

Environment Element

“The last word in ignorance is the man who says of an animal or plant: “What good is it?” If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering.”

– Aldo Leopold, 20th century naturalist

Vision: Protect, enhance, and promote our environmental resources.

Introduction

The term “environment” can take on many meanings. In a simple definition, “environment” is the surroundings that we, as residents of this world, interact with. In the context of this Plan, environment is primarily focused on our natural surroundings: the natural vegetation, the fish and wildlife, our waters and air, and the geographic setting. Future land use decisions will have a profound impact on this natural environment. Thus, our actions must be tempered in a manner respecting our surroundings, so that irreparable damage is not caused. The reason people live in or visit the County is largely due to the tremendous natural environment we enjoy. It is our responsibility to treat it with caring respect.

1. Environmentally Sensitive Areas

The County’s natural setting is its greatest asset as it helps define and give character to the area. Part of our natural setting is comprised of environmentally sensitive areas. Environmentally sensitive areas are considered to be lands that contain physical environmental characteristics including but not limited to: wetlands, streams and riparian areas, floodplains, slopes 30 percent or greater, avalanche hazard areas and other geologic hazards, critical fish and wildlife habitat, and alpine tundra. These areas typically either present a constraint to development or are extremely susceptible to development impacts.

There are many measurable and immeasurable benefits to the identification, conservation and protection of environmentally sensitive areas. Ramifications of the loss and degradation of environmentally sensitive areas include incremental reductions to the following:

- Endangered/rare species and general wildlife habitat.
- Aesthetics and recreational opportunities.
- Water supply to streams, reservoirs and well fields.
- Water flow control and water quality/pollution control.
- River bank stability.
- Minimization of stormwater damages.
- Health, safety and welfare of property owners (e.g. hazardous threats of fire, flooding, and avalanches).

Safeguarding environmentally sensitive areas is important because alteration may have negative impacts on aesthetics, property, environmental quality, or safety. Future development that occurs in the County needs to be designed and constructed to minimize impacts to these areas. This Plan promotes the avoidance of development in environmentally sensitive areas, with a desire to see natural features preserved and incorporated into new development projects.

Wetlands

The regulation of wetlands has become a focus of public attention in recent years at both the local and federal levels. Controversies have surfaced over how wetlands should be defined and how stringently they should be protected. The County currently defines wetlands as:

“Areas including lakes, streams, ponds, areas of seasonal standing water, areas with a predominance of wetland vegetation (such as willows, rushes or sedges), or areas with boggy soils. Wetlands do not include areas which are saturated solely by the application of agricultural irrigation water. Manmade lakes or ponds built for the purpose of detaining runoff are not considered wetlands in the context of these regulations.”

Wetlands are diverse and important as they provide important, interdependent ecological functions. Wetlands work as a kind of green infrastructure, providing vital ecological services. Among their important functions, wetlands improve the quality of water flowing through them; help reduce flooding impacts by storing floodwaters and releasing them slowly like a sponge; supply valuable water during periods of drought; and help reduce shoreline erosion. They also serve as critical fish and wildlife habitats for spawning, nesting, rearing, feeding and resting. With an understanding of the beneficial functions that wetlands serve, not only is it easy to see them as a collection of isolated, unusual plants, but they also can be seen as an essential ecological component to the overall County landscape.

By and large, the federal government is empowered to regulate wetlands under Section 404 of the Clean Water Act through the U.S. Army Corps of Engineers (USACE). In 1998, the U.S. Environmental Protection Agency and the USACE raised concerns regarding the cumulative loss of wetlands in the County. These concerns were based on existing development pressures, recent permit actions, the number of high quality wetlands in the County and the importance of the headwaters of the Blue River watershed in Colorado.

Based on the data collected and analyzed and under existing Federal and County regulations, it is estimated that at build-out the County will experience an additional loss of approximately 102.71 acres of wetlands affecting 592 private parcels (using 0.10 acre as standard impact). Approximately 7,000 acres of wetlands exist on private land in the County. Of the 592 parcels potentially affected by wetlands, 453 are partially affected and 139 parcels are significantly affected (e.g., the majority of the property contains wetlands). While this 102 acres constitutes only 1.5% of the total amount of 7,000 acres referenced earlier, development activities are anticipated to indirectly have a much larger impact to wetland health and sustainability throughout the County.

USACE regulations change frequently and may not always provide adequate management of wetlands and their functions. This oscillation of federal wetland regulations may leave certain wetland types vulnerable to permanent development impacts. This is significant as high quality wetlands are biologically significant and of superior quality or value critical to protecting water quality, quantity and other important wetland functions.

