



Ditch and Reservoir Company Alliance

DARCA Model Land Use Codes

John McKenzie
Executive Director, DARCA
1630 30th St. #431
Boulder, CO 80301
john.mckenzie@darca.org
Tel: (970) 412-1960
Fax: (303) 516-1202

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Enhancing Communication and Reducing Uncertainty Between Local Government and Ditch Companies

Introduction

Colorado's ditch and reservoir companies have a fascinating and storied history in the development of the state. Many were created by the entrepreneurs of their time - bankers, speculators, and developers, as well as a substantial farmer base. Over time, most of these ditch companies have become predominantly farmer owned but in some areas of the state the farmer base has been substantially diminished with the competing pressures for water resources.

Ditch companies provide benefits to society, both directly and indirectly. Despite this, the recipients of these benefits are usually not required to provide direct compensation for these positive externalities. Ditch companies and their linked agricultural economies support many rural cities and towns and provide them with a cultural backbone. Farms and ranches produce food and fiber and support more than just the farm and ranch owners; a range of employees, seasonal workers, and associated businesses also depend on them, as do local governments that are sustained by the taxes they pay. Ditch systems provide environmental benefits in the form of riparian corridors for flora and fauna, wetlands, and reservoirs that lead to more livable communities and tourism dollars. Irrigation may also provide water for late season return flows that extend recreational and irrigation seasons while supporting additional environmental flow needs.

Urbanization issues, municipalities seeking ditch company water for domestic use, and the increasing cost of doing business in today's regulatory and legal environment have complicated the matter of running ditch companies in Colorado. Many of these companies find it difficult to carry on business as usual and adequately protect their company and shareholder interests.

Many ditch company problems can be traced to a limited financial ability to adequately deal with problems, pressures, and opportunities.

Ditch company disputes come in many shapes and sizes, including: encroachment on ditch easements, poorly defined property rights, lack of local ordinances that protect the activities of ditches, incompatible zoning, and decisions made without the input of the ditch company or irrigation district. Such issues force ditch companies - many of which are organized as nonprofit 501(c)(12)s - to expend significant time and money on external management and compliance. Although most ditch companies are resource rich with their water portfolios, most have limited financial resources to deal with these controversies.

Until ditch companies are able to better handle the complexities of the 21st century and resolve their local disputes in more efficient manners, they will continue to spend their limited financial capital on non-productive dispute management activities rather than pursuing long term goals of improving financial viability, enhancing shareholder value and providing water to their farmer shareholders as inexpensively and efficiently as possible. Managing these controversies severely limits the time and resources available for maintaining and upgrading the ditch system, the pursuit of infrastructure subsidies and alternative funding support, and other creative management opportunities

To reduce transaction costs and allow ditch companies to better take advantage of opportunities to improve their infrastructure and remain competitive, better processes and systems for resolving these disputes are needed. DARCA and Environmental Defense Fund embarked on a listening tour and workshop series to develop guidelines and standards to streamline relationships between ditch and reservoir companies and urbanizing communities. The guidelines and standards developed will begin to forge more productive relationships between ditch companies and neighbors that allow for the mutually beneficial continuation of profitable irrigated agriculture and the public benefits it provides. In effect, reduced conflict should allow for ditch companies to be more able to focus on necessary ditch system maintenance and upgrades.

Tools to compensate ditch companies for these positive externalities can be monetary and non-monetary policies implemented by local government. These micro-subsidies at the local level can complement the few state and federal government supports, such as property tax exemptions and federal tax exemption respectively. One example of a non-monetary micro subsidy that does not burden local taxpayers is the development of local land use ordinances that provide more certainty to vague existing ditch company law.

Local governmental entities, developers, and citizens are also the beneficiaries of more certainty in local land use codes. The complexity, time, and resources spent on local land use issues can all be reduced by the creation of a streamlined process and clarifying open-ended development/land use processes

Colorado Law and Ditch Companies

The constitution of the state of Colorado, its statutes, and court's rulings have provided for and solidified protections of ditch company resources. The state's laws have protected ditch company resources including water rights and inherent infrastructure that is required to convey water from rivers to farms or other users.

Colorado's constitution, adopted on March 14, 1876, provides for the right of ditch companies to condemn private property from which to construct and operate ditches. Ordinarily, private property cannot be taken for private use, as this power of eminent domain is usually reserved for public uses. But the drafters of the state constitution were keenly aware that the efficient and unimpeded use of the state's water resources was critical for the development of agriculture, mines, mills, and for providing water for domestic and sanitary uses.

A brief set of statutes within the Colorado Revised Statutes known as the "Ditch Act," is contained in Article 42 of Title 7. §7-42-103 provides that ditch companies "...shall have the right-of-way over the line named in the articles of incorporation, and shall also have the right to run water from the stream, channel, or water source, whether natural or artificial, named in the articles through its ditch or pipeline..." Additionally, provision within Title 37 *Water and Irrigation*, of the Colorado Revised Statutes further specifies rights and obligations of ditch and reservoir companies.

However, the statutory protections of ditch companies are in reality few, vague, and open to interpretation. As a result, much case law has developed throughout the years from the appellate courts of Colorado to clarify many aspects of the law in its relation to ditch companies. However, gray areas remain and this uncertainty increases the expense and complexity of managing and maintaining these historic and important organizations.

The controversies are many that impact ditch companies including easement encroachment, urbanization issues, seepage, liability problems, access to the ditch, and storm water issues. For the purpose of demonstrating the burdens that ditch companies undertake to protect their resource base in today's legal environment, an illustrative case of ditch easement encroachment follows.

