

Town of Olathe Water Rights Assessment



Prepared for:

Town of Olathe
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1.0 INTRODUCTION AND PURPOSE

The Town of Olathe (Olathe) owns several pre-Colorado River Compact (pre-1922) water rights that are not currently fully utilized because Olathe currently receives a majority of its water from the Project 7 Water Authority (Project 7). Project 7 was formed in the summer of 1973 due to water shortage issues, which led to construction of a water treatment plant and pipelines to alleviate insufficient water treatment capacity for Olathe and other nearby municipalities.

This study evaluates options for Olathe to protect and enhance its pre-compact water rights, including the evaluation of conceptual cost estimates for the proposed alternative uses. Alternative uses that are explored include: 1) municipal use, 2) agricultural irrigation use, 3) instream flow leasing, 4) inclusion in a Colorado River Water Conservation District Compact Water Bank program, 5) hydropower development, and 6) Pilot CWCB Conservation Program.

2.0 PROJECT LOCATION AND BACKGROUND

2.1 Location

The Town of Olathe is located in Montrose County, Colorado approximately 51 miles southeast of Grand Junction, CO along US-50 (see Figure 1). Olathe was originally supplied water from a pipeline system and reservoir that were constructed to deliver municipal water to Olathe as shown in Figure 2. Water supply for the pipeline system comes from the East Fork Dry Creek and West Fork Dry Creek basins, which are located approximately 20 miles southwest of Olathe, CO (see Figure 3).

2.2 Background

The source for Olathe's municipal water changed due to the implementation of Project 7 in 1980. Project 7 is a cooperative effort between The City of Montrose, City of Delta, Town of Olathe, Tri-County Water Conservancy District, Menoken Water District, Chipeta Water District, and the Uncompahgre Valley Water Users Association (UVWUA), and is governed by a five-member board of directors. When Project 7 was implemented, Olathe was allocated approximately 300 acre-feet (AF), or 2.9 percent, of the total Project 7 water, and continues to

receive approximately the same share. Olathe is currently using approximately 270 AF or 90 percent of its Project 7 allocation. Upgrades to the original Project 7 infrastructure have been made since its implementation. The treatment plant has been expanded to a current capacity of 20.0 million gallons per day (MGD) and now includes two 5-million gallon reservoirs which were constructed in 1995.

3.0 INFRASTRUCTURE

3.1 Citizens Reservoir

Citizens Reservoir (Olathe Reservoir No. 2) is located at the upstream end of the Moffit Springs Pipeline and acts as a storage mechanism for the Town of Olathe pipeline network (see Figure 2). The reservoir is located on private land that is adjacent to Bureau of Land Management (BLM) land. The physical capacity of the reservoir is unknown at this time. The reservoir is considered non-jurisdictional, meaning that periodic inspections by the Colorado Division of Water Resources (CDWR) are not required, but if plans are made to enlarge or modify the dam, notification to the CDWR and associated approval will be required. The reservoir has been kept full in recent years. In addition to municipal and agricultural uses, Citizens Reservoir is used for recreational and piscatorial purposes.

3.2 Pipelines

The Town of Olathe Pipeline, Moffit Spring Pipeline, and East Fork Feeder Pipeline form an approximately 20.8-mile gravity-fed network that conveys water from the East Fork Dry Creek and West Fork Dry Creek basins to Olathe (see Figure 2). The current pipeline follows approximately the same route as the original machine-banded wooden pipe built in 1912. Currently the pipeline consists primarily of steel pipe. Diversion structures are typically concrete and stone. The pipeline has been used in recent years for agricultural and livestock purposes and filling Citizens Reservoir in the upper Dry Creek Basin vicinity. However, the entire length of the pipeline system is not fully functional, especially downstream from Moffit's Gap (see Figure 3).

4.0 WATER RIGHTS

4.1 Town of Olathe Water Rights

Table 1 shows the appropriation dates, decreed uses, and decreed rates for the Town of Olathe Pipeline, Moffit Spring Pipeline, and East Fork Feeder Pipeline. The total combined water rights for the pipeline system equal 2.6 cubic feet per second (cfs) for municipal, domestic, commercial, irrigation, and other uses incident by the inhabitants of Olathe. Points of diversion for each pipeline structure are shown in Figure 2.

Citizens Reservoir has water rights under three decrees for commercial, irrigation, and domestic use (see Table 1 and Appendix A). In 1912, an absolute right was established for 118 AF for storage of domestic, commercial, and irrigation uses, and in 1931 additional rights of 58.67 AF absolute and 64 AF conditional were established for the same uses. In 1985, a decree was filed to add hydroelectric generation as a beneficial use with no additional storage or change in volume.

