



# Parks and Open Space

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## **ATTACHMENT C: Summary of Proposed Updates**

The following information summarizes the updates that are proposed to the Environmental Resource Element map component of the Boulder County Comprehensive Plan. Please refer to Supplemental Materials provided with the November 2013 memo for more detailed information, as well as to the maps themselves. A previous version of this summary was also included as an attachment to the November 2013 memo.

### **CRITICAL WILDLIFE HABITATS (CWH)**

- The criteria for designating Critical Wildlife Habitat (CWH) were modified from the historic version. In developing the update to the Species of Special Concern (SSC) list, it became evident that there were no distinct criteria explicitly for designating SSC. Rather, these criteria were built into the criteria for designating CWH's. We felt that having distinct criteria for designating SSC, apart from those criteria for designating CWH's, was necessary. The reasoning is that not every SSC should have a CWH designated for it. The SSC list is much more comprehensive than that, and there are species on that list for which designating habitat is not warranted. There are also species on the SSC list that are of concern, but protection of habitat may not be the most effective method conservation for that species. Additionally, as you can see from the new CWH criteria, protecting habitat that supports SSC(s) is not the only reason for designating a CWH. Thus, the criteria for designating species and habitats were teased apart and developed into stand-alone criteria for each.
- UPDATES: All of the CWH's (as they existed per the 2002 update) were edited or modified in some way during the 2013 update. Five of the existing CWH's were deleted (see "DELETIONS" below). Eleven of the existing CWH's were subsumed by another CWH (typically a new one). That is, these shapes were deleted because the area which they covered was encompassed within a larger shape that was added per this update, or multiple smaller CWH's that overlapped or were within close proximity to each other were grouped together as one large CWH. The boundaries of the remaining 43 existing CWH's were edited to 1) more accurately represent the on-the-ground habitat, taking advantage of more advanced modern mapping technology and improved ecological information, 2) correct mapping errors from the past, 3) provide more adequate protections for the species or habitats within a CWH, based on the most current and best available science.

- **DELETIONS:** In the process of updating the Critical Wildlife Habitats, we deleted five of the existing CWH's outlined below
  - **CWH #9 – Old Apple Valley Road:** The SSC's described in the original CWH description (Cedar Waxwing and American Redstart) are not currently considered high priority species. Additionally, the habitat described for this area is not rare or of uniquely high quality. The higher quality parts of this habitat were riparian and were ultimately subsumed by the new St. Vrain Corridor CWH (#7).
  - **CWH #22 – Boulder Valley Ranch:** The "Key Species" for which this CWH was designated (Burrowing Owl and American Bittern) are not known to occur there currently. It was noted in the 2002 update to CWH's that the last year in which there was an active Burrowing Owl nest site was 1986. This remains true. While the area continues to be occupied by prairie dogs (Species of Special Concern), the habitat effectiveness (quality) of the area has been sufficiently degraded by anthropogenic activity (e.g. increased visitor use and dog use of the trail network).
  - **CWH #24 – Cottonwood Grove on Boulder Creek:** This remnant cottonwood gallery exists as a small isolated patch surrounded by urban development. Although this CWH may provide "stop-over" habitat for migrating birds, its landscape context (i.e. isolated island of questionable quality) is assumed to limit the habitat effectiveness of this small riparian patch.
  - **CWH #34 – Marshall Mesa:** This CWH was replaced with the new CWH # 64 Southern Grasslands. It was decided that the existing CWH was not the best example of native prairie habitat in the area, and that the area adjacent to this CWH (to the south east) was larger and of higher quality.
  - **CWH #35 – Stearn's Lake:** This CWH was actually deleted in the previous update to CWH's (2002). The Lost Lake CWH was added in 2002, taking the number (#35) of Stearn's lake. The CWH description reflected this change, but the change was not reflected in the ERE map. The polygon for the Stearn's Lake CWH remained and a new polygon for the Lost Lake CWH was not added to the map. This was remedied in the 2013 update process. The Stearn's Lake polygon was deleted, and a new polygon for Lost Lake was added to the map.
  
