



Land Use

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BOARD OF COUNTY COMMISSIONERS AGENDA ITEM

February 11, 2014 — 2:00 P.M.
Hearing Room, Third Floor
Boulder County Courthouse

Docket BCCP-08-003: BOULDER COUNTY COMPREHENSIVE PLAN UPDATE: Environmental Resources Element Update

Board of County Commissioners' review of the Environmental Resources Element.

Study Session: No formal action requested - Public Testimony Will Be Taken

(Staff Planners: Peter Fogg and William Davidson – Land Use; Justin Atherton-Wood – Parks and Open Space)

Introduction

The purpose of this docket item is to bring to the Board of County Commissioners the updated and approved Environmental Resources Element (ERE) of the Boulder County Comprehensive Plan (BCCP) for discussion, questions, and comments to be provided to the Planning Commission prior to their formal adoption of the updated Environmental Resources Element.

The ERE is the first of the Elements that is being brought forward to you as part of the BCCP Update process. Land Use staff and Parks and Open Space staff collaborated closely on the project, with Parks and Open Space being the primary contributor by providing the science-based and detailed expertise necessary for revising the Element.

Planning Commission approval of the ERE occurred in two phases, the first being the ERE Narrative, Goals, and Policies on June 19, 2013, and the second being the maps associated with the ERE, which are an official part of the document, on December 18, 2013.

The Environmental Resources Element has been one of the cornerstones of the Boulder County Comprehensive Plan (BCCP) since the Plan was first adopted in 1978. It has been the most widely used Element in decision making by the county throughout that time, and the most frequently visited by members of the public as well as other interested parties.

The BCCP Update Process

The scope of the BCCP update is to do a cover-to-cover revision and update to the Plan, which is now 36 years old. Until now, the Plan has been subjected only to *ad hoc* or incremental changes limited

both in context and focus without the benefit of looking at the document as an interconnected body of work. In this phase of the update, staff is proposing changes to the currently existing Elements. The focus of these changes is not a reconsideration of the fundamental direction or content of the goals and policies as they exist in the BCCP or contemporary County initiatives and plans. Rather, the purpose of this effort is to review existing goals and policies in the Elements and identify those that are:

- Out of date
- No longer applicable
- Redundant or conflicting with other policies
- Unclear as to their meaning
- Programmatic (for example, work plans, initiatives, and projects already underway as part of a county department's regular operations and responsibilities), rather than policy.

In accordance with achieving these purposes, the approved ERE update text retains and sustains the core goals of the Comprehensive Plan while making it more reader friendly, concise, contemporary in its guidance and coverage, and consistent throughout its contents. The companion maps have been expanded in number and revised to maintain consistency with the updated goals and policies and to incorporate the better information now available which is depicted on the maps. Other BCCP Element updates will undergo the same type of Goals, Policies, and Narrative revision process and, where relevant, mapping amendments.

Staff believes that the approved Environmental Resources Element successfully incorporates many of the public comments gathered over the past year in what has been a productive collaboration between them, the county Planning Commission, Land Use staff, and the subject matter experts in the Parks and Open Space Department.

Updated ERE Goals, Policies, and Narrative

This Element underwent a rigorous process of review and modification including a goal-by-goal and policy-by-policy review by staff, which ultimately resulted in the reduction in the number of Policies in the ERE from 68 to 19. Following the staff level work in developing the updated goals and policies of the initial draft, staff revised the introductory narrative to the Element so that it now explains and defines the specifics of the goals and policies within it. In making the changes, the Element has become more concise and understandable yet still retains all of the concepts of the original. The updating process has stayed true to the update review criteria described in the bullets listed above. A link to the approved version of the Environmental Resources Element may be found here:

<http://www.bouldercounty.org/doc/landuse/bccp-ere-goals.pdf>

Updated ERE Maps

The current BCCP maps were last updated in 1995. Since that time, advances in technologies such as GIS allow for better mapping, data exchange, and data management at the county-wide scale. As a result, the County and its partner agencies now know more about the species, habitats, and ecosystems in Boulder County and are better able to coordinate management at this scale. The updated maps are the result of what was a rigorous and collaborative process undertaken by Parks and

Open Space staff to collect and analyze the best currently available information about environmental resources in the county.

Consistent with the objectives of the overall BCCP update process, the updated maps more accurately reflect current information and County practices as they have evolved since the ERE was last updated in 1995.

The ecosystem approach to environmental resource management at the heart of the ERE maps and designations is not new to this update. It was central to the 1995 update, in which Environmental Conservation Areas (ECAs) were utilized as a means for recognizing ecosystem functions that occur at a landscape scale. Similarly, the new designation, High Biodiversity Areas, recognizes areas at this broad, landscape scale identified by the Colorado Natural Heritage Program for their unique characteristics in their study of natural resources and biodiversity in the county.

At more of the site scale, environmental resources illustrated on the updated maps, like the Critical Wildlife Habitat map and Rare Plants and Significant Natural Communities Map, have been identified largely through inventories completed by Parks and Open Space during management planning processes and by other public land management agencies in the county. In addition, the Preble's Meadow Jumping Mouse Conservation Areas map builds on previous work done by the county by identifying areas important to the recovery of this animal protected by the Endangered Species Act. Further, the Wetlands and Riparian Areas map calls out areas where these important resources are located.

