



BOULDER COUNTY PARKS AND OPEN SPACE

WATER POLICY

APPROVED BY THE BOARD OF COUNTY COMMISSIONERS
JUNE 19, 2012

**Boulder County Parks and Open Space
Water Policy**

June 2012

The purpose of the *Boulder County Parks and Open Space Water Policy* is to provide guidance to Parks and Open Space staff with respect to water owned and managed, principally for agricultural use, by Boulder County Parks and Open Space. The policy is somewhat unique in that water does not exist in, static form, on the majority of our properties and there are strict state laws governing how staff can manage and use any water to which BCPOS has a right. Public comments on this draft management plan were accepted from March 8 – April 11, 2012. A public meeting was held at the Parks & Open Space building (5201 St. Vrain Road, Longmont) on March 8 from 5:30 – 7:30 p.m. Following the public comment period, all public comments were analyzed and any necessary revisions to the draft plan were made. The draft plan was presented to the Parks & Open Space Advisory Committee on April 26, 2012, beginning at 6:30 p.m., and the final plan will be presented at a Public Hearing before the Board of County Commissioners for adoption on June 19, 2012, beginning at 2:00 p.m. For questions about this document or to provide comments, write Jesse Rounds, Resource Planner, Boulder County Parks & Open Space, 5201 St. Vrain Road, Longmont, CO 80503; call 303-678-6271; or e-mail: jrounds@bouldercouny.org.

Parks & Open Space Department • Boulder County

ADOPTED:

Chair, Board of County Commissioners

Date

Project Team

Ron Stewart, Director Parks and Open Space
Rich Koopmann , Resource Planning Manager
Therese Glowacki, Resource Management Manager
David Bell, Agricultural Resources Manager
Tina Nielsen, Special Projects Manager
Karen Martinez, Water Resource Specialist
Conrad Lattes, Assistant County Attorney
Janis Whisman, Conservation Easement Program Manager
Mel Stonebraker, Land Officer
Adrian Card, Extension Agent, Agriculture/Natural Resources, Colorado State University
Extension, Boulder County
Rob Alexander, Senior Agricultural Resource Specialist
David Hirt, Plant Ecology Specialist
Dave Hoerath, Wildlife Biologist
Chad Julian, Forestry and Fire Supervisor
Bob Buxton, Grounds Supervisor
Brent Wheeler, Project Manager
Jesse Rounds, Resource Planner

Original Document Drafted By:
Sasha Charney, Water Resource Specialist (Lead Author)

Other Contributors:
Summer Adamietz
Larissa Read
Luke Stromquist
Vanessa Lane-Miller
Kevin Lyles
Jan Burns
Glenda Rowe

Executive Summary

The thirsty earth soaks up the rain,
And drinks, and gapes for drink again;
The plants suck in the earth, and are
With constant drinking fresh and fair.

–Abraham Cowley (1618–1667), Anacreon

Resource Policies

In 2006 Boulder County Parks and Open Space adopted a new departmental planning approach, creating policies guiding the management of key resources to complement and streamline site-specific management plans. The policies would help create more robust action plans for Parks and Open Space.

Water Portfolio

Understanding the intimate connection between land and water, Boulder County Parks and Open Space (BCPOS) has been vigilant in its acquisition not only of land, but also the water necessary to keep that land and associated ecosystems healthy and productive. The County's water portfolio can be generally valued at over \$70 million and includes ownership in 61 incorporated ditches, 31 unincorporated ditches, and at least 57 directly held water rights. Additionally, the County owns nineteen reservoirs, multiple former gravel pits, and other important water infrastructure. Given the importance and size of this portfolio, it is important for the Department to develop an effective policy to guide its management.

Development

Sasha Charney, Water Resource Specialist for Boulder County Parks and Open Space at the time, took the lead in developing the draft water policy. Team members from all divisions within Parks and Open Space, including the County Attorney and Extension offices, met four times to create the vision, goals, objectives and standards that make up the policy.

In 2011, the water policy was reviewed by the Cropland Policy Advisory Group as part of the development of the BCPOS Cropland Policy. The Advisory Group recommended a number of additional policies within the Water Policy. These policies are cross-referenced in the Cropland Policy and will be approved as part of both the Water Policy and Cropland Policy.

Content

The purpose of this Water Policy is to guide and prioritize water-related activities at BCPOS. It is intended to provide a framework within which staff can prioritize their work. It should be sufficiently comprehensive and ambitious such that if these activities were undertaken,

BCPOS would successfully manage and maintain its water resources in a sound and useful condition.

This Water Policy applies to properties that the County owns in fee, including those where the County has partnered with municipalities and owns a partial fee interest and also holds conservation easements on the interests held by those municipalities. Conversely, except for Goal 6 (Information Management), this Water Policy does not apply to water resources the County owns in association with its conservation easement holdings (i.e., where the County holds conservation easements over properties that are owned by private landowners and may own partial interests in water but has no fee interest in such properties). For the County's water rights associated with those conservation easement properties, the County has entered into legal agreements requiring the private landowners of those conservation easement properties to employ those water resources for the benefit of those properties. The Parks and Open Space Real Estate staff developed a Conservation Easement Policy in 2010 that addresses the county's practices with regard to water on conservation easements.

The core of the Water Policy is found in the Vision Statement, the Purpose and Need, and in the Goals, Objectives and Standards. The vision and goals are given below.

Vision

Boulder County Parks and Open Space (BCPOS) responsibly and innovatively manages the County's water resources for diverse purposes. These resources are managed in an effective, sustainable, and efficient manner to support agriculture, provide quality visitor use opportunities where appropriate, maintain viable riparian corridors, and for other environmental benefits. Stakeholders, government agencies, and BCPOS staff work together as stewards to ensure the protection and optimum utilization of these resources.

Goals

1. Agriculture

Maximize the beneficial application and use of water by analyzing available water resources, agricultural properties, and diversity of crops. As a leader in the water community, the County supports the Colorado Prior Appropriations Doctrine and works with others to preserve water for agricultural production.

2. Ditch Operations

Balance protection of water delivery to shareholders for application to beneficial uses along ditches with some preservation of the ecological and historical benefits, as these ditch systems have been part of the Boulder County landscape for over 100 years. Staff works cooperatively with ditch organizations throughout the County to support partnerships and promote stability and expertise in a changing world.

3. Riparian Habitat

Staff works to protect and restore natural riparian corridors on Boulder County properties. At a county level, BCPOS works with other entities on high-value, multi-jurisdictional projects to improve natural riparian habitat.

4. Reservoirs and Ponds

Parks and Open Space manages its ponds and reservoirs to meet a spectrum of needs ranging from agricultural production to visitor experience and wildlife habitat. These facilities are safe and functional, with appropriate infrastructure maintained on a regular basis.

5. Visitor Experience

Parks and Open Space designates and manages sites and facilities to provide opportunities for visitors to experience water, protects associated water rights, and provides high-quality passive recreational experiences.

6. Information Management

Staff enhances resource management decisions using sound information. This information is processed using models and professional judgment to determine how best to manage water, including when to acquire or sell resources and how to optimize agricultural production, protect environmental values, and support recreational opportunities.