- **ADDITIONS:** A total of 35 new CWH's (plus three Wildlife Migration Corridors, see below) were added to the map of Critical Wildlife Habitats. These new CWH's were developed using the updated CWH designation criteria and informed using the best available science, expert interviews, and local habitat knowledge. (See CWH descriptions for more information on individual areas).
  
- **WILDLIFE MIGRATION CORRIDORS:** Specific, delineated areas of known elk migration were mapped using the best available information from Colorado Parks and Wildlife as well as data based on studies and long-documented expert observations by Boulder County staff and local experts from around the county. These shapes are based on specific and reliable information

about the movement patterns of all major elk herds in the County. These areas may also serve as movement corridors for other wildlife species in the County. This designation is a new addition to the Environmental Resources Element (ERE) and a special case of Critical Wildlife Habitat. It was determined by POS staff and other experts that migration corridors are essential to the long-term sustainability of local populations of migratory elk. This decision supports the effort to “keep common species common” and complies with earlier calls to minimize impacts to these areas (see Wildlife Policy ER 4.03.01 BCCP 1999). These areas should be treated with the same, if not more, conservation concern as any other Critical Wildlife Habitat area.

In addition to being vital to sustaining elk populations in county, these corridors have valuable land use planning functions. They serve to identify potential wildlife conflicts zones along roads etc.; and, highlight areas that could provide wildlife viewing. They also identify areas with habitat value that is vulnerable to being compromised and/or fragmented by human uses such as development and recreation.

- Summary of 2013 update to Critical Wildlife Habitats:

Updated	43
Deleted	5
Subsumed	11
New CWH	35
Wildlife Migration Corridors	3
<b>CWH (2013)</b>	<b>81</b>
CWH (2002)	58

CWH Descriptions: In addition, the CWH descriptions included in the Supplemental Materials were expanded from the previous version to include threats to the habitat or the SSC’s occupying it. In addition to SSC’s known to occur at a site, we also included a list of species expected to occur based on the habitat type. We also identified which of the CWH designation criteria each CWH met. Vegetation within a CWH was summarized using the Southwest Regional Gap Analysis Project Landcover types.

**Table 1: List of new Critical Wildlife Habitats added to the Environmental Resources Element per the 2013 update. Note: the one marked with an asterisk (\*) are Wildlife Migration Corridors.**

59	Geer Canyon	78	Buffalo Gulch and Rock Creek
60	Caribou Ranch Montane Parkland	79	Bear and Aspen Canyons
61	Barker Reservoir	80	Giggey Lake
62	Beaver Reservoir	81	Hall 2
63	Goose Pond	82	B.L.I.P. and Lappin Pond
64	Southern Grasslands	83	Geer Meadows
65	Kenosha Wetlands	84	Red Hill
66	Two Creeks	85	Coffintop Mountain
67	Cony Creek	86	Powers Marsh
68	Ouzel Creek	87	Quicksilver
69	Sandbeach Creek	88	Gunbarrel Hill
70	Peewink Mountain	89	South Boulder Creek Floodplain and Terrace
71	Red Hill Gulch	90	North Boulder Grasslands
72	Antelope Park	91	Bummer's Gulch
73	North Saint Vrain Canyon	92	Kenosha Heronry
74	Hat Rock	93	Upper Caribou Park Willow Carr Complex
75	Ingersoll Quarry	94	North Foothills Elk Herd*
76	South Draw	95	Winiger Ridge Elk Herd*
77	Hodgson-Harris Reservoir	96	Peewink Mountain Elk Herd*