The information on these maps represents only one component of the resources on county lands managed by the Parks and Open Space Department. Neither the current Element nor the updated Element has included information regarding resources such as trails and recreation facilities, agricultural lands, and cultural resources. Such information is addressed, and when appropriate, mapped in other Elements of the BCCP. For instance, while the Environmental Resources Element doesn't specify information regarding trails and recreation, it certainly informs the Open Space Element and the development of management plans for individual properties.

For review purposes, a link to the updated maps is provided at <http://www.bouldercounty.org/property/build/pages/bccpupdate.aspx>

The Supplemental Materials

In addition to the maps, staff has prepared a volume of supplemental materials containing criteria and lists from which the maps were developed. The supplemental materials are intended to provide more detailed information which supports the proposed changes to the Element maps.

The Supplemental Materials are provided for informational purposes. They will not be made an official part of the adopted Updated Environmental Resources Element. They will instead be available through a reference to this and other appendices for the BCCP. With goals, policies, maps, and their explanatory narratives being the subject of the Element, the level of detail that appears in the supplemental materials has never been intended to be made a formal part of the adopted Element. The Supplemental Materials provide information that supports the updated maps themselves. The Supplemental Materials document and summarize the update process undertaken by the staff team.

As subsequent information becomes available regarding the background for map updates, the lists of items such as Species of Special Concern may change, but the criteria for the inclusion of such information will not.

As stated in the Overview in the updated Element,

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...[these 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.

The Overview also describes the designations at the site-scale and landscape-scale that are identified in the Element's Narrative, Goals, and Policies. The maps and lists of Species of Special Concern, along with the supplemental materials provided with this memo, are the body of work intended to illustrate and described the irreplaceable "natural features, biodiversity, and ecosystems" present in Boulder County today. These maps and lists, derived from a well-developed inventory of environmental resources, guide county actions, considerations, and decisions.

The lists of Supplemental Materials including Criteria and Lists of Species of Special Concern are available at the following link:

<http://www.bouldercounty.org/property/build/pages/bccpupdate.aspx>

Public Outreach

For the ERE update, staff has undertaken an extensive public process which has included:

- Website postings
- Listserve emails
- Public notice
- Press coverage
- Open houses (2)
- Public meetings and hearings before both Planning Commission and the Parks and Open Space Advisory Committee (8 in all)
- Public comment provided and recorded at all meetings and hearings.

Planning Commission approved the ERE Goals, Policies, and Narrative on June 19, 2013. The Commission approved the Map portion of the Element on December 18, 2013. These actions concluded an extensive process by Planning Commission which featured a number of study sessions and hearings. In all of these Planning Commission meetings except the update schedule briefing on January 5, 2013, Planning Commission opened the floor for public comment as a part of the proceedings.

The following meetings, open houses, and hearings have occurred as part of the process:

Planning Commission Meetings

January 5, 2013

April 4, 2013

May 15, 2013

June 19, 2013

November 20, 2013

December 18, 2013

Open Houses

January 25, 2013

October 29, 2013

POSAC

February 28, 2013

November 21, 2013

In conjunction with the public process, an estimated 15 different people provided written comments or testimony at public hearings. About 10 of those same people gave multiple comments as part of the process. Briefly, the comments covered the following issues: the increase in the amount of acreage now designated as having environmental resources present, the extensiveness of the supplemental materials including the criteria and lists of Species of Special Concern, concerns over how certain species will be treated, the effect of the updated Environmental Resources Element on trails and recreation, and a proposal by some members of the public to include the concept of Rights of Nature in the updated Element.

Planning Commission has been apprised of the written comments, and has heard the testimony at their hearings. Most of the issue areas listed had members of the public speaking on both sides of the issues. Planning Commission discussed each of those areas, and some changes were made to address them. In the case of the Rights of Nature issue, Planning Commission determined that this issue was not something they wanted to take action on via incorporation into the ERE at this time. They wished to be briefed on the overall concept associated with the issue, which staff did at a subsequent meeting. Further discussions between staff and the proposal advocates will be taking place in the near future.

The Planning Commission packets for all of the meetings, hearings, and open houses may be found at this link: <http://www.bouldercounty.org/property/build/pages/bccpupdate.aspx>

The public comments which have been received as part of the process may be found at this link: <http://www.bouldercounty.org/doc/landuse/bccp-comments.pdf>

Planning Commission

The final step in Planning Commission's action regarding the updated ERE is to adopt the revised Element for inclusion into the Comprehensive Plan. To this point, Planning Commission action has been approval of the entire content of the Element. Following the presentation to the Planning

Commission of any suggested revisions by the BOCC, staff will request adoption at an upcoming Planning Commission hearing.

Summary

Staff has undertaken an extensive process in arriving at the updated ERE that has been approved by Planning Commission. The revision of the Element has stayed true to the goals of the update process. The updated Environmental Resources Element is a great improvement over the currently adopted Element. Without a change of fundamental direction or content, the Element has been made more concise, understandable, and reader-friendly.

Requested Action

Staff requests that the Board of County Commissioners provide comments, questions, and any suggestions to be forwarded to the Planning Commission prior to their final adoption of the revised ERE. Since the Planning Commission is the body that officially adopts the Comprehensive Plan, staff is not requesting formal action by the Board of County Commissioners on this docket.