In April 1999, the County adopted Resolution 99-46, “Conceptual Strategy For The Enhanced Management Of Wetlands Within Summit County.” This Resolution supports the spirit of working cooperatively with the public, private interests, towns, and various federal agencies with the goal of achieving “no net loss” of wetlands. In addition to supporting the recommendations of the Resolution, the County has implemented a phased Environmental Protection Agency 104(b)(3) wetlands grant. A byproduct of the Grant is for the County to continue to seek means to provide better management of wetlands while imposing limited costs for both County administration and private property owners. The following represents phased recommendations from the Grant to implement strategies developed for the

enhanced management of wetlands in the County:

- Amend the definition of wetlands in the County’s Land Use and Development Code to allow jurisdiction over “isolated wetlands.”
- Further develop and create incentive based regulations (e.g., encourage conservation easements for properties with wetlands and evaluate variable wetland setbacks).
- Facilitate private development of wetland mitigation banks.
- Amend Land Use and Development Code to create a mechanism to allow the County to review and approve proposed wetland impacts in existing subdivisions platted before February 26, 1996.
- Develop and adopt new regulations for identified ‘high quality’ wetlands.
- Develop basin specific wetland recommendations (e.g., special management zones in the Upper Blue Basin).

Steep Slopes and Slide Hazard Areas

The mountainous topography of the County presents considerable constraints to development, most commonly in the form of steep sloped areas. These areas (defined as having a grade change of 30 percent or more) are vulnerable to disturbance and can become unstable. Some areas of the County are located in landslide areas, avalanche gullies, or run-out areas. Development activities in these areas are extremely hazardous and can result in personal and property damage. County code has specified requirements for development in steep slope areas. However, this Plan emphasizes avoidance of these areas, whenever possible, so that impacts of development in these areas are eliminated altogether.

Wildlife

The various landscapes of the County provide a diversity of habitats for many species of wildlife. Big game species such as elk and mule deer utilize the higher elevations of the Tenmile, Gore, and Front Ranges during the summer and move to lower elevations in areas such as the Lower Blue Basin in the winter. Some areas provide important movement corridors for these and other species as they migrate between habitat areas. At its lowest elevations, the sage meadows of the northern County provide habitat for species such as sage grouse and winter range for deer and elk. At mid-elevations, coniferous forests predominate and host a variety of species, including deer, elk, bears, and an array of smaller animals. The highest elevations above treeline provide their own unique habitat conditions, suited for species such as mountain goats and marmots. Finally, riparian areas and wetland systems further diversify habitats and provide unique opportunities for species such as ptarmigan. Development activities, especially in undisturbed areas, can fragment habitat areas and wildlife movement corridors.

I-70 acts as a barrier to wildlife movement. However, there are a couple locations in the County where free movement from south to north is provided. One area is below Vail Pass near Stafford Gulch, where the elevated freeway allows wildlife movement underneath the freeway. The other location is the “land bridge” area above the Eisenhower Tunnel. These areas are important in terms of maintaining continuous landscape for wildlife to move through, and to allow for mixing of populations. Overall, the County serves as an important connector for wildlife between northern and southern habitats.

The Colorado Division of Wildlife (CDOW) is the state agency charged with ensuring that sustainable populations of different wildlife species are maintained. The state maintains a list of species of special concern (e.g., federally or state designated endangered and threatened species and other species of concern). In addition, CDOW maps habitat for a variety of important species. The following table identifies some of the important species found in the County.

Species	Federal or State Designation	Habitat Type	General Location
Bald Eagle	Federally Threatened State Threatened	Winter Range and Nest Site	Lower Blue River
Boreal Toad	State Endangered	Sightings/Overall Range	Riparian/wetland areas in Ten Mile, Snake River, and Upper Blue Basins
Bighorn Sheep		Overall range, winter range	Gore Range
Elk		Overall range, winter range, winter concentration area, severe winter range, critical habitat, summer concentration area, summer range, production area	Throughout County
Golden Eagle		Nest sites	Lower Blue Basin
Lynx	Federally threatened State endangered	Overall range	Throughout County
Mountain Goat		Concentration areas, overall range, winter range	High elevations of Tenmile, Gore, and Continental Divide
Canada Goose		Production area, transitional wintering area	Lower Blue River, Lake Dillon
Mule Deer		Overall range, winter range, severe winter range, winter concentration area, critical habitat	Countywide, northern Lower Blue Basin
Ptarmigan		Overall range, winter concentration area	Higher elevation areas throughout the County.
Sage grouse	State special concern	Overall range, production area	Northern Lower Blue Basin.

Source: Colorado Division of Wildlife, Wildlife Resource Information System, Threatened and Endangered List.