Ditch companies have the right to convey water through their ditches and also the inherent right to maintain, operate, and rehabilitate the same. However, most ditch companies do not own the land under the ditch in fee simple but rather possess a non-exclusive easement. Further complicating the situation is the fact that these easements are usually not written nor recorded but have arisen through use over time. Title commitments typically do not identify these easements and normally exclude unrecorded easements from warranty. Ditch companies often have to deal with encroachment issues from: 1) those wishing to bore under the ditch, e.g. a buried pipeline; 2) those wishing to place a structure within the ditch easement, e.g. a house along the ditch; and 3) those wishing to build improvements above the ditch, e.g., a bridge over the ditch. The Colorado courts have long recognized that ditch companies have the right to run water through their ditch along with a reasonable amount of land along the ditch to access, maintain, and rehabilitate the ditch. However, ditch companies are often forced to defend their easements - be it 100 feet in width or 20 feet in width which may depend on the ditch characteristics and the location within the ditch system. If such a matter comes before a court of law, the extent of the ditch easement becomes a factual issue, decided on a case by case basis using expert and non-expert witnesses. This adversarial system is not efficient, the transaction costs associated with it are burdensome, and the process may have to be repeated for another person encroaching on the ditch easement in another location of the ditch.

Many of the problems and disputes of ditch companies are better resolved locally. To begin with, better communication with residents and officials of local government is essential. The next step is the development of regulatory guidelines and standards that more clearly define property rights and reduce transaction costs and risk by providing more certainty.. Through a series of workshops and investigation into existing Colorado local ordinances, recommendations are being developed and offered. For a survey of existing local code sections related to ditch companies, please refer to Appendix A, entitled DARCA Model Land Use Codes.

Workshops

DARCA held four workshops in the state in 2012 and 2013. An initial workshop was held in Glenwood Springs, followed by workshops in Denver, Grand Junction, and Cedaredge. DARCA is prepared to carry out additional workshops for interested cities and counties in the state.

Workshop I. Enhancing the Viability and Ability of Ditch and Reservoir Companies to Respond to Changing Times in Colorado

This workshop was held on December 8, 2012 and was part of the Second Annual DARCA Water Tour held aboard the California Zephyr as it traveled from Denver to Glenwood Springs and back to Denver. The two-day event focused on the connections between healthy ditch companies, healthy economies, and healthy natural resources in the West. Agricultural and environmental organizations, farmers, ranchers, and ditch company members discussed the common interests of agriculture and conservation to better manage water resources and share examples of successful partnerships. Representatives from the Family Farm Alliance, Trout Unlimited, the Colorado Water Trust, the Colorado River Water Conservation District, the Nature Conservancy, the Quivira Coalition, the Three Sisters Irrigation District, and the Deschutes River Conservancy delivered presentations to the travelers in DARCA's reserved car and in sessions in Glenwood Springs. Please see Agendas for Workshops, Appendix B.

DARCA members and conservation group representatives involved in irrigation infrastructure improvement projects were the primary audience for this kick-off workshop. The primary focus

of this workshop was the generation of a summary of ditch company conflicts and concerns. Ditch company attendees agreed that they spend an inordinate amount of time and money managing local conflict and legal issues related to uncertainty. The initial list of concerns and costs produced in this meeting became the foundation for the later workshops.

Workshop II. The Role of Municipalities and Counties in Supporting Local Ditch Companies

This workshop was delivered on January 30, 2013 to a predominately municipality/governmental group at the Annual Colorado Water Congress Convention in Denver. The workshop focused on the development of guidelines and standards that reduce transaction costs and risks by providing more certainty in local regulations, property rights disputes, taxation, and lender relationships. Please see Agendas for Workshops, Appendix B.

At the Colorado Water Congress workshop, the municipal water manager attendees were intrigued by the concept of model codes to enhance relationships with ditch and reservoir companies. Many of them shared specific issues they have faced in the past and examples of local code sections that have either led to these disagreements or code sections they have developed to help clarify these processes. The workshop left many attendees looking to DARCA as a potential organizer/accrediting entity to both move ditch companies forward and act as an intermediary with municipalities. Suggestions included developing an inventory of best management practices from ditch companies and local government. It was suggested that DARCA could act as a certifying/accrediting entity for ditch companies to encourage standardization and then promote ditch company issues to governments with more certainty.

Workshop III. How Local Governments Can Help Ditch Companies

As part of the 11th Annual Convention of DARCA held March 6-8, 2013, in Grand Junction, Colorado, this workshop was delivered. The convention, Water for Food - Food for Life, focused on issues that farmers and ranchers face in the production of food, forage, and fiber for consumers. Twenty-five speakers gave presentations on current legislation, legal issues, and federal regulations facing agricultural producers and the ditch and reservoir companies that provide them water. DARCA hosted a pre-convention workshop that dealt with water efficiency issues and how they relate to agricultural operations as well as ditch and reservoir companies. Two additional workshops were also held: GIS for Ditch Companies and Canal Safety Please see Agendas for Workshops, Appendix B.

Workshop IV. Enhancing Communication and Reducing Uncertainty Between Local Government and Ditch Companies

The town of Cedaredge co-presented with DARCA a workshop on March 29, 2013 attended by the public, ditch company representatives and government officials. During 2012 Cedaredge reached out to DARCA to help them resolve a longstanding conflict with local private ditch companies. Please see Agendas for Workshops, Appendix B.

Cedaredge has been trying to deal with newly annexed land within the City recently.. However, unincorporated ditch company ditches and their easements crisscross the town and they have been unable to identify some of the ditches/laterals and locate the appropriate ditch company contacts. They contacted DARCA to put together a workshop focused on strengthening relationships with local ditch companies and agriculture while also providing information about ditch company incorporation. This workshop focused on the need for more inclusive and coordinated development processes to bring ditch companies to the table. In addition, reciprocal incentive structures to encourage ditch companies to organize in return for favorable land use code treatment were discussed as a viable solution.

Model Code Principles

Through these fact finding workshops and research into land use codes in Colorado many important insights have been identified and features of existing local ordinances have been recognized as particularly useful for helping ditch and reservoir better navigate today's complex environment. Six especially prominent principles are recommended.

I. Easements – Many ditch companies expend their limited resources defending their right to run water and maintain their ditches. Although the case law in Colorado is strong in defending ditch company easements, they do not do a good job clearly defining the boundaries and extent of ditch easements. As a result, the cost to ditch companies to protect this right can be substantial. In lieu of seeking relief through the courts, beneficial and clear land use codes are better suited to reduce conflicts by better defining these property rights.