ATTACHMENTS

Attachment A: Text of the updated Environmental Resources Element

Attachment B: Updated maps of the Environmental Resources Element



Boulder County Comprehensive Plan

ATTACHMENT A

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.

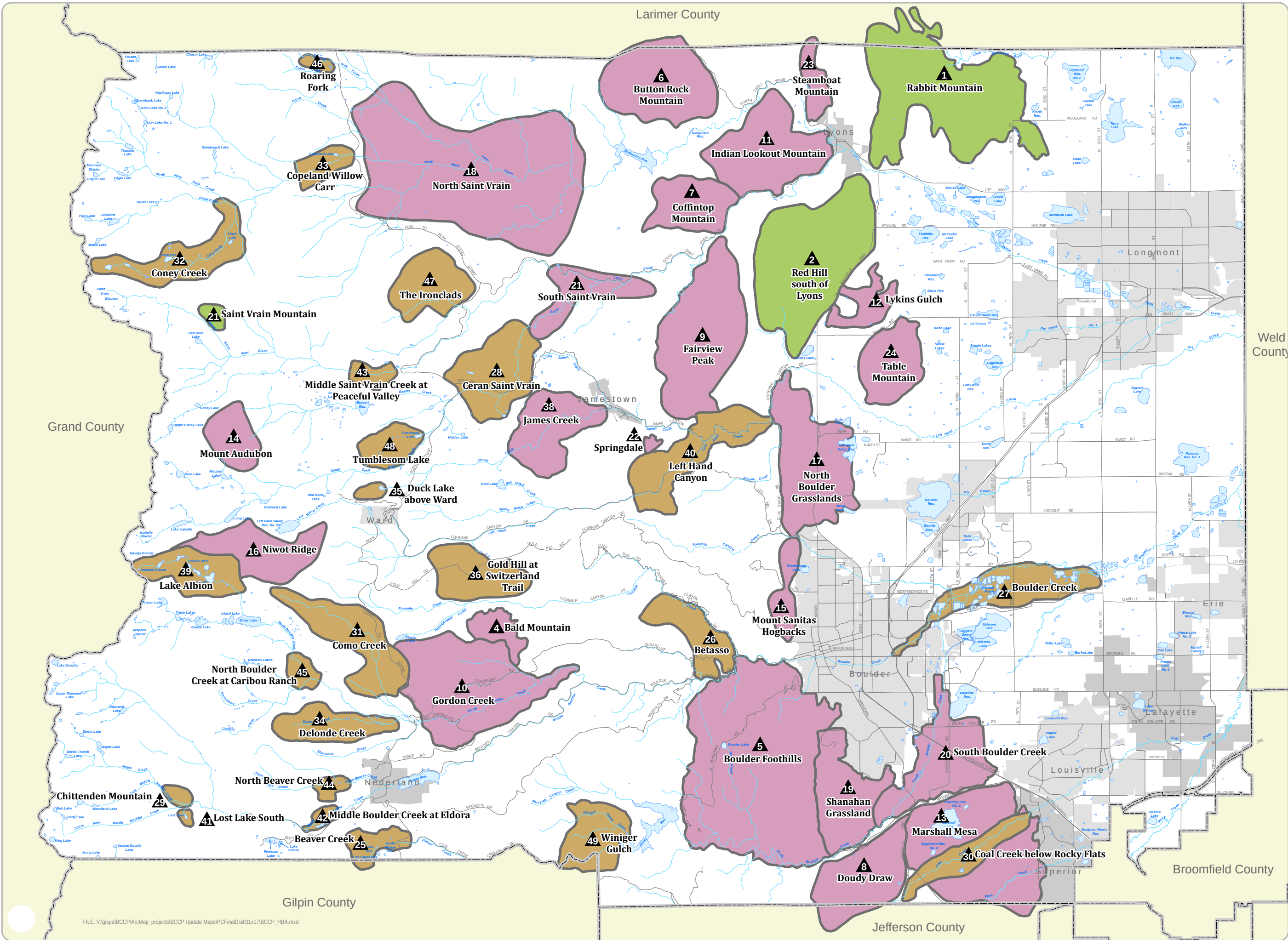
ER 4.02 Boulder County shall submit any County Natural Area that may be of state-wide importance to the Colorado Natural Areas Program for designation as a State Natural Area.



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.

ATTACHMENT B

Maps – Environmental Resources Element



High Biodiversity Areas



Boulder County
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2013 Update

High Biodiversity Areas

An area with a concentration of rare environmental resources that represents one of the greatest opportunities for preserving specific aspects of Boulder County's natural heritage. These areas have been identified and ranked by the CSU Natural Heritage Program.

B1: Outstanding Biodiversity Significance (Irreplaceable)



An area that on a global scale is irreplaceable. The area has a concentration of four or more globally critically imperiled to globally imperiled (G1-G2) element occurrences that are in excellent or good (A- or B-ranked) condition.

B2: Very High Biodiversity Significance (Nearly Irreplaceable)



An area that on a global scale is nearly irreplaceable and significance on a national scale. An area has a concentration of several biodiversity elements that are globally rare (G3) and/or species that are common globally (G4 or G5) but rare within Colorado.