In addition to our terrestrial species, the County’s fish populations are another important aspect of our wildlife picture. Through the years, stocking of non-native species such as brook and brown trout have led to a depletion of naturally occurring cutthroat trout populations. Only a select handful of stream segments in the County continue to support cutthroat trout as a result. Also, the runoff from old mining tailings and highway sediments have resulted in depleted habitat conditions for fish. The Lower Blue River is recognized as a Gold Medal trout fishing stream, but its continued status is jeopardized by sediments, pollutants, low stream flows, and other factors.

2. *Water Resources*

The water quality of the County’s streams, lakes, reservoirs, and groundwater influences our environment. Water is used for domestic, agricultural, recreational, commercial, and industrial uses. It also has intrinsic aesthetic qualities that are highly valued by our residents and visitors. Whether water is used for drinking, snowmaking, mining operations, or simply to be observed and marveled at, it is an extremely valuable commodity in this semi-arid mountain environment. Issues such as ensuring the maintenance of clean drinking water or stream flows adequate to support fish are important considerations, particularly as growth in the region increases demands on our water resources.

Although the County as a whole enjoys high quality water, there are nevertheless a number of human-related activities that have degraded the County’s waters. Historically, mining activities negatively impacted water quality, introducing high concentrations of trace elements (e.g., manganese, cadmium, zinc) into area streams. Other impacts come from stormwater runoff from highways (e.g., sediments,

salts) and septic tank effluents. With that in mind, the State of Colorado classifies streams for certain uses (e.g., recreation) and establishes standards to protect those classified uses. With the exception of the stream segments listed below, the County streams are generally meeting state standards.

The state has identified five stream segments in the County (indicated in the table below) that have impaired water quality resulting in the loss of ability to support certain uses. Four of the stream segments are listed because of metal concentrations, and one is listed because of sediment issues. These are not the only streams with water quality problems in the County, but these are the ones that have been recognized of being of most significant impairment. For example, Ten Mile Creek above Copper Mountain has elevated levels of metal concentrations, but major improvements in water treatment technology leaving the Climax Mine tailings ponds has resulted in improved concentrations and as a result the stream segment is not listed.

Stream Segment Description	Status¹	Impairment²
Blue River, French Gulch to Swan River	Partially supporting	Cd, Zn
Snake River, Peru Creek to Dillon Res.	Partially supporting	CD, Cu, Pb, Mn, Zn
Peru Creek, source to Snake River	Not supporting	CD, Cu, Mn
French Gulch, Wellington-Oro to mouth	Not supporting	pH, Cd, Zn
Straight Creek, source to mouth	Partially supporting	Sediment

¹ Supports classified stream uses.

² Does not meet state standards for specified uses.

Source: Draft Regional 208 Water Quality Management Plan.

The state has established an “Antidegradation Rule”. This rule is tiered based on the level of water quality protection assigned (i.e., streams within the Eagles Nest and Ptarmigan Peak Wilderness Areas require the greatest protection). For the majority of surface waters in the County, the antidegradation rule requires that no single federally-permitted action (e.g., development activity) can result in discharge to surface water that consumes more than 15 percent of the remaining capacity of the water body to absorb pollutants without exceeding established pollutant levels. These pollution levels are established as maximum concentration levels for a number of different potential pollutants. The Antidegradation Rule is not enforced for activities that are not federally regulated. However, individual jurisdictions can elect to use similar types of rules on the local level.

Minimum stream flows apply to some water bodies in the County. These minimum flows help ensure adequate water flows for fish habitat. However, minimum flows are ensured only to the extent that the state holds senior water rights in a given stream. Recent drought conditions in the state have resulted in significant declines in stream flow levels compared to historic averages. Some of the most visible signs of these declines are the level of the Dillon Reservoir, which dropped to 40 feet below normal levels in 2002. Overall impacts of such declines on recreation, the environment, and economy can be tremendous.

3. Air Quality

The United States Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards for six pollutants known as “criteria” pollutants. They are carbon monoxide, ozone, nitrogen dioxide, sulfur dioxide, particulate matter, and lead. According to state air quality officials, many of these criteria pollutants are only of major concern in heavily urbanized areas, such as the Denver metro area. Pollutants such as carbon monoxide fall among this category, with automobile emissions being the largest source of the pollutant. The Air Pollution Control Division of the Colorado Department of Public Health and Environment monitors air quality at various sites throughout the state, including Summit County.

The only air pollutant of concern that has been identified for the County is suspended particulate matter. The EPA has two standards for particulate matter: PM₁₀ (particulate matter 10 microns or smaller in size) and PM_{2.5} (particulate matter 2.5 microns or smaller in size). The Air Pollution Control Division monitors PM₁₀ currently at one location in the County: the County Justice Center in Breckenridge. PM₁₀ was previously also monitored in Silverthorne, but that monitoring has been discontinued. The primary source of PM₁₀ in the County is dust from roads and construction sites. Another small seasonal contributor is wood smoke. The following table identifies monitored PM₁₀ levels in the County.