Appropriation dates for the Town of Olathe Pipeline, Moffit Spring Pipeline, and East Fork Feeder Pipeline range from 1911 to 1933, which largely predate three major water compacts that were formed to ensure water delivery to users in the Colorado River Basin. Compacts dated 1922 (Colorado River Compact), 1944 (Mexican Water Treaty), and 1948 (Upper Colorado River Compact) dictate the State of Colorado's right to consumptive use of water within the Colorado River Basin. The Gunnison Basin currently does not have a specific delivery obligation within any of the three compacts; management practices to meet the requirements of these compacts are ultimately governed by the State Engineer.

4.2 Water Rights Administration

Colorado Water Conservation Board (CWCB) Instream Flow (ISF) water rights have been established for East Fork Dry Creek (05CW151), West Fork Dry Creek (05CW155), and Dry Creek (05CW150) (see Table 2). Appropriation dates for each ISF reach were established in 2005. ISF reach locations are shown in Figure 2, and ISF decrees are provided in Appendix B.

The Town of Olathe water rights as discussed in the previous section are all senior to these ISF rights. The ISF rights consist of two flow regimes, lower flows during the winter months (October 15 to April 30) and higher flows during the summer months (May 1 to October 14). West Fork Dry Creek ISF flows range from 0.3 to 3.4 cfs, East Fork Dry Creek ISF flows range from 0.6 to 3.6 cfs, and Dry Creek ISF flows range from 1.2 to 7.3 cfs. Summer ISF rates for all three streams were based on biological and field survey data, and then adjusted based on the limited water availability during summer months.

Dry Creek is a tributary to the Uncompahgre River. The UVWUA holds several senior water rights along the Uncompahgre River. Return flows for the portion of the UVWUA system located upstream are typically sufficient to meet diversions located along the Uncompahgre River for the lower portion of the UVWUA system. Thus, there are typically no calls from the UVWUA on the water rights in the Dry Creek area. Diversion structures with absolute rights greater than 10 cfs in the vicinity of the Olathe water rights are shown in Figure 2.

There are many current and future issues that will affect water rights administration in the Gunnison Basin, including the Town of Olathe. Population growth in the headwaters of the Gunnison Basin will require additional management due to increased demands and possible changes in land use. Agricultural water shortages are present throughout the area and will continue to be a challenge. Federal issues involving in-stream flows for threatened and endangered species, as well as trans-basin diversions, may also affect the future of water rights administration for the Town of Olathe. Population growth in the Town of Olathe is also a factor that will play a role in water rights administration. From 1900 to 2010 the average annual growth rate was 1.4 percent (see Table 3).

4.3 Historical Water Use

The availability of historical diversion records for each decreed structure is limited. There is ambiguity in the available diversion records, as typically the entire pipeline system was treated as a whole. CDWR historical diversion records are provided in Table 4, with average values used to fill in gaps. Historical diversion records from 1912 to 1980 show an average 415 AF per

year diverted through the Town of Olathe Pipeline (see Table 4). After the Town of Olathe connected to Project 7 in 1980, average Town of Olathe Pipeline diversions are estimated as 88 AF per year for reservoir filling and livestock use (see Table 4). Because of the reduced diversions after 1980, the 1912 to 2014 average diversion is estimated at 292 AF per year (see Table 4).

Current information regarding diversion data can be found using the Colorado Decision Support System (CDSS) tools online at www.cdss.state.co.us. The East Fork Dry Creek structure records in CDSS show that water was diverted from 1991-1993 for stock and storage use, but there was no measurement of the quantity. The most recent records in CDSS for Citizens Reservoir show that water was diverted from the reservoir in 2003 and 2004, but no specific data was available for either year. For Table 4, WWE filled gaps in the East Fork Dry Creek and Moffit Spring Pipeline diversion records using historical average values from existing diversion records.

WWE recommends monitoring and reporting for all future diversions from the East Fork Dry Creek and Moffit Spring diversion structures.

4.3.1 Agricultural Use

BLM grazing permittees have been using the pipeline system for at least the past fifteen years, but the amount of water diverted has not been documented. Grazing occurs on BLM allotments in the East Fork Dry Creek and West Fork Dry Creek basins, but not all of the allotments in the vicinity of the Olathe Pipeline have access to pipeline water.