7. Monitoring and Maintenance

Parks and Open Space monitors and maintains water rights, infrastructure, and environmental improvements using information gathered and processed as part of Goal 6. Staff creates procedures and mechanisms to regularly monitor necessary information about the County's water resources.

Document Lifecycle

The Water Policy will follow a slightly different trajectory from other resource policies. The Water Policy will be refined and developed as data are gathered and represented through a database of water resources. The water policy, like other policies, will be periodically reviewed to ensure it represents the overarching goals and vision of BCPOS. Parks and Open Space staff are working to develop many tools that will be required to realize the goals set forth in this policy. However, implementation will not be delayed until all tools and practices are in place. Instead this document should be viewed as recognition of the tools and tasks needed to realize the vision for water within Parks and Open Space.

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Introduction

A. Background

Understanding the intimate connection between land and water, Boulder County Parks and Open Space (BCPOS) has been vigilant in its acquisition not only of land, but also the water necessary to keep that land and associated ecosystems healthy and productive. The City of Boulder Mountain Parks and Open Space and BCPOS are the only open space agencies in Colorado with staff dedicated to management of water rights. Although precise calculations are difficult to develop, some metrics give a feeling for the water portfolio amassed by the County.

The vast majority of the water held by BCPOS is dedicated to agricultural production. The County has ownership in 61 incorporated ditches, 31 unincorporated ditches, and at least 57 directly held water rights. The County also has ownership of numerous wells and stock ponds and lakes. Parks and Open Space planning and agricultural staff hold positions on the boards of many ditch companies.

Other water owned and managed by Boulder County fills former gravel pits such as Pella Ponds and Walden Ponds, providing scenic backdrops for walkers and joggers, habitat for raptors and migrating waterfowl, and fishing opportunities. Nineteen reservoirs are owned and managed for agricultural production, with some also used for fishing, such as Stearns Lake at Rock Creek Farm.

Recent calculations show that the County owns 163 miles of land along stream corridors, 85 miles in the mountains and approximately 78 miles on the plains. The County works with partners such as the Army Corps of Engineers and the Urban Drainage and Flood Control District to restore degraded stream corridors, with work on Boulder and Rock Creeks, among others. The County is also actively working with partners to find creative means to improve stream flows. Working with the St. Vrain Corridor Committee, the County is helping to find proactive solutions to enhance winter flows from Button Rock Reservoir through Longmont.

As with other water users around the state, the County is also involved in augmentation plans, primarily associated with gravel ponds. These plans range from early plans done with the St. Vrain and Left Hand Water Conservancy District prior to the 1980 laws requiring the replacement of out-of-priority depletions, to a sophisticated plan for a wetland-pond complex at Kenosha.

Finally, the County is involved in water quality issues, especially related to some of its mountain properties. Working with the EPA, the Colorado Department of Public Health

and the Environment, and the Colorado Division of Mining, Reclamation and Safety, BCPOS is actively working to stop acid mine drainage from the Argo and Evening Star mines and monitors underground water drainage at the Cardinal Mill site. The County also has a seat on the Left Hand Watershed Oversight Group, helping advocate for cleanup throughout the watershed.

Clearly, the County is deeply involved in water management and use on Colorado's Front Range and understands the importance of actively and wisely managing this resource for its long and productive use.

B. Parks and Open Space Policy Development

The Water Policy is one of a series of policies Boulder County Parks and Open Space will use to guide future planning and action on Parks and Open Space land and in relation to our neighbors and community.

The Parks and Open Space resource policies are intended to link the goals and vision of the Comprehensive Plan with more strategic plans like Management Plans but also with work planning on a much shorter time scale. The resource policies are intended to create guidance for the vision developed in the Comprehensive Plan. Other policies include:

- Forest Policy (2010)
- Conservation Easement Policy (2010)
- Cropland Policy (2011)
- Grasslands Policy (planned 2012)
- Cultural Resources Policy (planned 2012)
- Visitor Use Policy (planned 2014)
- Wildlife Policy (planned 2013)

C. Parks and Open Space Mission Statement

Reflecting the multi-faceted purpose of Parks and Open Space, the Department's mission statement is as follows:

“To conserve natural, cultural and agricultural resources and provide public uses that reflect sound resource management and community values.”

D. Water Policy Scope

The purpose of this Water Policy is to guide and prioritize water-related activities at BCPOS. It is intended to provide a framework within which staff can prioritize their work. It should be sufficiently comprehensive and ambitious such that if these activities were undertaken, BCPOS would successfully manage and maintain its water resources in a sound and useful condition.

This Water Policy applies to properties that the County owns in fee, including those where the County has partnered with municipalities and owns a partial fee interest and also holds conservation easements on the interests held by those municipalities. Conversely, except for Goal 6 (Information Management), this Water Policy does not apply to water resources the County owns in association with its conservation easement holdings (i.e., where the County holds conservation easements over properties that are owned by private landowners and may own partial interests in water but has no fee interest in such properties). For the County's water rights associated with those conservation easement properties, the County has entered into legal agreements requiring the private landowners of those conservation easement properties to employ those water resources for the benefit of those properties. The County intends to address its policies for use of its water on such private conservation easement properties in a separate Conservation Easement Program Policy to be written at a later date.

As articulated in the Purpose and Need section, the Water Policy provides a cohesive direction for the protection, use, and development of Boulder County's water resources. It guides BCPOS to maximize the efficiency and benefit of our water resources for agricultural production, environmental enhancements, and recreational opportunities.

E. Water Policy Development

Sasha Charney, Water Resource Specialist, was the primary author and coordinator for the Water Policy. Tina Nielsen, Special Projects Coordinator, provided facilitation services for the team meetings.

Policy development began in 2007 with interviews of 14 staff members at Parks and Open Space. The interview included questions about expectations and desires from the policy and the process itself. The questionnaire is included as Appendix D.

From the information gathered in the interviews, a kickoff meeting was held on October 10, 2007. A large team of staff from all divisions within the department attended the kickoff meeting. A general overview of water issues in Colorado, the South Platte Basin, and Boulder County was presented to the team. After the presentation, staff worked on brainstorming long-term outcomes for the policy and developing a vision statement.

Three more meetings were held from fall 2007 through spring 2008. In these meetings a smaller group of staff developed the policy's vision, goals, objectives and standards. Before the last meeting, staff from various divisions was consulted to ensure the policy was accurate and comprehensive.

The draft document was compiled in summer 2008 and presented to management staff on August 11, 2008. Given the close association of water with croplands the Parks and Open

Space staff presented the draft Water Policy to the Cropland Policy Advisory Group during the development of the Cropland Policy in 2011. This Commissioner-appointed group incorporated several suggestions to strengthen the policies addressing agricultural issues.

A critical implementation item was the development of a comprehensive water database that would track with an Open Space land parcel database. Unfortunately, the team encountered a number of obstacles during development and the project was restarted recently and progress is being made on an accelerated basis. When the new database is complete, its function will enable POS to fully realize the goals and direction of this policy.

F. Document Overview

This Water Policy is organized in an intuitive and logical format. The introduction contains contextual and background information. The core of the policy is found in the Vision Statement, the Purpose and Need, and in the Goals, Objectives, and Standards.