Table 3. Summit County Year 2000 PM₁₀ Monitoring Data

Location	Days Sampled	24 Max ug/m ³ *	Year 2000 expected exceedances	3 Year Average expected exceedances	Annual Average ug/m ³ year 2000	Annual Average ug/m ³ 3-Year Average
Breckenridge 501 N. Park Ave.	116	182	2.94	0.98	22	19.7
Silverthorne 151 4 th St	36	52	0.0	0.0	23	22.7
Silverthorne 430 Rainbow Drive	16	31	0.0	0.0	27	32.3
National standards		150			50	

* ug = micrograms

Source: Colorado 2000 Air Quality Data Report, Colorado Dept. of Public Health and Environment Air Pollution Control Division

Summary of Data: With one exception, the PM₁₀ measurements for the Towns of Silverthorne and Breckenridge fall well below national ambient standards for air quality. Breckenridge experienced one exceedance of the 24 hour standard in 2000. Because data is only collected every other day, the projected exceedances for the year were identified as 2.94 days. Because Breckenridge experienced no exceedances in 1998 or 1999, the 3-year average for exceedances is 0.98.

Historic Data: Data is available for the Breckenridge monitoring station back to 1992. The year 2000 is the only year that a 24-hour violation of national standards has been recorded. Since 1992, air quality data for the Breckenridge site has kept relatively constant when measured over an annual average, keeping slightly over or under 22 ug/m³ annual average. PM₁₀ levels at the Silverthorne site have shown a decrease since 1993 levels. See attached graphs for PM₁₀ measurements throughout the 1990s.

4. Noise

Construction and vehicular traffic are two of the primary sources of noise in the County. A growing concern in recent years has been the levels of noise experienced in residential areas near I-70 and other major highways in the County. These concerns are from increased traffic volumes and from “jake brakes” used by commercial vehicles. Some neighborhoods (e.g., Dillon Valley) have worked with the Colorado Department of Transportation to provide solutions, such as highwayside berms, to the noise problem. Localized noise problems can be attributed to construction and other activities (e.g., gravel crushing). As growth in the County continues, it is important to alleviate excessive noise so that the quality of life for residents is maintained.

5. Conservation

Part of the job of protecting our natural environment involves making choices that reduce or avoid impacts to the environment. One of the key ways this can be achieved is through the promotion of resource conservation efforts that reduce the County’s use of resources and ultimately reduce waste and emissions generated. Various options are available, such as recycling, use of solar and wind power, use of

alternative transportation modes (e.g., transit, biking, walking), and use of more efficient and less-polluting technologies (e.g., alternative fuels in fleet vehicles). The ways buildings are designed and equipped can also have significant impacts on energy consumption. A subsection on green design addresses this issue in the Design and Visual Resources element.

6. Noxious Weeds

Several species of non-native plants have become a threat to the economic and environmental value of land in Summit County. These plants are not indigenous to this country and have no natural predators or pathogens to keep their populations in check. They are rapidly displacing native vegetation, causing a loss of native ecosystem stability and diversity, while affecting recreational resources. Our native plants are the building blocks of the ecosystem. If we lose that vital component, we lose all other life that evolved with that resource. Noxious weeds are the number one threat to our native plants.

Goals, Policies/Actions

Environmentally Sensitive Areas

Goal A. Protect and preserve environmentally sensitive areas.

- Policy/Action 1. Environmentally sensitive areas should be identified, mapped, and protected to the greatest extent possible.
- Policy/Action 2. Consider the location of environmentally sensitive areas when developing basin master plan land use designations and zoning classifications. Focus low intensity land uses and open space designations in location with environmentally sensitive areas.
- Policy/Action 3. Development in environmentally sensitive areas should be avoided to the maximum extent possible. Minimize and mitigate impacts where site conditions preclude the ability to avoid all environmentally sensitive areas.
- 3.1. While respecting underlying zoning and density and according to established County design standards and regulations, require that new development employ design and construction techniques that, to the maximum extent practicable, utilize sensitive site design of lots and building envelopes to minimize disturbances to environmentally sensitive areas and provide infrastructure most efficiently.
- Policy/Action 4. In addition to existing land use regulations, utilize innovative land use techniques such as TDRs, density bonuses, and incentives for voluntary practices to protect environmentally sensitive areas.
- Policy/Action 5. Amend the Land Use and Development Code to include incentives that allow for a relaxation of requirements (e.g., property setbacks, height variances) when impacts to environmentally sensitive areas are avoided and minimized.
- Policy/Action 6. The County should work cooperatively with homeowner groups and the State and Federal Forest Service to promote healthy and naturally diverse forests while reducing wildfire hazards.

