



# Boulder County Comprehensive Plan

## **Environmental Resources Element**

**Approved by Planning Commission 6/19/2013**

### **Overview**

Boulder County values and strives to preserve, conserve and restore the unique and distinctive natural features, ecosystems and landscapes of the county using sound resource management principles and practices at both a site-specific level and on a broader, landscape scale. Boulder County's important environmental resources include naturally occurring ecosystems and their native species populations. Species of Special Concern are an integral component of this management approach. The list of Species of Special Concern includes locally threatened or endangered flora and fauna that the county seeks to protect. Habitat for these Species of Special Concern is particularly vital, since it often presents our best chance to protect native species.

In addition to identifying Species of Special Concern, this Element designates areas of important habitat at two scales: the "site-specific scale" and the broader, "landscape-scale." At the site-specific scale, important environmental resources typically consist of an easily definable area such as an individual parcel of land or a distinct geographical location where specific resources exist. Designations at the site-specific scale include Critical Wildlife Habitats, Rare Plant Areas, Wetlands, Riparian Areas, and Significant Natural Communities (formerly referred to as Critical Plant Associations). Environmental resources designated at the landscape-scale are much larger and holistic in approach. At this scale, the designations of High Biodiversity Areas and Environmental Conservation Areas seek to preserve broader ecological processes and functions. These areas often encompass multiple resources also designated at the site-specific scale. Natural Areas and Natural Landmarks designations are intended to encompass and protect



unique and distinctive natural features and landscapes in the county. The fundamental and essential sustaining resources of air, soil, and water are also considered and addressed.

While this Element calls specific attention to the aforementioned designated environmental resources (Environmental Resources), it also recognizes that these are not the only environmental resources of significance and importance that should be considered in land use decisions and cared for through management practices. With this in mind, Boulder County's overarching intention is to maintain the overall health and integrity of our rich and diverse environment to the greatest extent possible as our knowledge and understanding of environmental functions and interconnections evolves. The term "environmental resources" as used in this Element consists of both the designated "Environmental Resources" and undesignated environmental resources.

To provide some context for the goals and policies, a brief explanation of the environmental resource designations and their importance to the ecosystems of Boulder County follows. For the most part, these designations are those that already are utilized by reference in the Boulder County Land Use Code. Designations added or amended in updates to this Element will also be protected through administration of the Code and in conformance with applicable Federal and State law. The criteria used to determine these designations are periodically reviewed and updated resulting in updated lists of Species of Special Concern and updated maps of the Environmental Resources Element. Descriptions of these designations follow.

#### *Environmental Conservation Areas*

Environmental Conservation Areas (ECAs) encompass the largest remaining relatively natural or restorable forests, shrublands, grasslands, and agricultural landscapes in Boulder County. Even with the current amount of relatively undeveloped public land in the county, and the conservation and preservation efforts of public land managers on these lands, broad shifts in animal and plant communities are occurring as a result of development, habitat degradation, climate change, and the exclusion or disruption of natural processes. ECAs are a planning tool developed by the County and its agency partners for analyzing land use and land management decisions in the context of the cumulative effects of development, roads, trails and increased human presence at a landscape-scale on these large and complex ecosystems. This land use decision-making tool is used as a strategy for maintaining the wide-ranging animal species, native plant communities, and natural ecological processes that operate at this landscape scale.

ECAs are a framework for ecosystem management that identifies and designates valuable ecological areas and delineates corridors of connectivity between them regardless of ownership. With this designation, land use and land management decisions within and adjacent to ECAs and their connectors can be made within a framework that seeks to: protect species that may be wide-ranging, ecologically specialized or disturbed by human presence; encourage the return of species lost from the county; prevent additional habitat fragmentation; and limit increases in invasive non-native species in these ecologically-significant areas. Such planning and decision-making processes may include resource management plans, the location



and extent of new development, future land and easement purchases for open space purposes, and the location of trails and other public facilities.

#### *High Biodiversity Areas*

High Biodiversity Areas (HBAs) are locales that have a concentration of rare environmental resources. If managed well, they represent the greatest opportunities for preserving specific aspects of Boulder County's natural heritage. The boundaries of HBAs encompass those lands that provide the habitat and ecological processes upon which the resources depend for their continued existence. These areas have been identified and ranked -- by the CSU Colorado Natural Heritage Program -- as having *outstanding significance* (B1), *very high significance* (B2), or *high significance* (B3).

#### *Natural Landmarks*

Natural Landmarks are prominent landscape features that distinguish a specific locality in Boulder County. They are important for the views they afford, their value as scenic vistas and backdrops, and the intrinsic value they hold as wildlife or plant habitats, natural areas, park and open space preserves, and open land areas. However, the single criterion for designation shall be its visual and scenic prominence as a landscape feature. They provide a record of Boulder County's natural heritage.

