plan Review Process for Development

A. Site Plan Review shall be required for (unless not required or waived pursuant to sections B and C below): 13. A ground mounted or parking canopy solar energy system as a principal use or accessory use, as described in 4-514 and 4-516.

C. Site Plan Review may be waived for the following circumstances if the Land Use Director determines that there is no potential for any significant conflict with the criteria listed in Article 4-806 of this Code:

- 7. Any ground-mounted accessory solar energy system.
- 8. Ground mounted or parking canopy solar energy systems less than 2.5 acres

4-1002 Nonconforming Structures

C. 1.a Installation of a flush roof-mounted or building integrated accessory solar energy systems shall not be considered an increase in the degree of non-conformity, provided it meets the specifications in 4-516.

4-1003 Non-conforming uses

(C) Enlargement or Alteration of a Nonconforming Use

- 2. An impermissible enlargement or alteration shall not include the following:
 - d) the addition of a solar energy system to a structure containing a nonconforming use; or

Article 18 - Definitions:

18-100B Area of Disturbance

The area of disturbance for a solar energy system project shall include new structures, access and areas used for access or parking, including during the construction process.

18-162 Floor Area

The area of a building or structure, existing or new, including basements and attached garages calculated without deduction for corridors, stairways, closets, the thickness of interior walls, columns, or other features as measured from the exterior face of the exterior walls. Floor area does not include the area of any covered porch, ground-mounted solar energy systems. Solar parking canopies are exempt from floor area on parcels other than for single-family residential use (For Residential Structures, see also Article 18-189D.)

18-185 Power Plant

An electrical energy generating facility with generating capacity of more than 50 megawatts and any appurtenant facilities.

18-189D Residential Floor Area

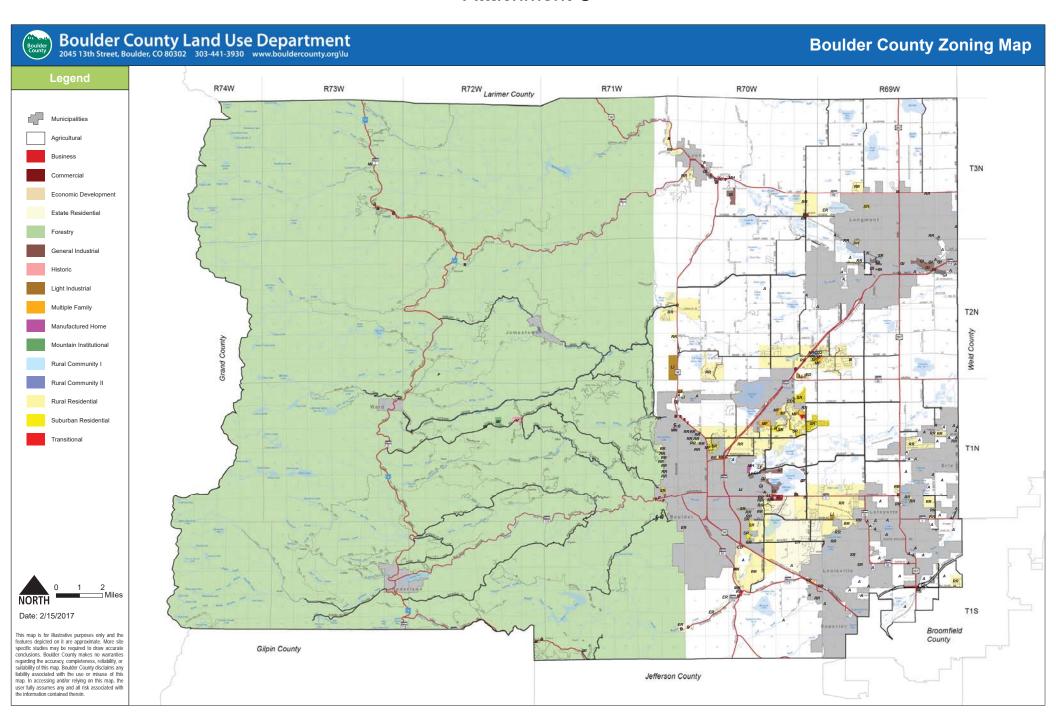
For the purposes of Site Plan Review and the presumptive size thresholds associated with the Expanded Transfer of Development Rights Program, Residential Floor Area includes all attached and detached floor area (as defined in 18-162) on a parcel including principal and accessory structures used or customarily used for residential purposes, such as garages, studios, pool houses, storage sheds, home offices, and workshops. (Exemptions: Gazebos, carports, solar parking canopies, detached greenhouses, renewable energy storage facilities, and hoop houses up to a total combined size of 400 square feet.)