Wetlands

Goal B. Provide for the long-term protection and 'no net loss' of wetland functions and values.

Policy/Action 1. Continue to support Resolution 99-46: Conceptual Strategy for the Enhanced Management, Protection and Preservation of Wetlands Within Summit County.

Policy/Action 2. Where wetlands impacts cannot be avoided, require that impacts are minimized and appropriately mitigated.

2.1 Where wetlands impacts are proposed to be mitigated, require greater or equal replacement of wetland functions and values through wetlands restoration or creation.

Goal C. Amend the Land Use and Development Code, where necessary, to provide for opportunities to enhance wetlands management in the County in a manner consistent with the recommendations set forth in the phased Environmental Protection Agency 104(b)(3) wetlands grant.

Policy/Action 1. Amend the definition of wetlands in the Code to allow jurisdiction over isolated wetlands.

Policy/Action 2. Amend the Code to include incentives that allow for a relaxation of requirements when wetland impacts are avoided and minimized including: relaxation of side, front, and rear property boundary setbacks; height variances; encouragement of communal septic systems and driveway entrances; relaxation of grading standards and soil disturbance regulations.

Policy/Action 3. Amend the Code to require appropriate wetland setbacks from wetlands for all single family and duplex development on existing lots with variance provisions. This would apply to all wetlands in the County and restrict maximum impacts.

Policy/Action 4. Amend the Code to require additional setback widths for those limited wetlands that are clearly identified as biologically significant or of high importance, based on empirical evidence.

Policy/Action 5. Amend the Code to streamline and help facilitate the wetland permitting process.

Policy/Action 6. Amend the Code to establish appropriate requirements for mitigation of all wetlands impacts (e.g., replacement ratios, mitigation banks).

Policy/Action 7. Amend the Code to provide guidance for the use of wetlands mitigation banks.

Goal D. Continue to work with appropriate agencies and organizations to protect and preserve wetlands.

Policy/Action 1. To the extent practicable, the County should work with appropriate agencies, including the County's open space acquisition program, to purchase wetlands identified as 'high importance.'

Policy/Action 2. The County should improve the level of communication and coordination with the USFS. This would enable better land management to protect identified wetlands of high importance and to improve road designs and maintenance standards. E.g., prevent erosion from roads and that have caused indirect impacts, like sedimentation to wetland habitats.

Policy/Action 3. Work with private or public entities to facilitate the development, establishment, and management of wetland mitigation banks. If possible wetland mitigation banks should focus on the creation, restoration, and preservation of high quality slope and riverine wetland types.

Policy/Action 4. Continue to refine the quality and accuracy of wetland maps and accompanying data generated.

Goal E. Further educate County residents, visitors, and appropriate agencies about wetland functions and preservation strategies to attain no net loss.

Policy/Action 1. Continue to create brochures and web-based access to wetland information.

Policy/Action 2. Work with the Department of Natural Resources, Division of Wildlife, Wetlands Program and Initiative Partners to enhance overall wetland protection efforts.

Policy/Action 3. Continue to make efforts to sensitize and educate landowners about wetland regulations and protection strategies.

Goal F. Incorporate wetland protection and conservation strategies for specific wetland areas into basin and subbasin plans.

Policy/Action 1. Work with the basin planning commissions to integrate wetland management strategies for specific wetland areas into respective master plans.

Policy/Action 2. Work with appropriate agencies to establish mitigation banks in all four basins.

Wildlife

Goal G. Identify and protect important wildlife and habitat from adverse impacts of growth and development.

Policy/Action 1. The County should work towards identification and classification of important habitat for a broad range of animals (including fish, birds and terrestrial animals), using the best available scientific information.

Policy/Action 2. Work with the Division of Wildlife to develop a monitoring program that will identify the condition of wildlife habitats, species and movement corridors, and evaluate changes to these conditions over time.

Policy/Action 3. While respecting existing zoning, basin master plans should consider the following:

3.1 Habitat for wildlife is best maintained by protecting large blocks of contiguous habitat.

- 3.2 Based on scientific evidence, linkages between large blocks of habitat need to be identified and protected.
- 3.3 Summit County's importance to wildlife within the state and southern Rockies should be recognized.
- 3.4 An incentive-based approach should be used, whenever possible, to accomplish habitat protection as described above.

Policy/Action 4. Minimize impacts to important habitat areas. Special emphasis could be given to preserving wildlife species that are unique to the county, region, and state. Where possible, development in these habitat areas should be avoided.

Policy/Action 5. When the Division of Wildlife or the U.S. Forest Service identify wildlife issues or suggest wildlife mitigation measures related to development proposals, such suggestions should be considered, provided they are supported with sound scientific information based on local conditions.