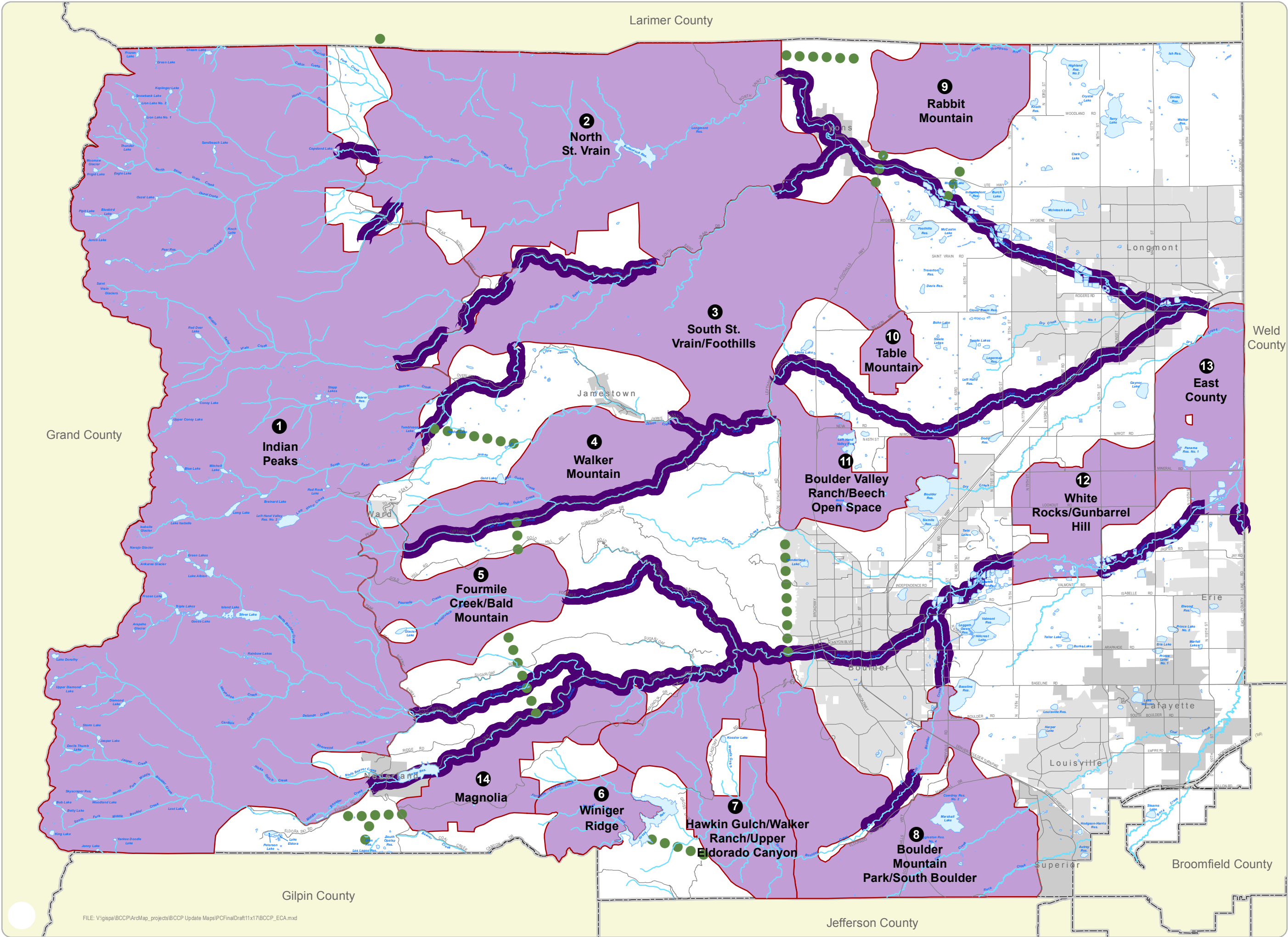
B3: High Biodiversity Significance



An area that has state-wide importance. The area has a concentration of several biodiversity elements that are more common globally but are excellent or good for this ecoregion.



0 0.75 1.5 3 Miles



Environmental Conservation Areas



Boulder County
Comprehensive Plan
2013 Update

Environmental Conservation Areas



Areas of the County that possess a relatively low amount of fragmentation, contain high quality natural resources or habitats, are designated at a sufficient size to provide ecological benefit, and/or have significant potential for restoration

Overland Habitat Connectors



Areas of wildlife movement across relatively unfragmented landscapes which provides connectivity among Environmental Conservation Areas