Recommendations: A better definition of ditch company property rights can be accomplished by either prohibiting structures or improvements in the ditch easement or by specifically defining the width of the easement.

Example:

Garfield County: “A maintenance easement of at least 25 feet from the edges of the ditch banks shall be preserved and indicated on any Final Plat for the Subdivision, or the final development plan for any nonsubdivision use.”

II. Liability – Liability issues along ditches is a serious concern especially in the urban environment in the close proximity of houses and public trails.

Recommendations: The local governmental entity can require developers to develop a risk assessment plan, provide signs to keep residents out of the ditch, indemnify the ditch company in case of harm, and to provide adequate liability insurance.

Example:

Chaffee County: “Require execution of an agreement binding the property owner and all future property owners to accept all liability for damage caused by the improvements installed in the ditch.”

III. Ditch Company Organization – At times, local government becomes frustrated when dealing with ditch companies. City or county officials may not know where all the ditches or laterals are located. The ditch may be informally organized and a contact person may be difficult to locate. This may arise due to the lack of formal corporate organization and formalities.

Recommendations: Land use codes can be constructed whereby certain protections or incentives are granted to ditch companies if the companies adhere to a formal business structure including the designation of a contact person. These could take the form of assistance with maintenance or other favorable treatment of incorporated ditch companies.

Example: No examples found. However, the workshop in Cedaredge demonstrated the need by city officials to better identify ditches, their shareholders, and responsible parties so that development in the area of the ditch could be achieved in a more coordinated and efficient fashion.

IV. Review Process and Notice Procedures - Just as a variety of stakeholders must be notified and given the formal opportunity to engage in development review process, ditch companies, as owners of easement rights in the affected area, should also be included in similar ways.

Recommendations: Specific notice and consent processes for development should be required before a development is approved that impact the ditch.

Example:

Grand County “Approval from the ditch owner or the ditch company to cross the ditch easement prior to any disturbance of the ditch shall be required. The developer shall be required to provide the ditch easement owner with design drawings and hydraulic analysis of the proposed crossing. The developer or owner is responsible for all costs associated with any review plans or specifications for ditch crossings by the ditch company.”

V. Overtopping of Ditches and Seepage – Unfortunately, homes and businesses have been placed adjacent to ditches where water from the ditch has historically seeped. Similarly, ditches have historically overtopped when during extreme precipitation events.

Recommendations: Ditch company problems regarding seepage can be alleviated by the prohibition of below grade improvements in the vicinity of a ditch. Floodplain areas are adopted in land use codes when dealing with natural creeks and rivers. However, floodplain restrictions have not been extended to manmade ditches that act like natural waterways but should be.

Examples:

Chaffee County: “Commissioners may require a developer to improve the ditch within the subdivision by fencing, lining, piping, or other means where increased activity, geography, density, or other conditions create unreasonable liability for the ditch company, or to protect new residential development from damage due to seepage or flooding. “

Pitkin County: Ensure that no building shall be constructed immediately downhill of a ditch unless the ditch can be placed in a culvert, lined, or otherwise treated to avoid leakage of water downhill towards the building.

VI. Stormwater and Water Quality Many ditches have become repositories for stormwater discharge that has resulted in an increased likelihood of overtoppings. Additionally, water quality concerns are becoming more critical since most ditch company systems are considered waters of the U.S.

Recommendations: It would be beneficial for ditch companies to have land use codes prohibiting the introduction of stormwater into the ditch.

Example:

Dolores County: “No development or change in land use shall channel storm water or snowmelt runoff into any irrigation system without the written consent of the responsible irrigation entity.”

Conclusion

Ditch and reservoir companies are an integral part of Colorado's agricultural landscape and they provide many benefits beyond running water through their canals to their farmer shareholders. These additional benefits, often referred to as positive externalities, enhance local communities and provide eco-system services. The development of more productive relationships with local governmental agencies including a better definition of property rights through local land use code changes can significantly assist ditch companies to prosper in the 21st century. Policies for inducing change should be crafted so that as much benefit is produced with the least amount of cost. The impact of the report's recommendations appears to be widespread and meaningful while the cost of implementing them is fairly insignificant.

Next steps in the continuation of this work will include disseminating this information to DARCA members and to municipalities and county government. DARCA has a continuing interest in offering more workshops in the state.



DARCA

Ditch and Reservoir Company Alliance

DARCA Model Land Use Codes

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[Development](#)

[Archuleta County](#)

Development occurring on land containing irrigation ditches, canals, or operating under legal water rights, shall comply with the following, as required by the respective ditch company or ditch owners:

The number of ditch crossings, locations, and sizes shall be approved by the ditch company or ditch owners.¹

[Boulder County](#)

No development, use, encroachment, or alteration in, on or over any part of the floodway shall be permitted. However, the open use of utility facilities such as dams, power plants, spillways, transmission lines, pipelines, water monitoring devices, water supply ditches, irrigation ditches and laterals shall be permitted within the floodway to the extent that they are not prohibited in a particular area by an underlying zoning district and only if they do not adversely affect the efficiency of the floodway, change the direction of the flow or increase

¹ Archuleta County Land Use Regulations. Section 6. May 2006.

base flood heights. Applications for floodplain development permits are to be submitted to the County Engineer and shall include (for ditch companies): a completed application form with all necessary information completed as well as a plan at a scale 1"=200' or larger, stamped by an engineer registered by the State of Colorado including the existing water supply ditches as well as irrigation ditches and laterals. The County Engineer shall then consider the effect of the proposal on any tributaries to the main stream, drainage ditches, water supply, and irrigation ditches, or any other drainage or irrigation facilities or systems.²

Costilla County

The proposed division and development of the land provides adequate buffers between water bodies and development to protect water quality, enhance wildlife habitat and improve visual quality of rivers, lakes, wetlands and irrigation ditches and avoid sedimentation and runoff impacts during and after development including those impacts that affect irrigation ditches.³