The appendices will assist the reader in understanding the document with a glossary, an outline showing how the Water Policy relates to the County Comprehensive Plan, reports about the County's water ownership from the a water database, and the questions posed in the initial interviews.

G. Document Lifecycle

Resource policies will be updated every ten years or sooner as needed.

Vision

Boulder County Parks and Open Space (BCPOS) responsibly and innovatively manages the County's water resources for diverse purposes. These resources are managed in an effective, sustainable, and efficient manner to support agriculture, provide quality visitor use opportunities, maintain viable riparian corridors, and for other environmental benefits. Stakeholders, government agencies, and BCPOS staff work together as stewards to ensure the protection and optimum utilization of these resources.

Purpose & Need

The Water Policy provides a cohesive direction for the protection, use, and development of Boulder County's water resources. It guides BCPOS to maximize the efficiency and benefit of our water resources for agricultural production, environmental enhancements, and recreational opportunities.

1. Boulder County has acquired numerous water rights through interests in incorporated and unincorporated ditch companies and directly held water over the past 30 years. Information about these rights has been stored in the BCPOS inventory (known as PRD8); however, the database was not designed to allow robust inquiries or manipulation of those data, and some information could not be adequately captured in the database. Now that a new database is in development, new information will become available about the extent and characteristics of the BCPOS water portfolio. This is a timely moment to review the role of water in the BCPOS mission and establish our primary goals and objectives.
2. Water is a resource vital to the functioning of human activity. The water portfolio acquired by the County is largely decreed for and committed to agricultural activities. Strategic planning is needed to determine how to optimize our water to meet agricultural demands, and, if appropriate and to the extent the decree allows it, for environmental needs, all in the face of growing pressure to transfer agricultural water rights to meet growing municipal, industrial, and non-consumptive needs on the Front Range.
3. Water is also a key element of all natural ecosystems. BCPOS has participated in various water-related projects to restore or improve ecosystems. It is important for BCPOS to analyze the water-related ecosystem needs across its portfolio and prioritize ways to understand and meet those needs.
4. Visitor experiences with and around water are highly valued activities for many, and BCPOS has acquired multiple resources appropriate for visitor use. It is important to identify and manage these sites to support and promote visitor use, particularly in cases where they are complementary with other water uses.

5. Some shifting in our water portfolio will likely be necessary in the coming years. Any attempt to change the use of water usually involves water court approval, which is a lengthy and costly undertaking and often results in resistance by interested parties. Before the County seeks either to file for new water rights or pursues a change of existing rights, it should consider all factors carefully to ensure that the proposed changes meet BCPOS goals.

Goals, Objectives & Standards

1. Agriculture

Maximize the beneficial application and use of water by analyzing available water resources, agricultural properties, and diversity of crops. As a leader in the water community, the County works with others to preserve water for agricultural production.

Objectives & Standards

- a. Optimize the allocation of water to efficient and productive agricultural uses.
 - i. Ensure, to the extent possible, that all properties have adequate base water supply for agricultural operations.
 - ii. Allocate water to agricultural uses to keep pace with emerging agricultural demands and markets.
 - iii. Develop criteria to determine if and how water may be legally moved among properties.
 - iv. Apply criteria through a variety of models to determine where water can be most effectively used for agricultural production.
 - v. Determine feasibility and develop methods to deliver water for production on small and market farms.
 - vi. Use supplemental water shares, primarily Colorado Big Thompson water, where it can provide the most benefit and when possible, purchase all water rights, including supplemental water, in new acquisitions.
- b. Develop criteria to determine what fields would benefit from increased efficiency of water application.
 - i. Apply these criteria to guide decisions on where and what efficient irrigation methods to install.
 - ii. Develop funding sources to add more efficient infrastructure and create a maintenance and replacement schedule to care for these new installations.
- c. Keep accurate and timely records of water resources Boulder County owns and how they are used for agricultural production and stock watering.
 - i. Keep accurate records of what water was purchased with every property, including both surface and ground water.
 - ii. Track water allocation to lessees and their end use of water as feasible.
 - iii. Track water-related infrastructure in a GIS database.

- d. Protect irrigation rights held directly and through ditch companies.
 - i. Document water use through the installation of measuring devices, collection of records from ditch companies, information on usage from tenants, and other pertinent sources.
 - ii. Maintain all easements, including prescriptive, associated with ditches and other water conveyance systems.
 - iii. Exercise all water rights on a regular basis.
 - iv. Review water court resume monthly and enter statements of opposition where water rights are significantly affected.
 - v. Review abandonment list and protest any affected rights owned by Boulder County.
- e. Stay updated on new regulations, developments, and opportunities.
 - i. Work with policy makers to advocate that water law continues to support agricultural uses.
- f. Develop plans to respond to future droughts.
 - i. Establish criteria for when water may be leased and develop legal and institutional structures to facilitate this process in a way that will be beneficial to agricultural producers.
 - ii. Examine farming operations for their operational potential in a drought scenario, identifying potential crop changes and flexibility for changing water allocation.
 - iii. Explore new programs including rotational fallowing to stretch water supplies in times of drought.
- g. Explore and implement rainwater storage systems where legally possible.
- h. Continue to purchase additional water rights if funds are available and if they can be beneficially used.
- i. Monitor water supply and delivery in both the short and long term, to measure the impact of climate change. Alter practices and planning as appropriate to reflect anticipated climate impact changes.

2. Ditch Operations

Balance protection of water delivery to shareholders for application to beneficial uses along ditches with some preservation of the ecological and historical benefits, as these ditch systems have been part of the Boulder County landscape for over 100 years. Staff works cooperatively with ditch organizations throughout the County to support partnerships and promote stability and expertise in a changing world.

Objectives & Standards

- a. Be active members of ditch companies.
 - i. Attend all annual meetings; send proxies when unable to attend.
 - ii. Pay assessments in a timely manner.

- iii. Serve on ditch boards when necessary to ensure functioning of ditch company or based on ownership of shares.
- iv. Advocate for maintaining ditch company by-laws that support continued agricultural use of water.
 - v. Understand the laws and policies that govern ditch management.
 - vi. Cooperate with tenants and neighbors to perform reasonable ditch maintenance (37-84-119, C.R.S.).
- vii. Fulfill agreements associated with ditch crossing and other use agreements.
- b. Advocate for modern and sustainable management of ditches.
 - i. Be informed of new developments in legal and physical matters pertaining to ditch management.
 - ii. Advocate for adequate physical maintenance of ditches.
 - iii. Read and analyze budgets and other information shared at annual meetings to ensure transparent and effective management.
 - iv. Explore issues associated with trees along ditches to encourage that healthy, valuable trees, outside of waterways, remain while identifying ways to remove dead or rotting trees that could increase ditch company liability.
 - v. Explore issues of liability, especially those associated with growing development along ditches.
 - vi. Strive to maintain easements and all other prescriptive rights along ditches and reservoirs.
 - vii. Explore the issues of weed management, how to manage for weed species that reproduce especially along ditch corridors, on BCPOS properties, and how to address transport of weed seed in ditches.
 - viii. Encourage removal of state-listed invasive species and where feasible, removal of non-native phreatophytes and other weed species from along ditches on BCPOS properties.
 - ix. Work cooperatively with the Sheriff's wildland fire crew to burn and clean difficult ditch segments, providing training for fire mitigation staff.
- c. While recognizing decrees under the Prior Appropriation Doctrine and respecting that the primary purpose of ditches is to supply water to shareholders for beneficial use of said water, BCPOS staff works to protect and enhance environmental and historic values that have developed along these ditches.
 - i. Identify key habitat and wildlife species associated with ditches in which BCPOS has ownership and that cross BCPOS properties.
 - ii. Identify high-value wetlands that have developed due to ditch seepage, and where BCPOS holds water rights, the decree allows it, and the project is feasible; seek to maintain the viability of these wetlands.
 - iii. Work with boards and shareholders to preserve valuable habitat.
 - iv. Comply with federal laws related to Threatened and Endangered Species in relation to management and maintenance of ditches.