Riparian Habitat Connectors

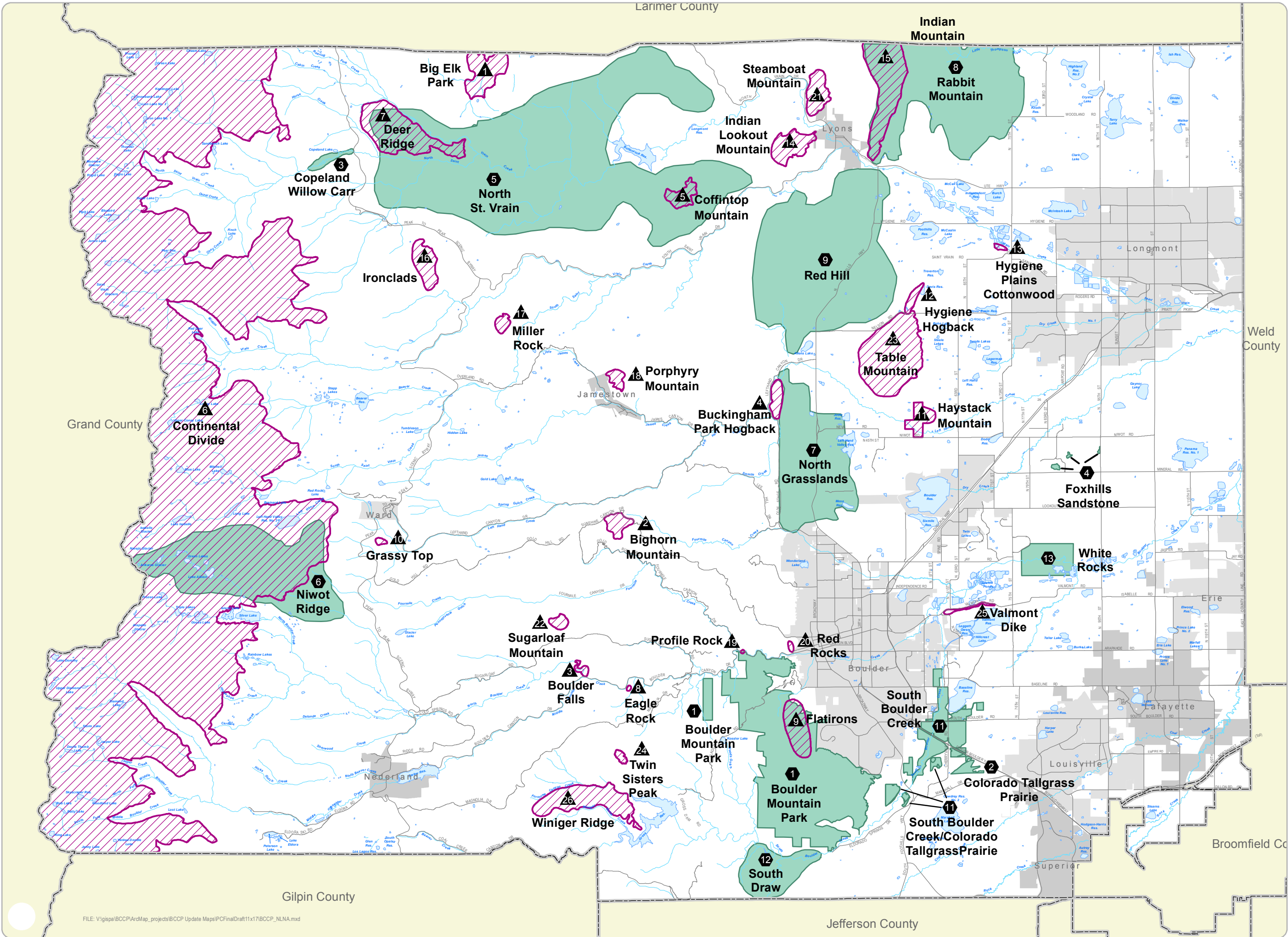


Areas of wildlife movement adjacent to relative unfragmented waterways which provides connectivity among Environmental Conservation Areas



0 0.75 1.5 3 Miles

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Natural Landmarks and Natural Areas



Boulder County
Comprehensive Plan
2013 Update

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.



0 0.75 1.5 3 Miles

Habitat Conservation Areas for Prebles Meadow Jumping Mouse



Boulder County
Comprehensive Plan
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Habitat Conservation Areas Descriptions

Habitat Conservation Areas are adapted from the "Possible Conservation Zones" of the PMJM Conservation Handbook. The designations guide conservation of PMJM habitat with the overarching goal of aiding in the recovery of this Threatened species.

Zone 1 Mouse Management Area (MMA)



Areas in which PMJM is known to occur, including adjacent habitat patches that are likely to be occupied. Management should emphasize maintaining higher quality riparian habitat and higher numbers of mice. Areas of poor quality are priorities for restoration with high expectations for success.

Zone 2 Possible Linkages



Linkages are designated for populations that once occurred as a single unit, but are now fragmented. Linkages provide adequate structure for a few mice to "make it to the other side", facilitating dispersal, population maintenance, and genetic exchange.

Zone 3 Suitable Contiguous Habitat



Areas of suitable habitat that are contiguous to a known population and are not known to be occupied by PMJM (i.e. PMJM either have not been captured or no trapping has occurred).

Zone 4 Potential Restoration, Contiguous



Areas not known to be occupied but contiguous with known populations where restoration of unsuitable or degraded habitat could result in a significant increase in a PMJM population.

Zone 5 Suitable, Noncontiguous Habitat



Areas of suitable habitat that are NOT contiguous to a known population and are not known to be occupied by PMJM.

Foothills Perennial Stream Habitat



Areas of suitable PMJM habitat along foothills perennial streams up to 7,600 ft. in elevation not covered under one of the other designations. PMJM are known to occupy riparian habitat up to this elevation (USFWS 2004).