Policy/Action 6. Support efforts to expand the body of scientifically sound knowledge on wildlife in Summit County, with the goal of acquiring the best information available to have a better understanding of wildlife populations and habitats.

Policy/Action 7. Work with the Colorado Division of Wildlife to develop wildlife management prescriptions, intended to protect wildlife and habitat, that will be applied to new development proposals.

Water Resources

Goal H. Protect and enhance the quality and quantity of water resources in the County.

Policy/Action 1. Reduce water consumption and manage water resources in a more sustainable manner.

Policy/Action 2. Development and other land use activities (e.g., highway operations and industrial activities) should avoid water quality impacts from erosion and sedimentation and should not result in degradation of water quality as measured by Colorado's Antidegradation Policy.

- 2.1 A water quality monitoring program should be developed for the County and monitoring information should be evaluated for indications of declining water quality.

- 2.2 When monitoring determines that water quality in the County's creeks is declining, efforts should be made to identify the source of the declining water quality and eliminate or appropriately mitigate impacts.

- 2.3 Efforts to protect water quality shall be required through the development review process.

Policy/Action 3. Protect water quality in the Dillon Reservoir by avoiding exceedance of established total phosphorous standards.

- Policy/Action 4. Work with water controlling entities (e.g., Denver Water Board) and other appropriate parties to maximize lake levels in Lake Dillon, while also exploring the feasibility of supplementing in-stream flows for environmental and recreational purposes.
- Policy/Action 5. Allow low impact dispersed recreation uses (e.g., hiking trails, and benches) within riparian corridors to facilitate public access, when consistent with protection of water resources.
- Policy/Action 6. Continue to actively participate in the 208 regional water quality planning process.
- Policy/Action 7. The County, in cooperation with the Northwest Council of Governments, should actively work with the Denver Water Board, State Engineer, Colorado Water Conservation Board, Bureau of Reclamation, State Department of Health, and others to incorporate water quality considerations into the operational regimes of reservoirs and streams within the County.
- Policy/Action 8. Ensure that new development does not disturb surface or subsurface hydrologic flows to the extent that recharge of nearby wetlands and streams are adversely affected.
- Policy/Action 9. Encourage utility providers to provide central sewer and water service to all residential, commercial, and industrial development in urbanized areas of the County, provided consideration is given to impacts of lost discharge to groundwater, wetlands, and streams.
- Policy/Action 10. Coordinate with the Northwest Colorado Council of Governments, towns, major water users and providers to develop a countywide water conservation program, including the recycling/reuse of water, the use of native and drought tolerant plant materials in landscaping (xeriscape), water saving plumbing devices, and the requirement that new developments adhere to the water conservation program once it is established.
- Policy/Action 11. Work with the Colorado Department of Transportation (CDOT) to address non-point source pollution from highway activities and CDOT construction projects, and develop mitigation measures to protect water quality.
- Policy/Action 12. Encourage the clean up of abandoned mines and mine tailings where water quality problems have been identified.
- Policy/Action 13. Explore ways to fund the cleanup of mine tailings where development is not proposed.
- Policy/Action 14. Support projects that restore stream channels and natural conditions, provide erosion control, and improve fish and wildlife habitat.

Air Quality

Goal I. Safeguard and enhance air quality in the County.

- Policy/Action 1. Develop a public air education program designed to encourage: the proper burning of wood; the conversion of solid fuel burning stoves and fireplaces; limitations on the idling of diesel engines; and the use of mass transportation.

- Policy/Action 2. Encourage mass transit providers to utilize maintenance practices that minimize vehicle emissions.
- Policy/Action 3. Incorporate dust mitigation into new development and construction activities as a measure to protect air quality.
- Policy/Action 4. Work with CDOT and other appropriate entities to minimize impacts of construction and road sanding on air and water quality.
- Policy/Action 5. Continue to monitor air quality in the County and support the operation of monitoring in at least two locations in the County. If air quality begins to degrade, develop implementation strategies to improve air quality.
- Policy/Action 6. Incorporate dust mitigation into new development and construction activities as a measure to protect air quality.
- Policy/Action 7. Promote carpooling and the use of alternatives to the automobile to protect air quality.

Environmental Education

Goal J. Work cooperatively with appropriate agencies to provide interpretive environmental opportunities and other educational programs.