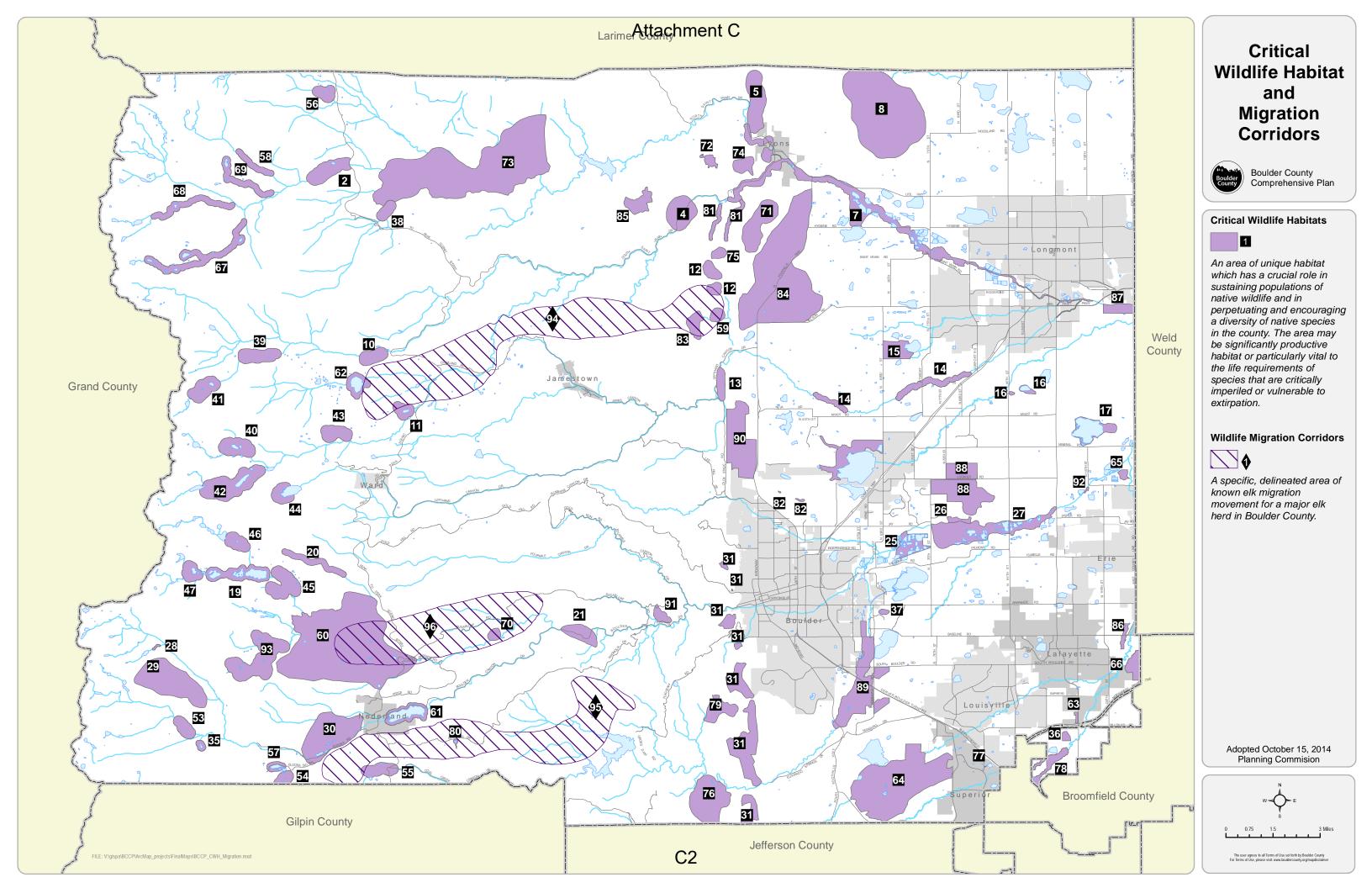
18-198 Solar Access

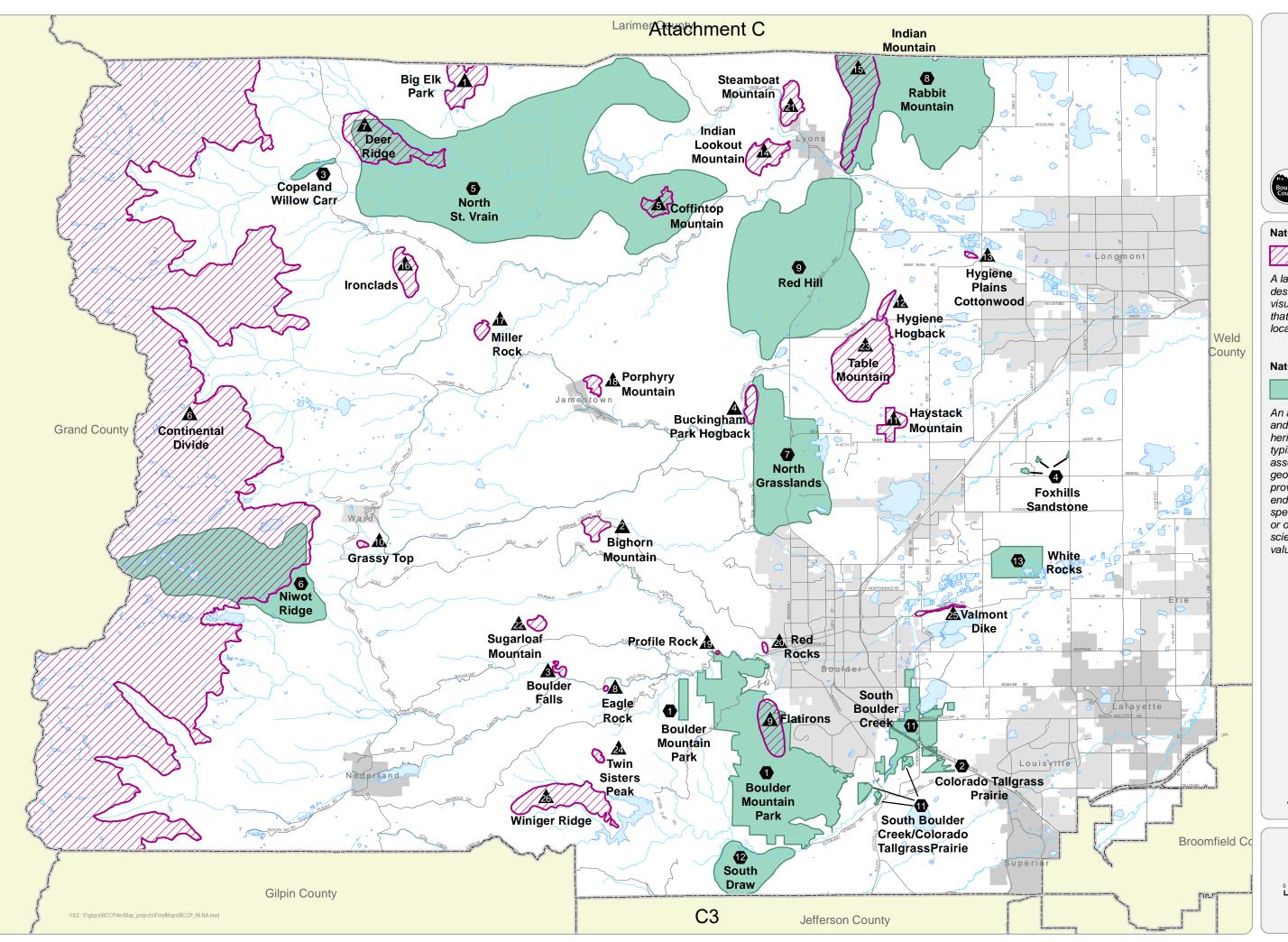
The ability to receive sunlight across real property for any solar energy device.

18-199 Solar Energy System

A system composed of panels, arrays, or devices which convert the sun's radiant energy into thermal, chemical, mechanical, or electric energy, which may include an energy storage facility, and components for the transmission and distribution of transformed energy.







Natural Landmarks and Natural **Areas**



Natural Landmarks





A landscape feature designated solely for its visual and scenic prominence that distinguishes a specific locality in Boulder County.