## **PREBLE'S MEADOW JUMPING MOUSE (PMJM) HABITAT CONSERVATION AREAS:**

PMJM is listed as a Threatened species and is protected under the Endangered Species Act. During the time of the last update to County CWH's (2002) the County was working with the U.S. Fish and Wildlife Service and the PMJM Science Team (a panel of area experts convened by The Nature Conservancy to guide local PMJM conservation efforts) to develop a PMJM Habitat Conservation Plan for Boulder County. Since a more comprehensive effort to conserve PMJM in the county was being developed, no CWH's specific to PMJM were included as part of the 2002 update. The Boulder County Habitat Conservation Plan continued to be under development and revision during the early 2000's, but was never adopted by the County. As a result, there currently exists no official County map to guide land use decisions in the county toward minimizing human impacts to PMJM populations and habitat, although federal regulations are in place. However, the efforts of the Science Team included extensive trapping efforts and habitat evaluation and resulted in the development of a map of PMJM habitat in Boulder

County. This map has since served as the primary reference to land use decision-making concerning impacts to PMJM habitat in the County. The “Science Team” map, as it is known, has been incorporated into a comprehensive map of PMJM Habitat Conservation Areas in Boulder County. The County expanded the original maps to include PMJM locations and habitat that have been documented in the time since the original map was produced (following the guidance of the PMJM “Conservation Handbook” developed by the Science Team). Additionally, all “Foothills Perennial Stream Habitat” was mapped up to 7,600 ft. as potential habitat to guide conservation of PMJM throughout its distribution in the County. (The U.S. Fish & Wildlife Service recommends that sites below 7,600 ft. in Colorado be surveyed, USFWS 2004).

**WILDLIFE SPECIES OF SPECIAL CONCERN (SSC):**

- Prior to the 2013 update to the BCCP – Environmental Resources Element (ERE), there was not a distinct set of criteria explicitly designed for designating Species of Special Concern. (See discussion under Critical Wildlife Habitat section). We reviewed current literature and listing criteria developed by other agencies and organizations to distill the basic tenants of modern species based conservation biology and compiled a comprehensive set of criteria for listing Species of Special Concern for Boulder County.
- The 1994 Boulder County SSC list was updated. This list is improved in that it incorporates a broader spectrum of taxonomic groups. There is also more abundant information available on species and population trends than during the previous ERE update. Some species populations have recovered, and so have been removed from the SSC list. Seventeen species remain extirpated from the county. Many more species have been determined to be in decline.
- Summary of number of species on the Boulder County SSC list by year of update:

	<b>1994</b>	<b>2013</b>
Total Species	153	180
New		64
Deleted		36

**Table 2: Summary of species added and deleted from the Boulder County SSC list during the 2013 ERE update.**

ADDED		DELETED
(A miner bee)	Myotis, Western Small-footed	Bass, Small Mouth
Avocet, American	Owl, Mexican Spotted	Blue, Appalachian
Azure, Hops Feeding	Owl, Northern Pygmy	Bobcat
Badger, American	Pigeon, Band-tailed	Bobwhite, Northern
Bat, Big Brown	Porcupine, North American	Bullhead, Black
Bat, Brazilian Free-tailed	Prairie Dog, Black-tailed	Cat, Channel
Bat, Eastern Red	Rosy-Finch, Brown-capped	Catbird, Gray
Bat, Hoary	Scrub-Jay, Western	Dace, Southern Redbelly
Bat, Silver-haired	Sheep, Rocky Mountain Bighorn	Finch, Rosy
Bat, Tricolored	Shrew, American Water	Flycatcher, Least
Bee, American Bumble	Siskin, Pine	Frog, Wood
Bee, Black and Gold Bumble	Skipper, Cross-line	Gopher, Plains Pocket
Bee, Variable Cuckoo Bumble	Skipper, Dusted	Hawk, Swainson's
Bee, Western Bumble	Skipper, Rhesus	Mouse, Hesperid Pocket
Beetle, Prairie Tiger	Skipper, Simius Roadside	Muskrat
Blue, Colorado	Skipper, Snow's	Nuthatch, Pygmy
Bunting, Indigo	Skipper, Two-spotted	Opposum, Virginia
Bunting, Lazuli	Snake, Common Garter	Osprey
Chipmunk, Colorado	Sparrow, Brewer's	Owl, Barn
Dace, Northern Redbelly	Sparrow, Cassin's	Pelican, American White
Dancer, Blue-Ringed	Stonecat	Shad, Gizzard
Dragonfly, Hudsonian Emerald	Toad, Great Plains	Shad, Threadfin
Flicker, Northern	Toad, Plains Spadefoot	Shrew, Pygmy
Frog, Chorus	Turtle, Spiny Softshell	Shrew, Water
Gopher, Northern Pocket	Vireo, Plumbeous	Snake, Smooth Green
Hawk, Ferruginous	Warbler, Virginia's	Sparrow, Savannah
Hawk, Rough-legged	Warbler, Wilson's	Squirrel, Abert's
Jewelwing, River	Wren, Rock	Squirrel, Rock
Kingfisher, Belted		Sunfish, Orange Spotted
Lark, Horned		Swallowtail, Eastern Tiger
Lizard, Short-Horned		Swallowtail, Short-tailed
Mink, American		Black
Moth, Lost Ethmiid		Teal, Green-winged
Myotis, Little Brown		Thrasher, Brown
Myotis, Long-eared		Valvata, Mossy
Myotis, Long-legged		Walleye
		Warbler, Chestnut-sided