Dolores County

Where irrigation ditches, canals or pipelines cross or adjoin the land proposed for development or change in land use, adequate provisions shall be made to ensure that the use of ditches, including the maintenance thereof, can continue uninterrupted. Ditch rights-of-way shall be recognized. Existing historical easements used to gain access to irrigation distribution systems and associated fences for maintenance shall be preserved or replaced with alternate easements suitable for a continuation of historic use.⁴

Chaffee County

Setbacks from ditches shall be measured from the centerline of the ditch and/or ditch easement. The minimum setback from ditches shall be 30 feet when uphill from the ditch, and 60 feet when downhill from the ditch. The Board of County Commissioners may require restrictions on the depths of future excavations for foundations or basements, or require an increase in the setback distance to protect the integrity of the ditch. Setbacks may be reduced to one-half if the developer lines the ditch with materials acceptable to the ditch owner.⁵

Development and use guidelines associated with the Residential (RES) zone district include:

1. Developments that respect and consider natural land characteristics (trees/vegetation, drainage ways, floodplains, wetlands, wildlife and irrigation ditches.)⁶

² Boulder County Land Use Department.

³ Costilla County Land Use Code. Division 1 Zoning.

⁴ Dolores County. Development and Land Use Regulation. December 2007.

⁵ Chaffee County Land Use Code. Adopted Feb 2002.

⁶ Chaffee County Land Use Code. Article 2 Zoning.

A property owner's use of ditch water is limited by state law.⁷

Custer County

All persons and corporations shall have the right-of-way across public, private, and corporate lands for the construction of ditches, canals, and flumes for the purpose of conveying water for domestic purposes, for the irrigation of agricultural lands, and for mining and manufacturing purposes, and for drainage, upon payment of just compensation.⁸

Eagle County

If irrigation water is to be made available in a development, it shall be the responsibility of the applicant to install an acceptable delivery system. The applicant and irrigation ditch owner shall collaborate on any necessary improvements to the ditch or attendant structures prior to final approval of the development. Such improvements shall be considered public improvements and shall be collateralized, constructed and subject to the terms and conditions of the other public improvements in the development.⁹

Grand County

Development of the land that contains irrigation ditches requires that the landowner or developer respect the rights of the ditch owner's access and maintain the ditch without any increase burden of maintenance or liability due to the development of the land.¹⁰

Garfield County

Maintenance. Where irrigation ditches cross or adjoin the land proposed to be developed, the developer shall insure that the use of those ditches, including maintenance, can continue uninterrupted.¹¹

Montezuma County

Where irrigation ditch and (or) pipeline cross or adjoin the land proposed to be developed, adequate provisions shall be made to insure that the use of such irrigation ditches and (or) pipelines, including the maintenance thereof, can continue uninterrupted. Ditch rights-of-way shall not be interfered with and an adequate maintenance easement including gates at fences crossing ditch easements shall be provided.¹²

Pitkin County

Where irrigation and waste water ditches, pipelines, waterways or any other means of

⁷ Chaffee County Land Use Code. Effective 2/15/14.

⁸ Custer County Zoning Resolution.

⁹ Eagle County. Land Use Regulations. Article 4. Updated July 2011.

¹⁰ Grand Country Rural Land Use Process. November 2008.

¹¹ Garfield County Unified Land Use Resolution. October 2008.

¹² Montezuma County Land Use Code. September 2010.

conveyance cross or adjoin the land proposed to be developed, adequate provisions shall be made to ensure that their use, including the maintenance thereof, will continue uninterrupted. Ditch rights of way shall be recognized and/or granted if not already established.

Ensure that no building shall be constructed immediately downhill of a ditch unless the ditch can be placed in a culvert, lined, or otherwise treated to avoid leakage of water downhill towards the building.¹³

Ditch Crossings

Boulder County

Road crossings over a public water course or ditch shall be bridged or culverted in a manner consistent with the County's requirements, standards, and specifications and in accordance with the hydraulic requirements of the ditch company. The ditch company shall be consulted regarding all proposed ditch crossings and written consent of the ditch company may be required by the County Engineer for such crossings.¹⁴

Applicants shall use boring technology or alternative director-approved most effective performance techniques and practices when crossing streams, rivers or irrigation ditches with a pipeline to minimize negative impacts to the channel, bank, and riparian areas.¹⁵

Chaffee County

Development of land crossed by irrigation ditches requires respecting rights of ditch owner(s) to operate and maintain their ditch without an increased burden of maintenance or liability due to land development and subdivision. Subdivision layouts should attempt to minimize ditch crossings by roads and driveways. As a minimum all irrigation ditch crossings, including crossings by private driveways under 500 feet, shall:

1) Require the crossing to be sized to not interfere with the ditch operations or change existing hydraulic flow characteristics (flow width, depth, slope, velocity or flow pattern) established within the ditch. Crossings shall not reduce the existing average ditch width within 100 feet upstream and downstream of the proposed crossing. Minimum clear height (invert level of ditch to bottom of crossing at the ditch centerline) shall be at least 60% of the width and pass the maximum flow possible in the ditch, including the maximum total ditch flow

¹³ Pitkin County Land Use Code. July 2006

¹⁴ Boulder County Land Use Code. July 2012

¹⁵ Boulder County Land Use Code. July 2012

rights and possible runoff which may flow into and be carried by the ditch. Provision shall be made for routine inspection of the crossing entrance and removal and disposal of trash.

2) Provide vehicle and maintenance equipment access to the ditch from both sides of the ditch crossing from all roads for use by the ditch owner(s). Allow access to all ditch crossings throughout the road system.

3) Require a letter from the ditch owner(s) or ditch company approving the crossing(s) prior to any permit application or construction within the ditch easement. The developer of the ditch crossing shall provide the ditch owner(s) with design drawings and hydraulic analysis of each crossing for which approval is requested.

4) Require execution of an agreement binding the property owner and all future property owners to accept all liability for damage caused by the improvements installed in the ditch.

5) Require execution of an agreement requiring present and future property owners to maintain the crossing and to keep it and the ditch access easement safe and free of trash at all times. Maintenance shall include without limitation frequent and timely trash and debris removal, repair or replacement of the crossing as needed, and construction of improvements to the crossing as may be considered necessary by the developer, property owners, or ditch owner(s). Ditch owners shall be notified prior to any work being performed within the ditch easement.