0 0.75 1.5 3 Miles

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Larimer County

Weld County

Broomfield County

Jefferson County

Gilpin County

Grand County

Rare Plant Areas and Significant Natural Communities



Boulder County
Comprehensive Plan
2013 Update

Rare Plant Areas

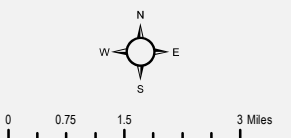
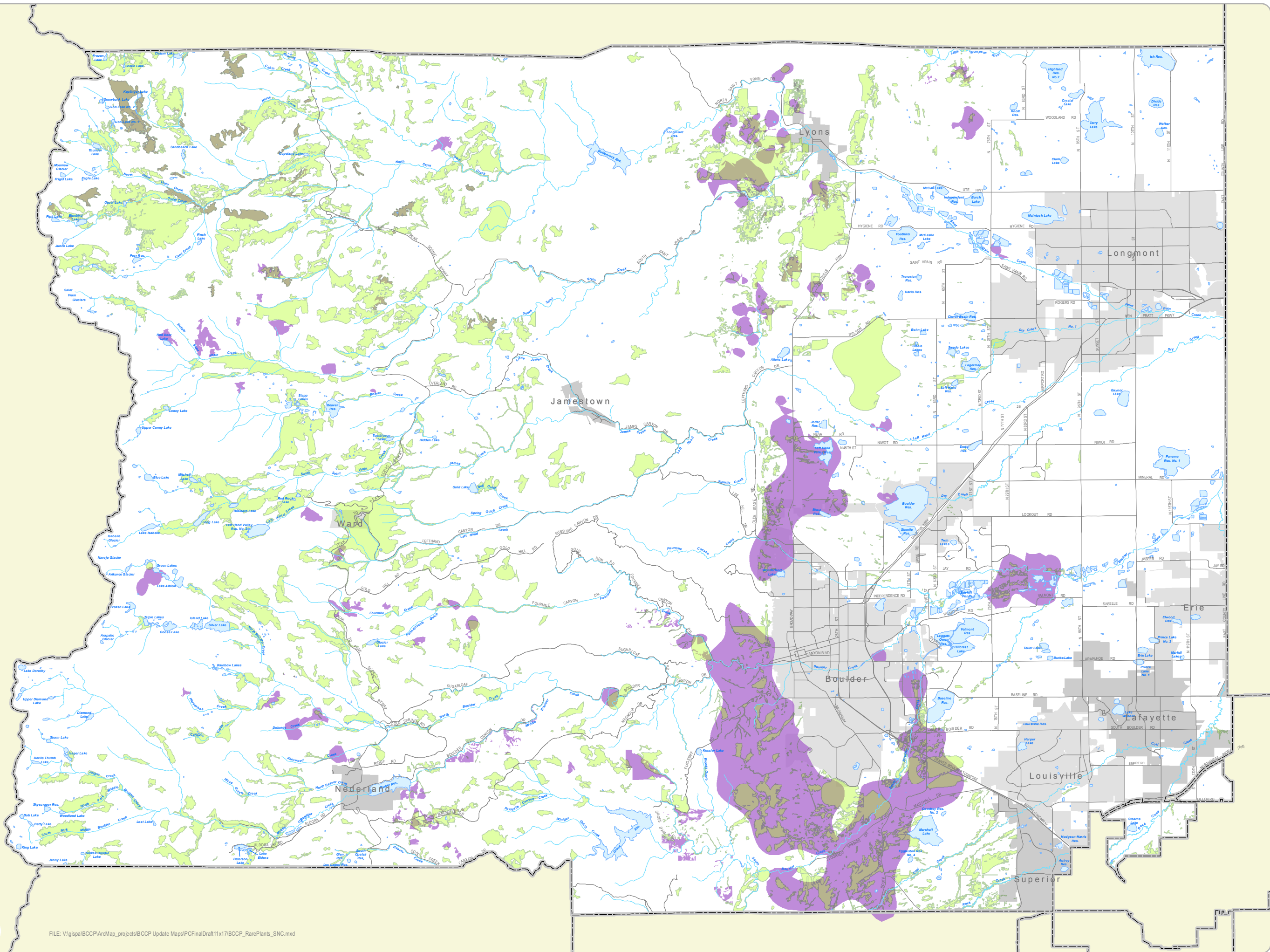