- d. While recognizing and respecting that the primary purpose of ditches is to supply water to shareholders for beneficial use of said water and many ditches operate within prescriptive Rights-of-Way, BCPOS staff will work to accommodate current and future use of ditches as recreational amenities where it is possible.
 - i. Maintain condition of existing trails along ditches and evaluate opportunities for new trails, while recognizing and protecting ditch company rights.
 - ii. Proactively manage to reduce conflicts between recreational activities and safe, full operation of the ditches for water conveyance.
 - iii. Acquire and respect appropriate crossing agreements when crossing ditches.
 - iv. Educate visitors about ditch history, management and water use at key locations along trails.
- e. The County shall work collaboratively with other agencies to protect the quality of irrigation waters.

3. Riparian Habitat

Staff works to protect and restore natural riparian corridors on Boulder County properties. At a county level, BCPOS works with other entities on high-value, multi-jurisdictional projects to improve natural riparian habitat.

Objectives & Standards

- a. Complete a riparian assessment, inventorying, assessing, and ranking the condition of riparian corridors on property managed by BCPOS.
 - i. Complete riparian assessment with the use of consultants.
 - ii. Create an assessment tool that is thorough, rapid, and reproducible.
 - iii. Include newly purchased properties with riparian corridors in the assessment.
 - iv. Revisit riparian corridors included in the assessment on a regular basis to monitor changing conditions over time.
 - v. Develop, as a product of the assessment, a ranking of the ecological condition of riparian corridors.
- b. Undertake restoration projects to improve the ecological function of degraded creeks and other key waterways.
 - i. Identify projects, primarily through the riparian assessment, with BCPOS focus on those segments identified as priorities for restoration.
 - ii. Remain responsive to unique opportunities for funding, partnerships, and demonstration projects when selecting restoration projects.
 - iii. Analyze and respond to emergencies or results of large-scale events (such as 100 or 500-year floods) as funding allows.
 - iv. Participate in multi-jurisdictional restoration projects.
 - v. Maintain relationship with the Urban Drainage and Flood Control District.

- vi. Remove state-listed noxious weeds and, where feasible, remove non-native phreatophytes and other weed species from riparian areas on BCPOS properties. Encourage removal on private property.
- vii. Ensure use of appropriate water supplies when irrigating plantings associated with creek restoration projects.
- c. Monitor conditions of key habitat areas and results of restoration projects.
 - i. Create realistic and feasible monitoring plans as part of development of restoration projects.
 - ii. Periodically monitor sites for unique and high-value habitat areas to ensure the continued functioning of these sites.
 - iii. Identify staff and/or volunteers to perform necessary monitoring.
 - iv. Record results in a simple and repeatable manner and store them in an accessible manner.
- d. Participate in projects to increase flows to creek segments where such work would result in improvement of the natural environment.
 - i. Identify key creek segments in the County and work with other agencies and nonprofit organizations to find creative ways to increase flow in those creek segments.
 - ii. Work particularly with Colorado Division of Parks and Wildlife to ensure that additional flows are set to improve habitat for native fisheries and other aquatic biota.
 - iii. Work with St. Vrain Creek Corridor Committee to increase winter flows from Button Rock to the Longmont treatment plant outfall.
- e. Research the potential impacts of climate change on riparian habitats along water delivery systems. Develop practices that maintain riparian ecosystem health under future conditions.

4. Reservoirs and Ponds

Parks and Open Space manages its ponds and reservoirs to meet a spectrum of needs ranging from agricultural production to visitor experience and wildlife habitat. These facilities are safe and functional, with appropriate infrastructure maintained on a regular basis.

Objectives and Standards

- a. Identify and inventory all ponds and reservoirs owned by Boulder County and managed by Parks and Open Space.
 - i. Inventory all ponds and reservoirs owned in full or part by the County.
 - ii. Gather and update information regarding underlying water rights, access, primary and secondary uses, partners, and other management information.
- b. Manage water-related infrastructure at ponds and reservoirs to ensure the safety and operation of these sites.

- i. Inventory infrastructure and keep records of maintenance and repair activities.
- ii. Be prepared for inspections by the state dam inspector and respond in a timely manner to state-required maintenance or repairs.
- iii. Ensure proper emergency procedures are established and followed for Class 2 hazard or higher dams.
- iv. Monitor development downstream of reservoirs that might impact classification.
- c. Implement measures to provide habitat protection at ponds and reservoirs managed for visitor use and/or natural resource values.
 - i. Implement habitat improvements and regulations to benefit aquatic and terrestrial species or to prevent shoreline degradation.
 - ii. Track water quality where necessary to protect habitat or prevent public health problems.
 - iii. Cooperate with the Colorado Division of Parks and Wildlife to raise native fish in isolated ponds.
 - iv. Protect habitat both for and from beavers and other rodents, with sensitivity where beaver activity may interfere with ditch operations.
- d. Protect water rights associated with ponds and reservoirs.
 - i. Be vigilant in pursuing water rights necessary for the protection and operation of ponds and reservoirs. Ensure conditional rights are exercised and appropriate records are kept for all water court decrees.
 - ii. Comply with state laws governing augmentation of ponds and reservoirs.
- e. Boulder County shall evaluate all storage proposals and support those that benefit the Department's agricultural or conservation programs and that are suitable environmentally.

5. Visitor Experience

Parks and Open Space designates and manages sites and facilities to provide opportunities for visitors to experience water, protects associated water rights, and provides high-quality passive recreational experiences.

Objectives & Standards

- a. Identify and inventory all ponds, lakes, reservoirs, and linear water-related sites that are designated for visitor use.
 - i. Create and maintain documents that communicate to the public what water resources are available for public access and which are not.
 - ii. Identify legal status of water resources that exists for visitor uses.
 - iii. Identify the priority of uses where multiple uses exist at one site.
- b. Manage those resources identified in Objective 5a most appropriate for fishing to provide high-quality recreational fishing opportunities. Offer a diverse range of fishing opportunities.