#### *State and County Natural Areas*

State and County Natural Areas are physical or biological areas that are unique and important to the natural heritage of the state and/or the county. Each area either retains or has reestablished its natural character, although it need not be completely undisturbed. It 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. State Natural Areas are designated as such by the Colorado Natural Areas Program.

#### *Significant Natural Communities*

Significant Natural Communities are areas that are recognized by the presence of a critical plant association that is limited in its distribution and occurrence. These areas have multiple important environmental resources that co-occur and interact. These areas have species and processes that are relatively undisturbed by human actions and currently exist in their natural state. These areas are also referred to as Critical Plant Associations in the Boulder County Land Use Regulations.

#### *Critical Wildlife Habitats*

Critical Wildlife Habitats are the unique habitats which have a crucial role in sustaining populations of native wildlife and in perpetuating and encouraging a diversity of native species in the county.



### *Wetlands and Riparian Areas*

Wetlands and Riparian Areas have unique and critical functions in the ecosystem. Wetlands are generally described as lands transitional between terrestrial and aquatic systems where the land is covered by shallow water or soils are saturated during the growing season. Wetlands have high biodiversity, are relatively rare, provide unique wildlife habitat, filter water, and buffer floods. Riparian Areas are a unique combination of terrestrial plant communities and aquatic systems associated with flowing water that provide unique habitat and important movement corridors for wildlife.

### *Rare Plant Areas*

Rare Plant Areas are sites that are known to have a high likelihood of having occurrences of Plant Species of Special Concern.

### *Species of Special Concern*

Species of Special Concern include the flora and fauna in the county whose populations may be threatened or endangered, locally rare, experiencing long-term non-cyclical population declines, isolated or restricted to distinct local habitat types, or native species which have ceased to exist within Boulder County.

To summarize, restoring, protecting and preserving our natural environment and all of its interdependent components upon which all things depend have been core values and objectives of Boulder County since the adoption of the first county-wide comprehensive plan in 1978. Numerous initiatives, plans and programs have been diligently pursued and implemented in this quest, and have benefited from the involvement of many stakeholders and interested parties in both the public and private sectors. The Environmental Resources Element is both a compass and a tool for use in sustaining and advancing these efforts.

## **Goals of the Environmental Resources Element**

**B.1** Boulder County shall conserve and preserve environmental resources including its unique or distinctive natural features, biodiversity, and ecosystems through protection and restoration in recognition of the irreplaceable character of such resources and their importance to the quality of life in Boulder County.

**B.2** Boulder County sustains and protects native species, natural ecosystems and the biodiversity of the region by designating High Biodiversity Areas, Natural Areas, Natural Landmarks, Significant Natural Communities, Critical Wildlife Habitats, Species of Special Concern, Wetlands, Riparian Areas, and Rare Plant Areas. Other resources and designations may be identified in the future. These designated areas and species lists also provide a point of reference for continued monitoring of long-term ecological change.



**B.3** Boulder County shall promote the viability and integrity of all naturally occurring ecosystems and their native species populations by applying a variety of environmental resources management strategies in a manner that is consistent with current ecological principles and sustainable conservation practices.

**B.4** Boulder County recognizes that climate change is having significant impacts on our environmental resources. As the body of climate science knowledge grows and potential effects are better understood, Boulder County shall incorporate the best scientific information into planning and decision-making to adapt to and offset those impacts.

**B.5** Boulder County shall continue to protect air, water and soil resources and quality, as well as restore resources in a degraded condition to enhance overall environmental health. Pollution of air, water, and soil, and pollution caused by noise or light, shall be eliminated or minimized to the greatest extent possible in order to prevent potential harm to life, health and property, and to reduce incremental degradation of the environment.

**B.6** Boulder County shall continue to protect prominent natural landmarks and other unique scenic, visual and aesthetic resources in the county.

**B.7** Boulder County shall conserve and preserve Environmental Conservation Areas (ECAs) in order to perpetuate native species, biological communities, and ecological processes that function over large geographic areas and require a high degree of connectivity to thrive.

**B.8** Boulder County shall protect environmental resources both at the site-specific scale and landscape scale through a variety of means such as partnerships with private landowners, non-governmental organizations, and other governmental agencies; education and outreach; advocacy at the state and federal level; and other programs consistent with the goals and policies of the Comprehensive Plan.