6) The BOCC may require specific improvements to ditch crossings to limit liability to ditch owners caused by the crossing, improvements or realignment. Improvements may be required to address safety concerns, minimize flood danger, or to protect downstream water rights.

7) Ditch crossings by any utility within any public or private right-of-way shall meet the requirements of this code with regard to permits and agreements required, construction, maintenance, and minimizing of flood danger. Additionally, underground utility locations in the right-of-way shall be marked on each side of the ditch.¹⁶

Crossing of ditches (including without limitations roads, driveways, bridges, culverts, utilities, fords and fences) may unduly interfere with or hinder ditch operations and are therefore subject to the reasonable control and prior consent of ditch owner(s).¹⁷

¹⁶ Chaffee County Land Use Code. Adopted Feb 2003.

¹⁷ Chaffee County Land Use Code. Effective 2/15/14.

Costilla County

Where irrigation ditches cross or adjoin land proposed to be developed, the developer shall insure that the use of those ditches, including maintenance, can continue uninterrupted. The proposed land use change shall not interfere with the ditch rights-of-way.¹⁸

Garfield County

Where irrigation ditches cross or adjoin the land proposed to be developed, the developer shall insure that the use of those ditches, including maintenance, shall continue uninterrupted.¹⁹

Grand County

If a ditch crossing is necessary the following rules must apply, at a minimum.

1. Crossings shall be roads or driveways whenever possible

The crossing shall be sized as to not interfere with the ditch operation or alter the existing flow characteristics

2. Provide access to the ditch from all roads that allow vehicles and maintenance equipment access to the ditch, on both sides

3. Approval from the ditch owner or the ditch company to cross the ditch easement prior to any disturbance of the ditch shall be required. The developer shall be required to provide the ditch easement owner with design drawings and hydraulic analysis of the proposed crossing. The developer or owner is responsible for all costs associated with any review plans or specifications for ditch crossings by the ditch company.

4. An executed agreement binding the property owner and all successor property owners to accept all liability for damage caused by improvements installed within the ditch or ditch easement.

5. An executed agreement that requires current and successor property owners to maintain the ditch crossing and keep it and the ditch access easement safe and clean at all times. Maintenance shall include but not be limited to trash removal as well as repair or replacement of the crossing when necessary. Ditch owners or easement owners shall be notified in writing by certified mail prior to any disturbance within the ditch easement.

6. The Board of County Commissioners, through the Planning and Zoning Department, may require specific improvements to the ditch crossings in order to limit the liability of ditch

¹⁸ Costilla County Land Use Code. Division 1 Zoning

¹⁹ Garfield County Land Use and Development Code. Effective July 15, 2013.

owners or ditch easement owners caused by any approved ditch crossings or improvements. These improvements may be required in order to minimize the possibility of flooding or to protect downstream water rights. The cost of these improvements shall be paid by the developer.

7. All utilities crossing the ditch must be cased, at as near a right angle as feasible and installed at a minimum of five feet from the bottom of the ditch to the top of the casing. This is to allow for future cleaning and ditch maintenance.

8. Any approved ditch crossing by any utility company shall be cased so future maintenance of the carrier pipe will not interfere with the operation of the ditch. Additionally, the location of any crossing shall be clearly marked on each side of the irrigation ditch.

9. All open cuts across any irrigation ditch are only allowed during the off season while the ditch is dry and shall be replaced with a four inch thick impermeable soil barrier places on the ditch bottom and banks. The barrier walls shall meet soil classification CL of ML-CL and shall be compacted to 95 percent of the standard proctor density.

10. Utilities installed during the irrigation season while the ditch is in operation must be bored as to not interrupt the operation of the ditch.²⁰

Gunnison County

Crossings to avoid wetlands, irrigation ditches distribution. All crossings shall be engineered to avoid drainage of existing wetlands and not to impede the historic flows of irrigation ditches.

Land use changes shall not interfere with ditch rights-of-way. Where irrigation ditches cross or adjoin the land proposed to be developed, a condition of a Land Use Change Permit shall include requirements to insure that the use of those ditches, including their maintenance, can continue uninterrupted.²¹

Hinsdale

Where driveways cross existing roadside ditches, a dip section providing an unobstructed waterway equivalent to the full area of the ditch shall be constructed if grades are feasible. Where grades are not feasible, a culvert pipe of a diameter six inches (6") less than the depth of the ditch, but not less than fifteen inches (15") shall be installed. When the required culvert exceeds four (4) square feet in cross-sectional area, the design of the driveway culvert shall be reviewed for adequacy by the County Engineer. The pipe shall be CSP, aluminum or RCP.²²

²⁰ Grand Country Rural Land Use Process. November 2008.

²¹ Gunnison County, Colorado. Land Use Resolution. Amended December 2012.

²² Hinsdale County. Zoning and Development Regulations. Adopted December 2012.

Pitkin County

Water crossing or diversion means a ditch, pipe, bridge, culvert, structure for irrigation, drainage, flood control, or water diversion, or other pathway in which or through which water is moved or allowed to move from one point to another, in accordance with Colorado law, for purposes of irrigation, agricultural use, or domestic use within Pitkin County.²³

Easements

Archuleta County

Irrigation ditches and canals shall be protected through the provision of adequate right-of-way easements to provide access for equipment to clean and maintain the ditch.

No structures shall be placed within these right-of-ways or easements without written permission from the appropriate ditch company or ditch owners.

Ditch or canal right-of-way or easements shall not be used as access to projects. Gates of adequate width shall be provided for the maintenance of ditches by ditch right holders.