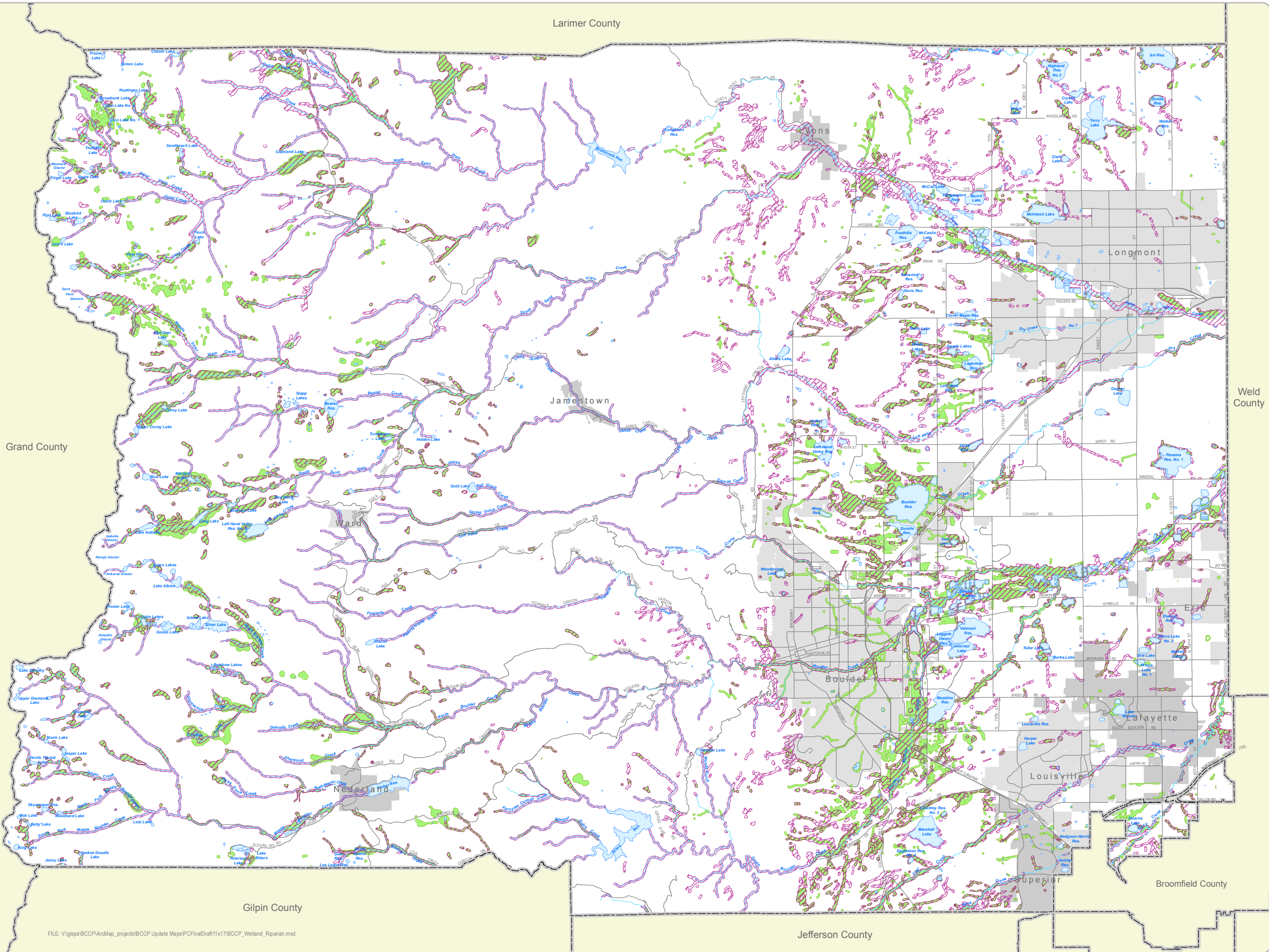
An area known to have or have a high likelihood of having occurrences of Plant Species of Special Concern.

Significant Natural Communities



An area where a combination of plant species (a plant association) that is critically imperiled or vulnerable to extirpation is present.





Wetlands and Riparian Areas



Boulder County
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2013 Update

Riparian Areas



An area recognized by the presence of linear bands of trees, shrubs, and herbaceous vegetation along a waterway where plant communities and soil moisture differ from surrounding upland vegetation and soils

Wetlands



Lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water with one or more of the following attributes: (1) at least periodically, the land supports predominantly hydrophytes (wetland plants); (2) the substrate is predominantly un-drained hydric soil; and/or (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year (USFWS 1993).



0 0.75 1.5 3 Miles

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Critical Wildlife Habitat and Migration Corridors