## **PLANTS SPECIES AND COMMUNITIES OF SPECIAL CONCERN**

- Took more regional and global approach to identifying species/communities of concern (Plants SSC List)
  - Utilized CNHP ranking system (G1/S1 etc. )
  - Utilized input from Subject Matter Experts
- Utilized geodatabases of the county's and county partners to identify and map Rare Plant Areas and Significant Natural Communities based on Plants SSC List

Below is a summary of the changes to the Plants SSC List:

<b>BCCP Year</b>	<b>Significant Natural Communities</b>	<b>Rare plants</b>
<b>1995</b>	27	27
<b>1999</b>	20	23
<b>2013</b>	102	132

## **WETLANDS AND RIPARIAN AREAS**

- Developed criteria that were used to identify and map wetlands and riparian areas at the county-wide scale using a variety of geodatabases
- A map of these resources did not previously exist at this scale in the ERE

## **ENVIRONMENTAL CONSERVATION AREA (ECA) UPDATES:**

- The BCCP made big strides in protecting the environmental resources of the county when the adopted the ecosystem management concepts outlined in the "Ecosystem Plan", produced by the Boulder County Nature Association. These concepts, as well as the criteria for designating ECA's, were revisited during the current update and found to be consistent with contemporary conservation biology and landscape ecology theory and concepts. Thus, we found it was not necessary to apply any major changes to the ECA's. Only minor editorial changes were made to the text and existing ECA shapes. One new ECA was added to the map (see below).
- We took advantage of more advanced modern mapping technology and better available information to update the boundaries of the ECA's. These boundaries were modified to correct mapping errors and align shapes to better match features on the ground.

- A number of experts and POS staff felt that the area east of Nederland, along Magnolia road was “missing” from the historic ECA map. We are proposing the addition of the Magnolia ECA (#14). This area bears many of the features of an ECA and fully meets the criteria for designation. The relative impacts of fragmentation in this area are fairly minor and consistent with that of other ECAs. This area is also home to high quality habitat for both flora and fauna of the montane life zone in Boulder County. It provides connectivity on the landscape through a diffuse matrix of relatively undeveloped land and sustains high degree of naturalness, relative to the majority of Boulder County’s mineral belt. This area has undergone some habitat restoration work by both POS and USFS, and some historical efforts have been made to curb development of public land.
- A description was written for each of the individual ECAs summarizing its general characteristics and features. These descriptions are included in the Supplemental Materials.

## **HIGH BIODIVERSITY AREAS**

- Developed this map based on the study completed by Colorado Natural Heritage Program in 2009 identifying areas in the county of high biodiversity

## **NATURAL AREAS**

- Using the criteria already outlined in the BCCP, areas were identified for inclusion under this designation and areas that could be removed were identified based on new information and in collaboration with partners. Here is a summary of the changes.
  - Four areas were revised
  - Three new areas were identified
  - Two areas were removed
  - Five areas have no proposed changes

## **NATURAL LANDMARKS**

There are no proposed updates or changes to Natural Landmarks