Fences shall be designed and placed in such a manner as to not interfere with the easement.²⁴

Boulder County

The ditch easement shall extend the length of the ditch through the subject property and the size of the ditch easement shall be based on the following:

- a. The minimum ditch easement shall be the area between the ditch banks, as measured between the top of each bank plus 15 feet on one side of the ditch and five feet on the other side of the ditch to provide for vehicular access and maintenance activities.
- b. Additional easement width may be required where the ditch company can demonstrate the legal right for the additional width in order to continue the historic maintenance and/or use of the ditch.
- c. Additional easement width may be required where there is a dedication of land paralleling the ditch easement for a needed public purpose.
- d. Except where otherwise where otherwise provided, the ditch easement shall be an exclusive easement for the use of the ditch company. Exceptions to an exclusive easement will be at road right-of-way,²⁵ along trails or bikeways and where drainage and other utility easement are overlapping.

²³ Pitkin County Land Use Code. July 2006

²⁴ Archuleta County Land Use Regulations. Section 6. May 2006.

²⁵ Boulder County Land Use Code. July 2012.

Ground-mounted solar energy collectors may not be located within ditch easements unless authorized by the easement-holder in writing.

Chaffee County

The Constitution and Statutes of the State of Colorado define Ditch Easements. Additionally, other ditch easements may have been specified as part of the ditch decree or other action. All applications must show all ditch easements on the plat. If available, the reception number of the ditch formation must be shown on the plat. The plat shall show existing and new ditches and ditch laterals and contact information for all ditch owners or for the ditches' designated contact. The plat shall also identify the locations of head gates and other irrigation related items within the proposed subdivision that are necessary for the operation of the ditch. Lot access driveways will not be permitted within the ditch easement without written agreement of the ditch companies or owners. The Board of County Commissioners may require a developer to improve the ditch within the subdivision by fencing, lining, piping, or other means where increased activity, geography, density, or other conditions create unreasonable liability for the ditch company, or to protect new residential development from damage due to seepage or flooding.²⁶

Pursuant to Colorado law and County resolution/ordinance, irrigators have the right to maintain irrigation ditches, at any time and without notice to the property owner, through easements that transport water for their use and such irrigation ditches are not to be used for the dumping of refuse. The determination of the need for and nature and method of ditch maintenance is solely up to the ditch owner(s), provided that the ditch owner(s) is working within the easement and complying with applicable law.²⁷

Under Colorado law, a ditch owner has an easement as wide as reasonably necessary for maintenance, operation and repair of the ditch. Such an easement may exist over private property. The County recommends that the easement be wide enough to provide continuous vehicular access along the length of at least one side of the ditch (typically, 15 feet, however access issues and terrain may necessitate a different width) in order to facilitate maintenance. If there are existing trees within easement, the easement shall be located adjacent to the trees, so that the trees will not hinder access. Nothing in this recommendation is intended to alter state law or other rights or agreements that may define the width of such easement. If there is a dispute regarding the width or extent of such easement, the County recommends that the parties utilize the Agricultural Land Use Conflict Resolution Program.²⁸

²⁶ Chaffee County Land Use Code. Adopted Feb 2002.

²⁷ Chaffee County Land Use Code. Effective 2/15/14.

²⁸ Chaffee County Land Use Code. Effective 2/25/14.

Costilla County

A maintenance easement of at least twenty five (25) feet from the edges of the ditch banks shall be preserved and indicated on any final plat for subdivision, or the final development plan of any non-subdivision use. When approved in notarized written form by the ditch owner(s), that distance may be decreased.²⁹

Eagle County

Irrigation ditch easements shall be provided for all irrigation ditches crossing the proposed development, unless the applicant can prove conclusively that they have been legally abandoned. Irrigation ditch easements shall be of a width equal to the average ditch width plus twenty (20) feet, or as otherwise recommended by the ditch owner and as approved by the Board of County Commissioners.³⁰

Garfield County

A maintenance easement of at least 25 feet from the edges of the ditch banks shall be preserved and indicated on any Final Plat for the Subdivision, or the final development plan for any nonsubdivision use. When approved in notarized written form by the ditch owner(s), that distance may be decreased.³¹

Gunnison County

Planned and existing, recorded or apparent easements shall be shown, including 25-foot easements from each irrigation ditch bank pursuant to Section 11-109: G. 2.: Irrigation Ditch Easements, watercourses, public utilities, drains, sewers, snow storage areas, roads and paths or trails crossing the property, the closing or changing of which might affect the rights of others or result in damage to the property of the owner.

A maintenance easement of at least 25 feet from the edges of the ditch banks shall be preserved and indicated on any Final Plat for subdivision, or in the Final Plan for any nonsubdivision use. For parcels that are the subject of Land Use Change Permits, Building Permits or Individual Sewage Disposal System Permits, access for maintenance of an irrigation ditch is required to be 25 feet from each ditch bank. When approved in notarized written form by the ditch owner(s), that distance may be decreased and existing historical easements used to gain access to ditches, headgates, and fences for maintenance or operational purposes shall be preserved or replaced with reasonable alternate easements suitable for continuation of the historic use.³²

²⁹ Costilla County Land Use Code. Division 1 Zoning.

³⁰ Eagle County. Land Use Regulations. Article 4. Updated July 2011.

³¹ Garfield County Unified Land Use Resolution. October 2008.

³² Gunnison County, Colorado. Land Use Resolution. Amended December 2012.

Pitkin County

Existing historical easements utilized to gain access to ditches, headgates and fences for maintenance shall be preserved or replaced with alternate easements suitable for a continuation of historic use.

Provide for access to irrigation ditches by ditch owners and to the public if a ditch is to be, or is part of the Pitkin County Open Space and Trails System or other public property.³³

Alteration of the Ditch

Boulder County

Normal agricultural grading that is exempt from the Grading of more than 500 Cubic Yards definition (movement of more than 500 cubic yards of material) includes creating or altering ditch irrigation laterals.³⁴

Chaffee County

When an irrigation ditch passes through a subdivision, the applicant shall provide written consent from the ditch owner agreeing to any proposed movement or alteration of the ditch easement OR shall provide proof of a declaratory determination from a court that the proposed changes will not significantly lessen the utility of the easement, increase the burdens on the owner of the easement, or frustrate the purpose for which the easement was created (namely, the movement or alteration must not adversely affect the ditch owner's maintenance rights and the water provided to the ditch owner must be of the same quantity,* quality, and timing as provided under the ditch owner's water rights and easement rights in the ditch). Any written consent or agreement shall be recorded with the Chaffee County Clerk and Recorder prior to Preliminary Plan submission.³⁵

Custer County

Any person owning a water right or conditional water right shall be entitled to a right-of-way through the lands which lie between the point of diversion and point of use or proposed use for the purpose of transporting water for beneficial use in accordance with said water right or conditional right. This right extends to ditches.³⁶

³³ Pitkin County Land Use Code. July 2006.