Boulder County
Comprehensive Plan
2013 Update

Critical Wildlife Habitats

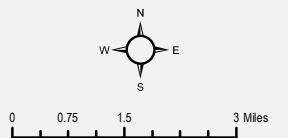
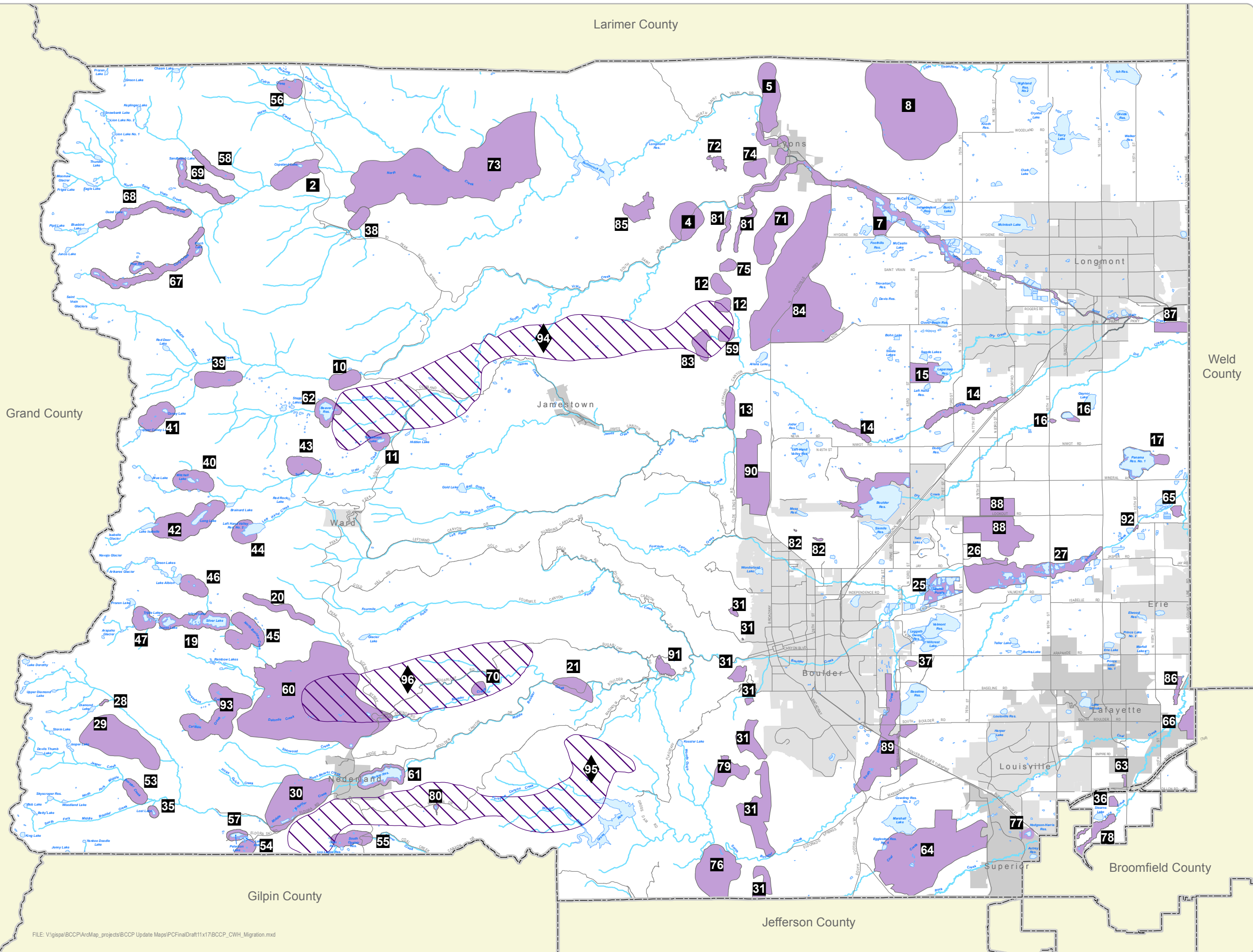


An area of unique habitat which has a crucial role in sustaining populations of native wildlife and in perpetuating and encouraging a diversity of native species in the county. The area may be significantly productive habitat or particularly vital to the life requirements of species that are critically imperiled or vulnerable to extirpation.

Wildlife Migration Corridors



A specific, delineated area of known elk migration movement for a major elk herd in Boulder County.



Critical Wildlife Habitats

2	Copeland Willow Carr	58	Hunters Creek
4	Deadman Gulch and South St. Vrain	59	Geer Canyon
5	Steamboat Mountain	60	Caribou Ranch Montane Parkland
7	St. Vrain Corridor	61	Barker Reservoir
8	Rabbit Mountain	62	Beaver Reservoir
10	Middle St. Vrain Willow Carr	63	Goose Pond
11	Tumblesom Lake	64	Southern Grasslands
12	Marietta Canyon	65	Kenosha Wetlands
13	Lefthand Palisades	66	Two Creeks
14	Lefthand Creek Cottonwood Groves	67	Cony Creek
15	Lagerman Reservoir	68	Ouzel Creek
16	Gaynor Lakes	69	Sandbeach Creek
17	Panama Reservoir	70	Peewink Mountain
19	City of Boulder Watershed	71	Red Hill Gulch
20	Como Creek	72	Antelope Park
21	Boulder Falls Area	73	North Saint Vrain Canyon
23	Boulder Reservoir	74	Hat Rock
25	Walden and Sawhill Ponds	75	Ingersoll Quarry
26	White Rocks	76	South Draw
27	Lower Boulder Creek Riparian Area	77	Hodgson-Harris Reservoir
28	Diamond Lake Outlet	78	Buffalo Gulch and Rock Creek
29	Chittenden Meadows	79	Bear and Aspen Canyons
30	Arapaho Ranch - Tucker Homestead	80	Giggey Lake
31	Boulder Mountain Parks Eldorado Mountain	81	Hall 2
35	Lost Lake	82	B.L.I.P. Ponds and Lapin Pond
36	Carolyn Holmberg Preserve at Rock Creek Farm	83	Geer Meadows
37	Sombrero Marsh	84	Red Hill
38	Lazy H. Ranch Willow Carr	85	Coffin Top Mountain
39	Coney Flats Willow Carr	86	Powers March
40	Mitchell Lake Willow Carr	87	Quicksilver
41	Coney Lake Willow Carr	88	Gunbarrel Hill
42	Long Lake Willow Carr	89	South Boulder Creek Floodplain and Terrace
43	South St. Vrain Willow Carr	90	North Boulder Grasslands
44	Letthand Reservoir Willow Carr	91	Bummer's Gulch
45	Boulder Watershed Willow Carr	92	Kenosha Heronry
46	Lake Albion Willow Carr	93	Upper Caribou Park Willow Carr Complex
47	Triple Lakes Willow Carr	94	North Foothills Elk Herd
53	Woodland Flats Willow Carr	95	Winiger Ridge Elk Herd
54	Buckeye Basin Willow Carr	96	Peewink Mountain Elk Herd
55	Los Lagos Willow Carr		
56	Roaring Fork Willow Carr		
57	Peterson Lake		

*CWH numbering is not sequential. Some previously established CWH’s have been deleted or subsumed by another CWH. Those numbers were “retired”.