- i. Perpetuate and stock a variety of sport fish in reservoirs and ponds. Ensure measures are taken to prevent introduction of invasive species and diseases.
- ii. Inventory and maintain infrastructure that has been established to improve fishing experience. Pursue funding to improve habitat for fisheries and associated support facilities.
- iii. Analyze whether additional water rights are necessary to improve or maintain fishing experiences, and the feasibility and cost of pursuing such rights.
- iv. Address water quality as it affects the maintenance of viable fish populations.
- c. Provide opportunities for visitors to interact with water.
 - i. Demonstrate the value of restoration activities by allowing controlled access.
 - ii. Promote an understanding and desire to protect riparian habitat by allowing controlled access by the public. Direct visitor experience to key areas so that the habitat value of these areas is protected.
 - iii. Provide appropriate infrastructure to support approved visitor uses.
 - iv. Analyze whether additional water rights are necessary to support visitor use experiences, and the feasibility and cost of pursuing such rights.
- d. Promote educational and partnership opportunities associated with water resources.
 - i. Develop interpretive materials for display at water-related sites, including ditches, reservoirs, and former gravel ponds.
 - ii. Develop water-related materials for classroom visits by outreach staff.
 - iii. Engage Youth Corps and volunteers in projects.
 - iv. Be aware of community water events, initiatives, and issues, and participate where appropriate.

6. Information Management

Staff enhances resource management decisions using sound information. This information is processed using models and professional judgment to determine how best to manage water, including when to acquire or sell resources and how to optimize agricultural production, protect environmental values, and support recreational opportunities.

Objectives & Standards

- a. Establish and maintain a database that houses pertinent elements of the County's water rights for use by BCPOS and Boulder County staff.
 - i. Use the database as an important tool to house accurate information on what water rights are held, where they were purchased, and where they are used in any given year.
 - ii. Include in the database information about the nature of water rights, such as priority dates, decreed uses, number or shares in a ditch company, etc.
 - iii. Ensure the database is accessible to all BCPOS staff through the Intranet.

- b. Ensure that the riparian inventory is accessible for use by staff and updated on a regular basis.
 - i. Collect appropriate information necessary for analysis.
 - ii. Ensure that the process for collecting and analyzing data is recorded and can be repeated by a variety of personnel (staff, consultants, students, etc.).
- c. Set up tracking system and record information on water use, quantities, and quality.
 - i. Install staff gauges on all reservoirs and on those gravel pits requiring measurement. Record levels from these staff gauges on a monthly basis or as required by an individual decree.
 - ii. Determine where to place recording equipment for agricultural water uses. Develop spreadsheet or database for recording of this information.
 - iii. Track crop consumptive use.
 - iv. Install measuring devices on water rights and sites with augmentation plans as required by the state. Record data on a regular basis and report to the State Engineer as legally required.
 - v. Install monitoring wells to record ground water information.
 - vi. Determine water quality parameters to be monitored. Develop spreadsheet or database for recording this information.
- d. Establish and maintain an integrated geographical information system (GIS) to manage water resources.
 - i. Collect GIS information about features currently recorded, including irrigation features (ditches, head gates, center pivots, etc.), seeps, springs, ponds, reservoirs, monitoring wells, etc. Maintain and update these datasets.
 - ii. Develop a work plan to identify additional data needs and set up a procedure to collect, process, and maintain this GIS data.
 - iii. Develop GIS products that illustrate water features such as ownership and allocation of all water resources and condition of infrastructure owned by the County.
- e. Use models to optimize BCPOS water management.
 - i. Continue development and implementation of integrated GIS model to analyze BCPOS water resources to better inform decision-making process.
 - ii. Determine the utility and necessity for additional external hydrological models.
- f. Water resource information shall be made available to the public through Boulder County's website.

7. Monitoring and Maintenance

Parks and Open Space monitors and maintains water rights, infrastructure, and environmental improvements using information gathered and processed as part of Goal 6. Staff creates procedures and mechanisms to regularly monitor necessary information about the County's water resources.

Objectives & Standards

- a. Maintain safe and functional water-related infrastructure, developing funding for these activities.
 - i. Prioritize and schedule regular maintenance for pumps, valves, pipes, ditches, and other infrastructure used to convey and store water.
 - ii. Track condition of infrastructure and develop procedures to replace failing or unsafe facilities.
 - iii. Respond to emergency infrastructure failures by preparing in advance a list of contractors and regulations on emergency purchasing procedures. Explore the need for establishing continuing services contracts.
 - iv. Boulder County shall use Best Management Practices to protect water quality and reduce soil erosion.
- b. Meet or exceed local, state, and federal water laws and regulations.
 - i. Monitor condition of dams and comply with items identified for maintenance by the State Engineer.
 - ii. Comply with monitoring and other terms of augmentation plans.
 - iii. Be informed of, identify, summarize, and comply with relevant water quality regulations and laws pertaining to BCPOS activities.
 - iv. File updated permits, plans, etc., with appropriate agencies.
 - v. Meet state and federal requirements for water quality monitoring of abandoned mine sites owned by Boulder County.
- c. Ensure water rights have adequate legal protection.
 - i. Review the water court resume monthly.
 - ii. File statements of opposition to any change case that will have a direct, negative effect on the County's water rights.
 - iii. Ensure water use is adequately documented to prove beneficial use to ensure water is not lost or reduced due to non-use.
 - iv. Retain a water attorney/firm to act as the County's primary water rights legal counsel as needed.
- d. Stay informed of developments in water policy and regulation at the local, state, and federal level.
 - i. Participate in local watershed organizations, including the Left Hand Watershed Oversight Group. Participation includes serving on boards or commissions, responding to surveys, and helping to develop new organizations as needed.
 - ii. Monitor state legislation, providing input on new water bills to the County's legislative liaison.
 - iii. Ensure representation by the County on water policy bodies such as the South Platte Round Table, helping to strengthen a voice for agricultural and non-consumptive water uses.

- e. Use Best Management Practices with respect to all aspects of water management. Develop a standardized set of practices that can be altered by staff as new BMPs are developed.

Appendix A – Glossary

Abandonment: Loss of all or part of a water right by intent to permanently discontinue use. A period of non-use for ten years raises presumption of non-use that can be contested. Water rights are declared abandoned through a water court proceeding. Conditional water rights are conclusively presumed to be abandoned if an application for finding of reasonable diligence is not made within six years of the most recent diligence decree.**

Abandonment List: A list prepared every ten years by the State Engineer of water that has been abandoned due to nonuse (see Abandonment).

Acid Mine Drainage: Water that flows out of mines. Once it is exposed to air, acidity is generated from oxidation of metal sulfides from the surrounding rock and overburden.

Augmentation Plans: A way for junior appropriators to obtain water supplies through terms and conditions approved by a water court that protect senior water rights from the depletions caused by the new diversions. Typically involve storing junior water when in priority and releasing that water when a call comes, purchasing stored waters from federal entities or others to release when a river call comes, or purchasing senior irrigation water rights and changing the use of those rights to off-set the new users injury to the stream.

Beneficial Use: Defined statutorily as “the use of that amount of water that is reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the appropriation is lawfully made[.]” In Colorado, water must be diverted for a beneficial use, which is the use of a reasonable amount of water necessary to accomplish the purpose of the appropriation without waste.

Class 2 Hazard Dam: In Colorado, dams are categorized according to the potential for loss of life and property damage in the event the dam should fail. A Class 2 Hazard Dam is one where no loss of life is expected, but property damage would be significant.