³⁴ Boulder County Land Use Code. March 5 2015

³⁵ Chaffee County Land Use Code. Adopted Feb 2003.

³⁶Custer County Zoning Resolution.

Garfield County

Irrigators have the right to maintain irrigation ditches through established easements that transport water for their use, and said irrigation ditches are not to be used for the dumping of refuse. Landowners are responsible for controlling weeds, keeping pets under control, and other aspects of using and maintaining property in accordance with County regulations. Residents and landowners are encouraged to learn about these rights and responsibilities and to act as good neighbors and citizens of the county.³⁷

Gunnison County

Pursuant to Colorado law, owners of irrigation ditches have the right to maintain irrigation ditches, headgates and other diversion structures. Gunnison County shall not require mitigation that will interfere with the right of ditch owners to maintain ditches, headgates or other diversion structures.³⁸

Site Plans and Maps

Boulder County

Natural, as well as artificial drainage ways, ditches, streams, and lakes must be indicated in the site plan and recognized during development. In addition, there must be a schematic and narrative representation of the proposed land use that includes natural and artificial drainage ways, ditches, streams, and lakes. Ditches, artificial and natural drainage ways, streams, and lakes are to be also represented on an exemption map. The purpose of the exemption map is to clearly identify boundary lines and dimensions of the land that are to be exempted.³⁹

Eagle County

Ditches engineered to convey more than fifteen (15) cubic feet of water per second of time or to serve a domestic supply for ten (10) units or more shall comply with the following standards:

1. Public Need: Such uses shall serve an obvious public need.
2. Energy Supply: There shall be a sufficient supply of electrical energy to serve the ditch in order to not jeopardize future domestic requirements.
3. Safety: The ditch shall be built in a prudent matter, so as to preserve public safety.
4. Minimum Use of Land: The ditch shall be environmentally engineered so as to use the minimum amount of private land.

³⁷ Garfield County Unified Land Use Resolution. October 2008.

³⁸ Gunnison County, Colorado. Land Use Resolution. Amended December 2012.

³⁹ Boulder County Land Use Code.

5. No Adverse Impacts on Wildlife: The facilities shall not adversely affect fish populations, wildlife habitat, or migratory ranges.
6. No Adverse Impacts on Private or Public Property: The ditch facilities shall not adversely affect private or public property owners in the vicinity. Appropriate studies shall be constructed to illustrate the impact of ditch development.
7. Preliminary Subdivision Plan: This use shall only require Special Review when it is not specifically addressed in an approved preliminary subdivision plan.⁴⁰

Garfield County

Site plans are required for the location of existing water supply ditches, irrigation ditches, and laterals. A sketch map plan may be required as well.⁴¹

Montezuma County

Maps shall show the name of development, date of preparation, scale, and arrows designating true north. Maps shall be of a scale to permit adequate review: The sheet size shall be twenty-four (24) by thirty-six (36) inches. Maps shall include:

3. Location and associated easements of boundary fences, irrigation ditches, pipelines and utilities, proposed and existing, associated with proposed development.⁴²

Ouray County

Following preliminary design approval, and in accordance with the approved preliminary design, all design work is to be prepared and signed by a Professional Engineer registered in the State of Colorado. Plans sufficiently detailed to facilitate review are to be submitted to the County Engineer for approval at least 60 days prior to anticipated construction; or, in the case of subdivisions or PUDs, in accordance with the submittal deadlines for consideration of, or recommendation for preliminary approval by, the Planning Commission. Plan approval is valid for one year. After one year, if construction is not started, the detailed design must be re-submitted and revisions in standards made in the interim shall apply. Alternately, a phasing schedule may be submitted for approval. Plans shall include the following:

- (g) Letters from utility companies, ditch companies, fire departments, and other interested parties or agencies involved, stating their approval of any structure constructed within their right-of-way or which may influence their rights or interests.⁴³

⁴⁰ Eagle County Land Use Regulations.

⁴¹ Garfield County Unified Land Use Resolution. October 2008.

⁴² Montezuma County Land Use Code. September 2010.

⁴³ Ouray County Land Use Code. Revised December 2010.

Maintenance

Eagle County

Irrigation ditch owners shall be responsible for the maintenance of the ditch and any attendant structures unless other written agreements are entered into between the applicant and ditch owner. Such agreement(s) shall be filed as part of the final approval documents. Maintenance within the public way shall require the applicant to obtain a "Permit To Construct Within the Public Way Of Eagle County", which is administered by the Eagle County Engineer's Office.⁴⁴

Garfield County

Irrigators have the right to maintain irrigation ditches through established easements that transport water for their use, and said irrigation ditches are not to be used for the dumping or refuse.⁴⁵

Gunnison County

Irrigators' right to maintain irrigation ditch. Language notifying individual lot owners that an irrigation ditch owner has the right to enter the designated irrigation ditch maintenance easement, maintain the ditch, and may leave natural debris on the bank.⁴⁶

Drainage

Boulder County

Unless otherwise approved by the County Engineer and the applicable ditch company, ditches are not intended to be used as drainage facilities.⁴⁷

City of Cortez

Adequate Drainage Required. A developer shall provide, at his expense, drainage structures that will become integral parts of the existing street or roadway drainage system, and the dimensions of all drainage structures must be approved by the city public works director prior to installation. The developer shall show that the drainage plan complies with existing master drainage plan of the city and failure to provide such proof will constitute grounds for denial of the application. Drainage structures and ditches shall be of size and nature sufficient to carry the calculated storm water from streets, roadways and open drainage areas as based on standard engineering principles. A grading and drainage plan as described below shall

⁴⁴ Eagle County. Land Use Regulations. Article 4. Updated July 2011.