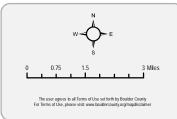
Natural Areas

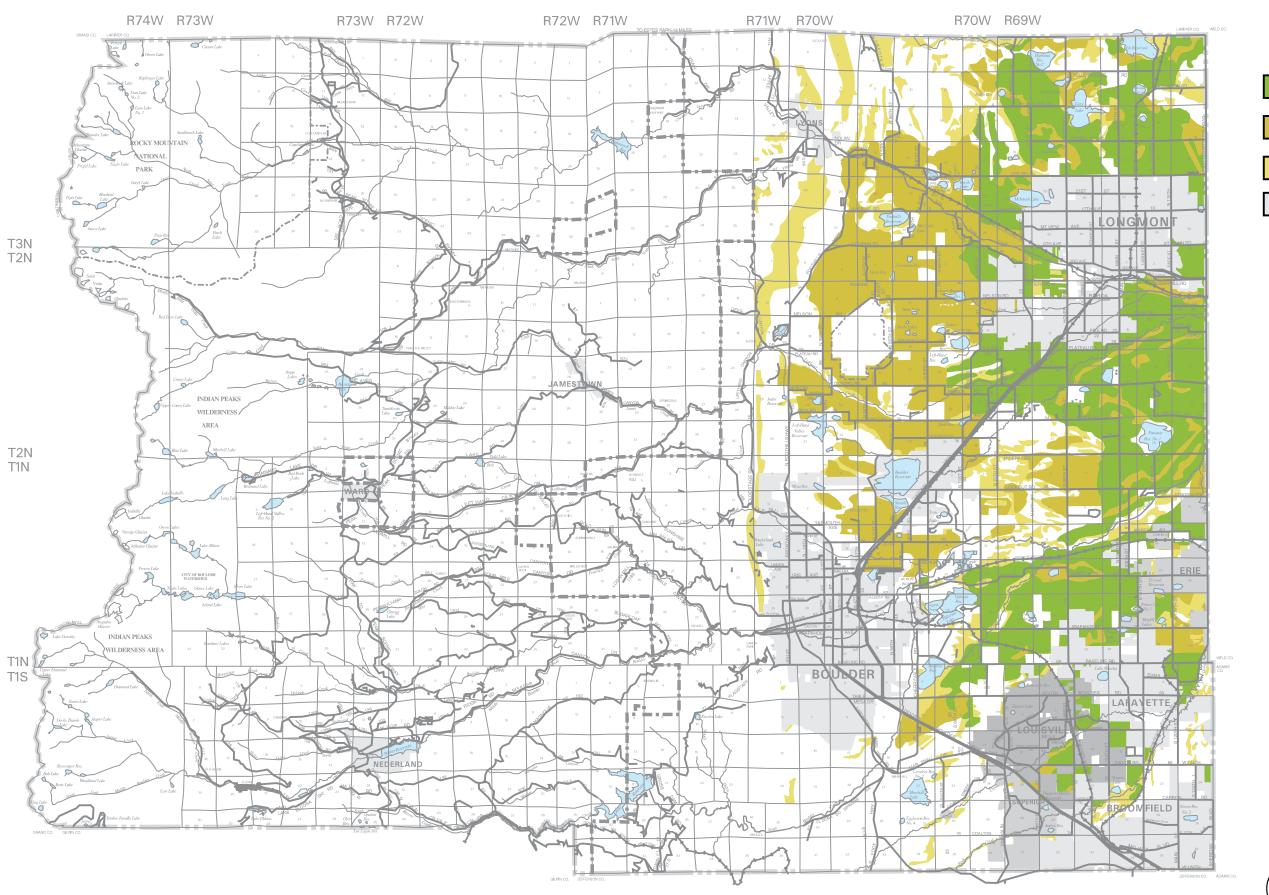




An area especially unique and important to the natural heritage of the county that typifies native vegetation and associated biological and geological features and provides habitat for rare or endangered animal or plant species; or includes geologic or other natural features of scientific or educational value.

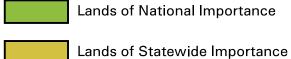
> Adopted October 15, 2014 Planning Commision

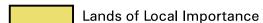


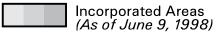


Significant Agricultural Lands Environmental Resources

Legend







Notes

Map scale and reproduction method limit precision in physical features and boundary locations.
PRINTED - JULY 1, 1998

Adopted - Planning Commission - July 16, 1997 Approved - County Commissioners - August 14, 1997





C4

BCCP Significant Agricultural Lands

	Types	Distinguishing Factors and	Source of Identification
		Crops Generally Grown Here	
National	Prime Farmland- based on criteria in Federal Public Law 95-87	Best physical and chemical characteristics: Soil moisture water availability/ irrigation mean soil temperature salinity permeability erodibility drainage/deeper water table slope less than 6%	USDA
Statewide	Irrigated Lands (inadequate water) High Potential Dry Cropland	Hay meadows, Dryland wheat, grain sorghum, forage sorghum, corn, fruit and vegetable growing and seed cultivation	CO Division of Agriculture, Dept of Natural Resources and CO Soil Conservation Board
Local	Irrigated Crop Land Dry Crop Land Rangeland	 Soil type- includes class III which is very limited Existing land Use—using aerial photography and Land Use records Carrying Capacity – based on soil type and moisture Grasses, grass-like plants, forbs and shrubs, valuable for grazing 	Longmont office of SCS and Boulder County Extension Office