Conditional Water Right: This water right allows an appropriator to secure a priority before water has been applied to beneficial use by showing that the "first step" towards the appropriation has been taken. The "first step" includes the intent to appropriate, plus a sufficient demonstration of that intent. Once the appropriator actually places the water to beneficial use, a final decree may be issued with a priority date relating back to the initiation of the appropriation.

Consumptive Use: Use of water that permanently withdraws water from its source, making that water no longer available because it has evaporated, been transpired by plants, or

incorporated into products or crops, consumed by people or livestock, or otherwise removed from the immediate water environment.

Ditch: A long narrow trench or furrow dug in the ground for irrigation or drainage.

Geographic Information System (GIS): A computerized information system for capturing, storing, analyzing, managing and presenting database data which are spatially referenced (linked to location on a map).

Incorporated Ditch: A ditch system in which water is allocated by shares issued by a company, with shares representing proportional amounts of decreed water rights. Stock certificates of ownership are typically issued by incorporated ditch companies. Each ditch company operates under by-laws.

Market Farm: Three to twelve acres of farm product directly marketed to the consumer/buyer

Water Database: The central database used by Boulder County Parks and Open Space to track and manage information about its purchases of property (land and water).

Phreatophyte: A deep-rooted plant that obtains its water from the water table or the layer of soil just above it.

Prescriptive Rights: Ditches have an established right-of-way to carry water through public and private property due to historic practices. Even if no recorded documentation of the easement exists, this prescribed right of carriage allows the continued use and reasonable access to maintain the ditch and/or easement.

Proxy: Authority or power to act for another. In this application, a written proxy is provided by the County Commissioners to Boulder County staff to represent its interest at ditch company meetings.

Riparian: Pertaining to the banks of a river, stream, waterway, or other, typically, flowing body of water as well as to plant and animal communities along such bodies of water. This term is also commonly used for other bodies of water, e.g., ponds, lakes, etc., although Littoral is the more precise term for such stationary bodies of water.

Shareholder: One who holds an interest (shares) in an incorporated ditch company.

Staff Gauge: A graduated scale used to indicate the height of the water surface in a stream channel, reservoir, lake, or other water body.

Statement of Opposition: A legal document filed with the Water Court in Colorado indicating that a new water right or change of water right will negatively impact existing water right holders.

State Engineer: The director of the Division of Water Resources.

Unincorporated Ditch: An association of water right owners who convey water in a common ditch, but have not formed an incorporated company. Owners are tenants in common of the water right and associated easement.

Water Commissioner: Personnel of the Division of Water Resources that allocate water, issue shut-down orders, collect water use and/or diversion data, and enforce the decrees and water laws of the State of Colorado.

Water Court: A District Court that hears matters related to water. To obtain a judicially recognized water right, change a water right or file an Augmentation Plan, persons or entities file applications with one of these courts, and the court will issue a decree or order. There are seven water courts in the State located in each major drainage basin.

Water Court Resume: A detailed monthly listing from the water court of court cases pending.

Water Right: A property right to the use of a portion of the public's surface or tributary groundwater obtained under applicable legal procedures.

Wetland: An area that is periodically inundated or saturated by surface or groundwater on an annual or seasonal basis, that displays hydric soils, and that typically supports or is capable of supporting hydrophytic vegetation.

Sources:

Alabama State Water Program, <http://www.aces.edu/waterquality/glossary/glossary.htm>
Citizen's Guide to Colorado Water Law, Colorado Foundation for Water Education (2004)
Colorado Division of Water Resource, <http://water.state.co.us/>

Appendix B – Water Policy & Comprehensive Plan

Comprehensive Plan Element	Water Policy Goal
B.4 Significant natural communities, including significant riparian communities and rare plant sites, should be conserved and preserved to retain living examples of natural ecosystems, furnish a baseline of ecological processes and function, and enhance and maintain the biodiversity of the region.	Goals 2, 3, 4
B.7 Productive agricultural land is a limited resource of both environmental and economic value and should be conserved and preserved.	Goals 1 & 2
B.9 Riparian ecosystems, which are important plant communities, wildlife habitat and movement corridors, shall be protected.	Goals 3 & 5
C.1 Provision should be made for open space to protect and enhance the quality of life and enjoyment of the environment.	Goals 1 – 7
C.2 Parks, open space, and recreation facilities should be encouraged throughout the county and should be integrated whenever suitable with public facilities. The county will assume only those financial responsibilities for public development as provided under Open Space Policy OS 4.02.	Goals 1 – 7
C.3 Open space shall be used as a means of preserving the rural character of the unincorporated county and as a means of protecting from development those areas which have significant environmental, scenic or cultural value.	Goals 1 – 7
C.5 The private sector, non-county agencies, and other governmental jurisdictions should be encouraged to participate in open space preservation and trails development in Boulder County.	Goals 1, 2 & 3
E.1 Preservation and utilization of water for agricultural purposes within the county shall be encouraged.	Goals 1 & 2
M.1 Agricultural enterprises and activities are an important sector of the Boulder County economy and the county shall foster and promote a diverse and sustainable agricultural economy as an integral part of its activities to conserve and preserve agricultural lands in the county.	Goals 1 & 2
ER 3.01 It shall be county policy to evaluate planned activities within Boulder County relative to their cumulative impacts and compliance with air and water quality standards.	Goals 6 & 7
ER 3.04 The county shall encourage the formal organization of basin subcommittees for all basins in Boulder County identified in the Regional 208 Water Quality Plan and shall encourage the basin subcommittees to communicate with each other regarding their responsibilities in maintaining county-wide water quality through the vehicle of a county-wide water quality association.	Goal 7
ER To the extent practical, the county shall encourage land use decisions	Goals 1, 2 & 4

4.07	that maintain the function and quality of the water courses and areas designated on the Boulder County Comprehensive Plan environmental resources maps as high quality aquatic habitats.	
ER 6.01	The county will work with appropriate management agencies and property owners to protect or restore riparian areas.	Goals 2, 3 & 7
ER 6.02	The county shall work toward minimizing human impacts to riparian ecosystems from development, roads and trails.	Goals 2, 3 4 & 5
ER 6.03	The county will work with appropriate entities to ensure suitable minimum and maximum stream flows that maintain channel morphology, support hydrologically connected wetlands and perpetuate species, both plant and animal, dependent on riparian ecosystems.	Goal 3
ER 6.05	Management of riparian areas shall encourage use or mimicry of natural processes, maintenance or reintroduction of native species, restoration of degraded plant communities, elimination of undesirable exotic species, minimizing human impacts, and development of long-term ecological monitoring programs.	Goals 2, 3, 4 & 5
OS 3.01	Where necessary to protect water resources and/or riparian habitat the county shall ensure, to the extent possible, that areas adjacent to water bodies, functional irrigation ditches and natural water course areas shall remain free from development (except designated aggregate resource areas). The county may preserve these open corridor areas by means of appropriate dedication during the development process, reasonable conditions imposed through the development process, or by acquisition.	Goals 1, 2 & 3
OS 6.01	Trails and trailheads shall be planned, designed, and constructed to avoid or minimize the degradation of natural and cultural resources, especially riparian areas and associated wildlife habitats. Riparian areas proposed for preservation but for which trail development is inappropriate include: 1) Boulder Creek between 55th Street and U.S. Highway 287, 2) St. Vrain Creek west of Airport Road, 3) Left Hand Creek west of State Highway 119, and 4) Rock Creek west of McCaslin Boulevard.	Goals 3 & 5
AG 1.09	The county shall provide technical assistance to farmers and ranchers to help avoid conflicts over wetland and riparian management and the management of other sensitive or diminishing environmental resources as listed and periodically updated in the Environmental Resources Element. In doing so, the county shall seek the advice and expertise of other land, resource, and wildlife agencies and institutions to the extent the resources are available.	Goals 1 – 4
AG 1.11	The county shall encourage that water rights historically used for agricultural production remain attached to irrigable lands and shall encourage the preservation of historic ditch systems.	Goals 1 & 2

Appendix C – POS Water Portfolio

The following spreadsheet contains information on the Boulder County Parks and Open Space water portfolio.