⁴⁵ Garfield County Land Use and Development Code. Effective July 15, 2013.

⁴⁶ Gunnison County, Colorado. Land Use Resolution. Amended December 2012.

⁴⁷ Boulder County Land Use Code. July 2012.

accompany any application that may require a drainage study. The plan shall be prepared signed and sealed by a professional engineer of the state or Colorado.⁴⁸

Garfield County

Drainage ditches shall have a minimum Slope of no less than 0.75%. Energy dissipaters or retention ponds shall be installed in drainage ditches where flows are in excess of 5 feet per second. Ditches adjacent to roads shall have a maximum Slope of 3:1 on the inside and outside edges, except where there is a cut Slope on the outside edge, in which case the edge of the ditch shall be matched to the cut Slope.⁴⁹

Park County

Land uses and development design shall not permit surface waters to be directed or collected to active and legally recognized irrigation and mining ditches without the consent of the ditch owner as evidenced by written easement or other documentation.

No operator shall channel storm water, produced water or snowmelt runoff into any irrigation system without the written consent of the responsible irrigation entity.⁵⁰

Dolores County

No development or change in land use shall channel storm water or snowmelt runoff into any irrigation system without the written consent of the responsible irrigation entity.⁵¹

Urbanization

Boulder County

Unless otherwise approved by the County Engineer and the applicable ditch company, ditches are not intended to be used as drainage facilities.

If the Board determined the existence of a ditch through a proposed development may result in improper use of that ditch for recreational purposes by residents of the development, the developer may be required by the Board to take protective measures.⁵²

⁴⁸ City of Cortez Land Use Code. Amended March 2007.

⁴⁹ Garfield County Land Use and Development Code. Effective July 15, 2013.

⁵⁰ Park County Land Use Regulations. Adopted April 2012.

⁵¹ Dolores County. Development and Land Use Regulation. December 2007.

⁵² Boulder County Land Use Code. July 2012.

Water Quality

Archuleta County

At no time shall solid or liquid waste be discharged in any manner on the surface of the ground within State and local regulations of a specific water source, as well as directly into a well, reservoir, lake, stream, or ditch.⁵³

Chaffee County

Open ditch operations often result in historical cleanouts, seepage, and spills of storm water in unpredictable locations and times. A ditch owner shall not be liable for any injury to persons or property resulting from unauthorized use of the ditch, including without limitation, wading, tubing, floating, and fishing.⁵⁴

San Miguel County

Commercial Feedlot

A commercial feedlot in the WMRA zone district shall comply with the following standards:

iv. Water Protection: No unconfined manure stacking or piling shall occur within the Source Water Protection Area Overlay (as set forth in Section 5-319 J), within 300 feet of a stream, or within 100 feet of an irrigation ditch.⁵⁵

Chaffee County

When an irrigation ditch passes through a subdivision, the applicant shall provide written consent from the ditch owner agreeing to any proposed movement or alteration of the ditch easement or shall provide proof of a declaratory determination from a court that the proposed changes will not significantly lessen the utility of the easement, increase the burdens on the owner of the easement, or frustrate the purpose for which the easement was created (namely, the movement or alteration must not adversely affect the ditch owner's maintenance rights and the water provided to the ditch owner must be of the same quantity,* quality, and timing as provided under the ditch owner's water rights and easement rights in the ditch). Any written consent or agreement shall be recorded with the Chaffee County Clerk and Recorder prior to Preliminary Plan submission.⁵⁶

⁵³ Archuleta County Land Use Code.

⁵⁴ Chaffee County Land Use Code. Effective 2/15/14

⁵⁵ San Miguel County Land Use Code Amendments. Article 5. 2009.

⁵⁶ Chaffee County Land Use Code. Adopted Feb 2003.

Interpretation of Ditch Boundaries

Archuleta County

Boundaries of ditches are indicated by a centerline of the ditch. All ditches, rivers, irrigation canals, streams, canals, and any other body of water shall be determined by the center lines.⁵⁷

Boulder County

The minimum lot size for lot, building, and structure requirements are 35 acres. The minimum setbacks from an irrigation ditch is 50 feet from the centerline of the ditch. However, this requirement only affects structures that have been built after October 10, 1996. This setback can be reduced to 20 feet from ditch centerline with a letter from the applicable ditch company that establishes a new setback. This new setback must always be aligned with County concurrence.⁵⁸

Chaffee County

Building envelopes shall be required for all properties adjoining or adjacent to an irrigation ditch which are undergoing a Land Use Change (as defined in the County's Land Use Code), minor plat correlation, lot line adjustment, any building code permit, or Individual Sewage Disposal System Permit after the effective date of the Ordinance. No structures, including overhangs, shall be located within the setback.

1. Adjacent Grade 5 Percent or Less: Where the grade of the existing land within the area between 40 feet of the ditch and the intended building envelope is five (5) percent or less, shall show a minimum 20 foot setback from each side of the ditch, measured from the ditch bank.
2. Adjacent Grade Greater than 5 Percent: Where the average grade of the existing land within the area between 40 feet of the ditch and the intended building envelope exceeds five (5) percent, shall show a minimum 20 foot setback from the uphill side of the ditch and minimum 40 feet from the downhill side of the ditch, measured from the ditch bank.
3. Additional Setback Required: Greater setbacks may be required by other provisions of the Chaffee County Land Use Code (including zoning regulations) or by the Board where warranted because of public safety, terrain or other circumstances; specifically to include disturbances to the ditch embankment.
4. Reduced Setback: Setbacks can be reduced by the ditch owners in accordance with Section 3.1.3 D. A lesser setback may also be approved by the Board in circumstances in which the applicant can demonstrate construction within the

⁵⁷ Archuleta County: Section 3 Zoning Amendments

⁵⁸ Boulder County Land Use Code.

building envelope will cause no possible harm to the ditch owner's water right, limit any maintenance operations and property owner and successor property owners will indemnify the ditch operator from any damage claims resulting from any water damage.⁵⁹

⁵⁹ Chaffee Count Land Use Code. Effective 2/15/14.