## **Environmental Resource Policies**

### *Introduction*

The general policies below (ER 1.01 to ER 1.08) pertain to all environmental resources. Additional policies follow the general policies that expand on and are unique and specific to Air, Water, Soil and Noise (ER 2.01 to ER 2.03), Environmental Conservation Areas (3.01 to 3.05), and Natural Areas and Natural Landmarks (ER 4.01 to ER 4.03).

## **General Policies for Environmental Resources**

*The following policies apply to all environmental resources in Boulder County*

### **ER 1.01**

Boulder County plans and attendant regulations shall be formulated to insure that land uses avoid where possible and otherwise minimize the destruction or adverse modification of



environmental resources. Land use proposals shall be evaluated on a case-by-case basis for their potential impacts to environmental resources identified in the BCCP as well as those resources that may be identified on the site and in the vicinity of the proposal during a county development review process. The applicant may be required to complete other studies, inventories, or reports that address the proposal's potential impacts on environmental resources and include recommendations for mitigation of those impacts.

**ER 1.02** Boulder County shall continue to identify and designate environmental resources that have significance to Boulder County. Such designations, and attendant maps, will be based on criteria that use science, collaboration with experts, and on-the-ground verification to the extent practicable. Boulder County may periodically reevaluate such criteria and designations.

**ER 1.03** Scenic vistas shall be preserved as much as possible in their natural state.

**ER 1.04** Boulder County shall work with federal, state, municipal and other public or quasi-public entities that have a jurisdictional or property interest in unincorporated lands within or surrounding any designated environmental resources to achieve their protection.

**ER 1.05** Boulder County shall work in partnership with private land owners and non-governmental organizations to protect, conserve, and restore designated environmental resources using a variety of tools.

**ER 1.06** Boulder County shall use its open space program as one means of achieving its goals for protecting environmental resources.

**ER 1.07** Boulder County shall encourage all private landowners to seek assistance from appropriate governmental and non-governmental entities to protect Boulder County's environmental resources.

**ER 1.08** Boulder County shall modify plans, policies and regulations as necessary to adapt to climate change in order to reduce species and ecosystem vulnerability and other potential adverse impacts on environmental resources. These measures will guide environmental resource management implementation aimed at protecting biodiversity and ecological resiliency.

## **Air, Soil, Water, Noise and Light Policies**

*In addition to the general policies above, the following policies also apply specifically to air, soil, water, noise and light.*

**ER 2.01** Boulder County shall seek to protect overall public and environmental health by enforcing regulations concerning air, soil, water, noise and light pollution at the local level in accordance with applicable law.



**ER 2.02** Boulder County shall evaluate land use proposals and other planned activities considering their cumulative impacts on public and environmental health. Sufficient mitigation and minimization of any impacts shall be required for the proposal or activity to be approved. These proposals and activities shall at a minimum comply with air, soil, and water quality standards, as well as noise level and lighting standards, established by county and state agencies or the Boulder County Land Use Code.

**ER 2.03** Boulder County shall take a watershed approach to addressing water quality and water quantity including supporting and participating in local and regional watershed partnerships.

## **Environmental Conservation Areas Policies**

*In addition to the general policies above, the following policies apply specifically to Environmental Conservation Areas.*

**ER 3.01** Boulder County shall designate and map Environmental Conservation Areas as well as Overland and Stream Habitat (Riparian) Corridors at a landscape scale.

**ER 3.02** Boulder County shall encourage the removal of development rights from ECAs through transfer, donation, acquisition, trade, or other incentives.

**ER 3.03** Development within ECAs shall be located and designed to minimize the cumulative impacts on the environmental resource values of ECAs.

**ER 3.04** Development outside of ECAs shall be located and designed to minimize impacts on and connectivity between ECAs.

**ER 3.05** Boulder County shall encourage and participate with the appropriate public entities and private land owners in the development of coordinated management plans to conserve, preserve and restore the environmental resource values of ECAs.

## **Natural Landmarks and Natural Areas Policies**

*In addition to the general policies above, the following policies apply specifically to Natural Landmarks and Natural Areas.*

**ER 4.01** Natural Landmarks and Natural Areas identified in the Environmental Resources Element and as may be identified from time to time by the state under the Colorado Natural Areas Act, shall be protected from destruction or harmful alteration.

**ER 4.02** Boulder County shall submit any County Natural Area that may be of state-wide importance to the Colorado Natural Areas Program for designation as a State Natural Area.



**ER 4.03** Boulder County shall coordinate with local, state, and federal agencies and municipalities, as well as with willing private landowners, to protect natural resource values within Natural Landmarks and Natural Areas. This may include: identification of specific resources of concern including scenic values; recommendations for long-term management; mitigation of existing or foreseen impacts; or protection through acquisition of land interest.