Boulder County Water Ownership by Water Organization

Water Right Name	Amount	Unit	BOCO % Int	Other Names Used
Agitator Ditch	61.00000000	Shares	100.00 %	
Anderson Ditch	1.95000000	CFS	100.00 %	
Bader Ditch	0.83333000	Interest	100.00 %	Bader Ditch 1 and 2
Barkley Slough 1	0.25000000	Interest	100.00 %	
Baseline Land and Reservoir Company	4.66624000	Shares	100.00 %	
Beasley Slough	50.00000000	Inches	100.00 %	
Beckwith Ditch	1.66000000	Shares	100.00 %	
Bill's Reservoir	100.00000000	Percent	100.00 %	Bill's Res
Bonus Ditch	16.50000000	Shares	50.00 %	
	38.00000000	Shares	100.00 %	
Boulder and Lefthand Ditch and Irrigation Company	55.10000000	Shares	100.00 %	
Boulder and Weld County Ditch	0.50000000	Shares	100.00 %	
Boulder and White Rock-Class A	2060.44000000	Shares	100.00 %	Boulder and White Rock (Before 2010 Merger of Boulder and
Boulder and White Rock-Class B	91.00000000	Shares	100.00 %	Boulder and Weld Reservoir Company (Before 2010 Merger
Boulder and White Rock-Class C	556.00000000	Shares	100.00 %	Six Mile No 2 Reservoir Company (Before 2010 Merger of Bc
Boulder and Whiterock Lateral and Siphon Company (North Branch)	341.69000000	Shares	100.00 %	
Bull Head Gulch Ditch Pipeline	0.09375000	Interest	50.00 %	Bull Head Gulch P L
	0.90625000	Interest	100.00 %	
Bull Head Gulch Irrigation System	0.09375000	Interest	50.00 %	Bull Head Gulch Irr Sys
	0.90625000	Interest	100.00 %	
Bullock WELL	100.00000000	Percent	100.00 %	
Caribou Ranch I WELL	100.00000000	Percent	100.00 %	
Caribou Ranch Natural Pond No 1	100.00000000	Percent	100.00 %	
Caribou Ranch Natural Pond No 2	100.00000000	Percent	100.00 %	
Caribou Ranch Natural Pond No 3	100.00000000	Percent	100.00 %	
Caribou Ranch Natural Pond No 5	100.00000000	Percent	100.00 %	
Caribou Ranch Pond No 4	100.00000000	Percent	100.00 %	
Caribou Ranch Pond No 5	100.00000000	Percent	100.00 %	
Caribou Ranch Pond No 6	100.00000000	Percent	100.00 %	
Caribou Ranch Spring No 10	100.00000000	Percent	100.00 %	
Caribou Ranch Spring No 9	100.00000000	Percent	100.00 %	
Carl Holcomb Ditch	50.00000000	Percent	100.00 %	
Chapman McCaslin Ditch	9.50000000	Percent	100.00 %	
Cherry Creek Tree Farm WELL	100.00000000	Percent	100.00 %	
Clough and True Ditch	50.00000000	Percent	100.00 %	True and Clough
Como Ditch No 5	1.92000000	CFS	100.00 %	
Crocker Ditch	0.55556000	Interest	100.00 %	
Cushman Ditch	0.03571430	Interest	47.00 %	
Cushman Water Rights	100.00000000	Percent	100.00 %	
Cushman WELL	100.00000000	Percent	100.00 %	
Davidson Ditch and Reservoir Company	83.94400000	Shares	50.00 %	
	136.00000000	Shares	100.00 %	

Boulder County Water Ownership by Water Organization

Water Right Name	Amount	Unit	BOCO % Int	Other Names Used
Davidson Highline Lateral Ditch	121.50000000	Shares	100.00 %	
Davis and Downing Ditch	52.50000000	Shares	100.00 %	
Denio and Taylor Ditch	16.04687500	Shares	100.00 %	Mill Ditch, Denio and Taylor Mill Ditch
Dodd Reservoir	1.00001000	Interest	100.00 %	
Dry Creek Davidson Ditch	42.50000000	Shares	100.00 %	Little Davidson
Duck Lake	100.00000000	Percent	100.00 %	
Dunn Irrigation System	2.50000000	CFS	100.00 %	Dunn Irr Sys
Eisele Lateral Ditch	20.50000000	Shares	100.00 %	
Farmer's Ditch Company	1.87500000	Shares	100.00 %	
Farmers Reservoir and Irrigation Company	12.70000000	Shares	50.00 %	FRICO
	80.73500000	Shares	100.00 %	
Frank R Duffy Pipeline	0.50000000	CFS	100.00 %	Frank R Duffy PL
Gaynor Lake & System, Inc	9667.00000000	Shares	100.00 %	
Goodhue Ditch and Reservoir Company	171.26900000	Shares	50.00 %	The New South Bldr and Rock Creek Ditch
	116.66000000	Shares	100.00 %	
	688.33175000	Shares	100.00 %	
Goss Private Ditch No 1	100.00000000	Percent	100.00 %	
Hake Ditch	0.87500000	Interest	50.00 %	
Hamm Private Ditch	100.00000000	Percent	100.00 %	
Harris Ditch	7.00000000	CFS	50.00 %	
Heron Lake	0.61330000	Interest	100.00 %	
Highland Ditch	47.25000000	Shares	100.00 %	
Hillcrest Ditch and Reservoir Company	40.00000000	Shares	100.00 %	Valmont Reservoir, Leggett-Owen
Holland Ditch	3.50000000	Shares	100.00 %	
Howell Ditch	0.25000000	Interest	100.00 %	
James Ditch Company	50.00000000	Inches	100.00 %	
	1.75000000	Shares	100.00 %	
	2.50000000	Shares	100.00 %	
Jerry's Lake	100.00000000	Percent	100.00 %	
Johnson Farm Pond	1.00000000	AF	100.00 %	
Lagerman Reservoir	200.00000000	AF	100.00 %	
Lake 4	600.00000000	AF	50.00 %	Rock'n WP Ranch Lake 4
Lake Ditch	1.37500000	Shares	100.00 %	
Laycook Lateral Ditch	0.12500000	Interest	100.00 %	
Left Hand Ditch Company	422.00000000	Shares	0.00 %	
	60.00000000	Shares	50.00 %	
	300.00000000	Shares	100.00 %	
	1789.00000000	Shares	100.00 %	
Leggett Ditch and Reservoir Company	95.50000000	Shares	100.00 %	Liggett Ditch and Reservoir Company
Leyner-Cottonwood Consolidated Ditch Company	335.50000000	Shares	100.00 %	
Longmont Supply Ditch Company	9.48000000	Shares	100.00 %	
Lower Baldwin Ditch	0.58333000	Interest	100.00 %	
Marfell Lake No 1	1.00000000	Interest	100.00 %	