- Policy/Action 1. Encourage the establishment of low-impact hiking and interpretive facilities in appropriate locations, preferably in more accessible areas, to educate area residents and visitors on important environmental functions and processes occurring in the County. These activities and facilities should only be allowed after review by appropriate agencies with expertise in environmental protection (e.g., Colorado Division of Wildlife, U.S. Army Corps of Engineers).
- Policy/Action 2. Provide opportunities for environmental interpretation of wetlands, where appropriately designed.
- Policy/Action 3. Make informational brochures on “living with wildlife” available to residents and visitors within the County as a means to educate residents and guests of ways that they can minimize the impacts of their activities on area wildlife.
- Policy/Action 4. Provide information about options such as conservation easements to further the protection of environmentally sensitive areas as open space.

Noise and Light

Goal K. Mitigate the adverse impacts of noise and light.

- Policy/Action 1. Encourage site design that uses landscaping and natural buffers to absorb excess noise.
- Policy/Action 2. Coordinate with CDOT to provide for effective screening and sound barriers between major highways and adjacent residential areas, using materials and design that blend with the natural landscape.

Policy/Action 3. Ensure that hours for development work are acceptable to the community. Development approvals should identify appropriate construction hours, with consideration given to providing flexibility in some cases to allow longer hours as a means of expediting completion of the project and limiting duration of noise.

Policy/Action 4. Outdoor lighting should be subdued and have minimal off-site impacts.

Conservation

Goal L. Promote alternatives that reduce resource consumption in Summit County.

Policy/Action 1. Summit County should be a leader in the promotion of energy and resource conservation, by incorporating the use of resource-saving techniques in as many aspects of its daily governmental operations as possible, including the following examples:

- 1.1 Use of fuel-efficient fleet vehicles.
- 1.2 Use of compressed natural gas or other alternatives to diesel fuel in fleet vehicles or Summit Stage buses, when practicable.
- 1.3 Use of energy-conserving and solar design in new buildings constructed for County purposes and the retrofitting of existing County buildings with energy-conserving and solar design.
- 1.4 Purchase of wind power from electricity companies.
- 1.5 Support of enhanced public transit options.
- 1.6 The continued promotion and development of pedestrian and bicycle paths as an alternative to motorized travel.
- 1.7 Waste reduction and recycling programs.
- 1.8 Use of biodegradable and recycled (green) products to the greatest extent possible.

Policy/Action 2. Educate County residents on ways to conserve energy.

Policy/Action 3. Explore incentives for homeowners and developers that reduce residential energy consumption.

Policy/Action 4. Develop an overall comprehensive resource conservation program for the County.

Noxious Weeds

Goal M. Support the County's weed control program.

Policy/Action 1. Support, sustain, and promote efforts to eradicate noxious weeds from Summit County.

Policy/Action 2. Work with developers and homeowners to ensure that revegetation and landscaping is weed-free.

Sustainability Measures

Water Resources

Table 4. Impaired Segments in the Blue River Watershed	
Impaired Stream Segment Year 2002	Impaired Stream Segments Year 2008
Blue River, French Gulch to Swan River	
Snake River, Peru Creek to Dillon Reservoir	
Peru Creek, source to Snake River	
French Gulch, Wellington-Oro to mouth	
Straight Creek, source to mouth	

Source: Draft Regional 208 Water Quality Management Plan, 2002.

Air Quality

Table 5. Summit County PM₁₀ Monitoring Data - Breckenridge¹						
Year	Days Sampled	24 Max ug/m³*	Year 2000 expected exceedances	3 Year Average expected exceedances	Annual Average ug/m³ year 2000	Annual Average ug/m³ 3-Year Average
2000	116	182	2.94	0.98	22	19.7
2001						
2002						
2003						
Etc.						
National standards		150			50	

* ug = micrograms

¹ Data collected at the Summit County Justice Center, 501 N. Park Ave; data for Silverthorne area has been discontinued.

Source: Colorado 2000 Air Quality Data Report, Colorado Department of Public Health and Environment Air Pollution Control Division.

Implementation Strategies

Many of the policies and actions identified in this element propose some future work, such as an amendment to the Land Use and Development Code, in order to see their successful implementation. The table below identifies specific strategies recommended to fully implement the Environment Element. Priorities are identified to give an indication of the current relative importance of a particular implementation strategy. These priorities are provided as guidelines only.