Boulder County Water Ownership by Water Organization

Water Right Name	Amount	Unit	BOCO % Int	Other Names Used
Marfell Lake No 2	100.00000000	Percent	100.00 %	
Martha Matthews Ditch Company	100.00000000	Inches	100.00 %	Martha M Mathews Ditch
Mathews Ditch	50.00000000	Percent	100.00 %	Matthew Ditch
Mountainview Egg Farm WELL	100.00000000	Percent	60.00 %	
Mumford Lateral Ditch	5.50000000	Shares	100.00 %	
New Consolidated Lower Boulder Res and Ditch Co	60.00000000	Inches	100.00 %	Cons Lower Bldr Res an Ditch, Lower Bldr
	1.00000000	Shares	75.00 %	
	3.38000000	Shares	100.00 %	
New Table Mountain Ditch	1.00000000	Shares	50.00 %	Table Mountain Ditch
	4.50000000	Shares	100.00 %	
	1.50000000	Shares	100.00 %	
Niwot Ditch	2.50000000	Shares	100.00 %	
North Boulder Farmer's Ditch	336.00000000	Shares	50.00 %	
	157.00000000	Shares	100.00 %	
North Branch Rough & Ready	1.00000000	Shares	100.00 %	
North Pointe Reservoir	2.50000000	AF	100.00 %	
North Tollgate Ditch	80.00000000	Shares	100.00 %	Tollgate
Northern Colorado Water Conservancy District	25.00000000	Units	0.00 %	Colorado-Big Thomspson (CBT)
	62.00000000	Units	100.00 %	
	2746.00000000	Units	100.00 %	
Oleson Reservoir No 1	100.00000000	Percent	100.00 %	
Oleson Reservoir No 2	100.00000000	Percent	100.00 %	
Oleson Reservoir No 3	100.00000000	Percent	100.00 %	
Oligarchy Ditch	6.75000000	Shares	100.00 %	
Otto Ditch	80.00000000	Percent	100.00 %	
Palmerton Consolidated Ditch	8.50000000	Shares	100.00 %	St Vrain Palmerton Ditch
Peck WELL	100.00000000	Percent	100.00 %	
Pella Ponds	100.00000000	Percent	100.00 %	Frontier-Hygiene Res
PHC Seepage Ditch No 1	1.00000000	CFS	100.00 %	
PHC Seepage Ditch No 2	1.00000000	CFS	100.00 %	
PHC Seepage Ditch No 3	0.35000000	CFS	100.00 %	
Pleasant Valley Reservoir Fish and Ditch Company	4.42830000	Shares	100.00 %	Terry Lake
Prince Reservoir No 1	0.56250000	Interest	100.00 %	
Reformed New Hinman Ditch	407.00000000	Shares	100.00 %	New Hinman Ditch
Rough and Ready Ditch	1.25000000	Shares	0.00 %	
	11.78270000	Shares	100.00 %	
Runyan Ditch	446.00000000	Shares	100.00 %	
Schureman Reservoir No 1	100.00000000	Percent	100.00 %	East Swede Lake
Schureman Reservoir No 2	100.00000000	Percent	100.00 %	Middle Swede Lake
Six Mile No 1 Storage Right	0.00833300	Interest	100.00 %	Six Mile Reservoir
Smead Ditch	6.00000000	Percent	100.00 %	
South Boulder and Coal Creek 1st Ext Ditch Company	0.62500000	Shares	0.00 %	
	5.45000000	Shares	50.00 %	

Boulder County Water Ownership by Water Organization

Water Right Name	Amount	Unit	BOCO % Int	Other Names Used
South Boulder and Coal Creek Irrigation Ditch Comp	0.62500000	Shares	0.00 %	FRICO System
	5.45000000	Shares	50.00 %	
South Boulder Canyon Ditch	32.00000000	Shares	50.00 %	South Boulder Canon Ditch
	88.50000000	Shares	100.00 %	
South Ledge Ditch	2.50000000	Shares	100.00 %	Bradford and Stiles Ditch
South Tollgate	1.00000000	Shares	100.00 %	
Star Ditch	1.25000000	Shares	100.00 %	
Steele Reservoir No 1	100.00000000	Percent	100.00 %	Steele Bros. Reservoir No 1
Steele Reservoir No 2	100.00000000	Percent	100.00 %	Steele Bros. Reservoir No 2
Supply Irrigation Ditch	1.00000000	Shares	50.00 %	
	22.25000000	Shares	100.00 %	
Swede Ditch	15.00000000	Shares	0.00 %	
	87.00000000	Shares	100.00 %	
	49.00000000	Shares	100.00 %	
Swede Reservoir	100.00000000	Percent	100.00 %	West Swede Lake
T. N. Willis Ditch	0.80000000	CFS	50.00 %	
Toteve Drainage Tile Rights	11.62000000	CFS	100.00 %	
Toteve Reservoir No 2	48.00000000	AF	100.00 %	
Toteve Reservoir No 3	48.00000000	AF	100.00 %	
Toteve Reservoir No 4	48.00000000	AF	100.00 %	
Toteve Reservoir No 5	48.00000000	AF	100.00 %	
Toteve Springs	100.00000000	Percent	100.00 %	
Townley Lateral	3.25000000	Shares	100.00 %	
True & Webster Ditch	0.33333000	Interest	100.00 %	
Ullery Ditch	2.90000000	CFS	100.00 %	
Upper Baldwin Ditch	5.00000000	Shares	100.00 %	
Warembourg WELL 1	100.00000000	Percent	100.00 %	
Warembourg WELL 2	100.00000000	Percent	100.00 %	
Webster and McCaslin Ditch	100.00000000	Inches	100.00 %	
	33.33333000	Interest	100.00 %	
Western Mobile Unsealed Reservoirs & Lakes on Parcels 3 & 4	1.00000000	Interest	100.00 %	
Williamson Ditch	1.18750000	Shares	100.00 %	
Zweck and Turner Ditch	0.41667000	Interest	80.00 %	
	0.16667000	Interest	100.00 %	

Appendix D – Questionnaire

The following questionnaire was used in the interviews of 14 Parks and Open Space staff in early 2007.

Background

- Have to do this, tasked with creating it, very exploratory at this stage
- How did you get into this line of work?
- In your time here, where has this (planning) been done really well and how did it work? In a previous position?

Content

- What would you want to include/cover in this process to help you in your job?
- What do you want to avoid?
- Pretend we did this and it worked great, what do I need to do to say we did this, to make it happen?
- If you could have our work related to water function in the way you wanted it to, how would that look to you, what does it mean to you?
- What is in the way between us and that now?
- What is the single most important thing you want me to know about before we move forward?