Goal, Policy/Action	Project/Description	Timeframe	Priority
A.1, D.4, G.1	As new information and scientific documentation are provided, the County should accordingly update its maps of environmentally sensitive areas, including wetlands and critical fish and wildlife habitat areas. Where possible, these areas should be classified as to their sensitivity and uniqueness.	Ongoing	Medium
A.6	The County should work with the Colorado State Forest Service and (where applicable) the U.S. Forest Service to communicate with homeowners about wildfire hazards and way to reduce those hazards. Part of this process may include obtaining funding and resources to do selective thinning in urban/forest land interface areas.	Ongoing	Medium
C.1, C.2, C.3	Amend the Code to provide for opportunities to enhance wetlands management in the County. Wetland recommendations derived through the phased EPA 104 (b)(3) wetlands grant call for: a change to the existing definition of wetlands, the creation of incentive based regulations, a 25-foot wetland setback requirement from wetlands for all single family and duplex development and additional setbacks for those limited wetlands of 'high quality.' These amendments should be initiated and developed by the Planning Department.	1-2 years	High
C.6, D.3	Work with private and public entities to facilitate the development, establishment, and management of wetland mitigation banks. The Planning Department should disseminate information to appropriate entities on the progress and status of wetlands management in the County. The Planning Department should then coordinate with the USACE and Open Space and Trails Department to help facilitate and coordinate efforts between entities to establish mitigation banks.	1-2 years	High
G.2, G.6	The County should work cooperatively with the Colorado Division of Wildlife to establish a wildlife monitoring program. The monitoring program should identify the condition of wildlife habitats in the County and the areas of known movement corridors. Changes in conditions should be tracked and potential impacts to wildlife should be evaluated. This program should be undertaken with the goal of utilizing the best available scientific information, and to expand that scientific information base.	1-2 Years	Medium
G.7	The Colorado Division of Wildlife should work in a cooperative effort with the Summit County Board of Commissioners to develop wildlife management prescriptions that can be used in new development proposals. The management prescriptions are intended to be standard requirements (e.g., bear-resistant	6 months	Medium

Table 7. Environment Element Implementation Strategies

Goal, Policy/Action	Project/Description	Timeframe	Priority
	trash containers) that can be made as conditions of new development applications. Once a list of management prescriptions is mutually agreed on by the Division of Wildlife and the Board of County Commissioners, the prescriptions should be implemented in an appropriate manner so that they can be utilized in future development projects.		
H.2.1, H.2.2, H.3, H.7	The County should work with the Northwest Council of Governments Water Quality and Quantity Committee (and other appropriate entities) to determine feasible water quality monitoring data that could be evaluated on an ongoing basis. Part of the program should be focused on identifying the source of any declining water quality.	1-2 Years	Medium
H.4, H.8, H.10	The County should bring together different water controlling entities, such as Denver Water Board, the towns, local water districts, and ski areas to identify opportunities to supplement stream flows and maximize water levels in Lake Dillon. The different players would also work towards a cooperative agreement intended to maximize lake levels and stream flows. In addition, the different parties could work to develop and implement a countywide water conservation program.	1-2 Years	High
H.11, I.4	The County should arrange a meeting with the Colorado Department of Transportation to initiate discussions on ways to minimize or eliminate non-point source pollution from highway activities and construction projects. Particular attention should be given to road sanding policies and its impacts on both water and air quality.	6 months	Medium
H.12	The County should work with appropriate parties (e.g., Colorado Division of Minerals and Geology) to identify funding for reclamation of abandoned mines and mine tailings so that contaminant runoff into area streams and groundwater is eliminated or mitigated.	Ongoing	Low
I.1, I.5	The County should bring together the towns and other appropriate agencies (e.g., Colorado Department of Health Air Pollution Control Division) to develop and implement an air quality public education program. The program would inform the public about choices they can make to reduce air quality emissions in Summit County. The County should also lobby with the Air Pollution Control Division to maintain at least two air quality monitoring stations in Summit County.	1 year	Low
I.2	The County, Summit Stage, and the towns should coordinate to share ideas on the most effective methods to reduce transit vehicle emissions. These methods should be implemented, based on the recommendations of the task force.	6 months-1 year	Medium
J.1-J.4	The County should involve other parties (e.g., towns, Division of Wildlife, Army Corps of Engineers) in an effort to promote educational and interpretive facilities related to environmental protection. These efforts should include information for residential homes on things homeowners can do to benefit wildlife and provide information to landowners on options that protect environmentally sensitive areas.	Ongoing	Medium
K.2	Work with Colorado Department of Transportation to reduce noise impacts generated on area highways through the construction of sound barriers (e.g., berms, sound walls) in appropriate locations (e.g.,	Ongoing	Medium

Table 7. Environment Element Implementation Strategies

Goal, Policy/Action	Project/Description	Timeframe	Priority
	Dillon Valley). Work with CDOT to ensure that these barriers are designed so that they blend with landscape and mountain character.		
L.1-L.4	The County should, in coordination with other appropriate agencies such as the towns and utility providers, establish a comprehensive program directed at resource conservation. One of the main focuses of the program should be ways that the County can serve as a leader in conservation in its practices (i.e., the types of fuels used in its fleets, solar and energy-efficient design of its buildings, etc.). Another focus will be public information and possible incentives to encourage homeowners to also adopt resource conservation practices.	1-2 years	Medium

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