Currently there is one BLM grazing permittee who uses water from the Town of Olathe Pipeline, Ernie Etchart. Mr. Etchart holds a grazing permit for approximately 1,000 animal unit months (AUMs) and grazes sheep near Citizens Reservoir. One AUM is a measure of forage that is used to determine the livestock carrying capacity of rangeland. Water is currently diverted off the pipeline downstream of Citizens Reservoir into two small livestock ponds. According to personal correspondence with Mr. Etchart, there may be an opportunity to utilize water from the pipeline for other grazing allotments in the area if repairs are made to the pipeline. He performs some maintenance on the pipeline to keep it functional for livestock use, and would be interested

in participating in future efforts regarding use of the pipeline. There may also be an opportunity to work collaboratively with the BLM to sustain or enhance use of the pipeline for livestock purposes.

4.3.2 Municipal Water Use

The average municipal water delivery to the Town of Olathe is 88,550,500 gallons per year (271.8 AF) based on recent Project 7 sales records (see Table 5). The average population of Olathe between 2010 and 2012 was approximately 1,824 according to U.S. Census Bureau estimates provided by the American Fact Finder website (accessed July, 2015). Dividing the average Project 7 water delivery from 2010 to 2012 by the average 2010 to 2012 population of 1,824 results in an annual average of 0.15 AF water per person.

WWE calculated average daily municipal use flow rates based on the 2010 to 2012 Project 7 purchase records (see Table 5). The calculated average daily use flow rate is 0.38 cfs. The highest daily flows typically occur in July or August with an average calculated value of 0.65 cfs. Peak daily flow rates are estimated by applying a peaking factor of two to the average monthly flow rate. The average estimated peak day flow rate based on these purchase records is 1.29 cfs (see Table 5).

It is worth noting that the Town of Olathe is allocated approximately 300 AF, or 2.9 percent, of the total Project 7 water available, which is approximately the same volume as its original Project 7 allocation. Based on monthly Project 7 delivery records from 2010 to 2012, Olathe currently uses 90 percent, or 270 AF, of its annual allocation on average (see Table 5). In order to ensure a firm future municipal supply, WWE recommends investigating increasing this allocation, and implementing water conservation measures to reduce water demand. Changing the allocation may involve negotiations with the Tri-County Water Conservancy District and Project 7 Board of Directors.

4.3.3 Additional Irrigation Water Use

The Town of Olathe also purchases water from the UVWUA, primarily for irrigation purposes. In 2015, 45.2 AF of water was purchased for the Olathe Sweet Corn Festival and Campo Verde Home Owners Association accounts. No other records were available to review at the time of this report.

4.4 Historical Depletion Analysis

Historical depletions from the Town of Olathe Pipeline system can be analyzed in two ways: as depletions to the Uncompahgre River, and as depletions to the Dry Creek system. Depletions to the Uncompahgre River are based on the difference between diversions and estimated return flows to the Uncompahgre River. Depletions to the Dry Creek system are 100 percent depletive, as return flows from diversions through the Town of Olathe Pipeline system accrue to the Uncompahgre River rather than to Dry Creek. Livestock use and evaporative depletions from Citizens Reservoir are considered 100 percent depletive to both systems. WWE calculated estimated depletions to both the Dry Creek system and Uncompahgre River using population data and historical diversion records (see Table 6).

Depletions to Uncompahgre River

Average depletions to the Uncompahgre River from 1912 to 2014 are estimated at 72 AF per year (see Table 6). Depletions before 1980 are based on municipal indoor use, landscaping irrigation, and Citizens Reservoir evaporation. Depletions after 1980 consist of Citizens Reservoir evaporation and livestock use.

Depletions to Dry Creek System

Average depletions to the Dry Creek System from 1912 to 2014 are estimated at 496 AF per year (see Table 6). Diversions before 1980 are 100 percent depletive. Depletion calculations after 1980 are based on overflow and outfall from Citizens Reservoir returning to the Dry Creek system because of damage to the Town of Olathe Pipeline. The total post-1980 Dry Creek depletions consist of Citizens Reservoir evaporation and livestock use.

Citizens Reservoir Depletions

WWE estimates annual depletions due to net evaporation from Citizens Reservoir as approximately 45.4 AF per year, based on the following: water surface area of 15 acres, gross evaporation of 40.7 inches per year according to NOAA Technical Report NWS 33, and average precipitation data from the NOAA Olathe climate station, with evaporation distribution adjusted for sites above 6,500 ft.

These depletion estimates should be considered preliminary, limited based on the assumptions made above, and subject to change.

5.0 HYDROLOGY ANALYSIS

The CWCB and BLM performed a hydrology analysis during the formation of the ISF recommendations for East Fork Dry Creek, West Fork Dry Creek, and Dry Creek. Reliable gage data was not available to form the ISF, so the CWCB and BLM conducted a water availability analysis using regional equations developed by USGS for estimating stream flows (Estimation of Natural Streamflow Characteristics in Western Colorado, Water Resources Investigations Report 85-4086, 1985). Active and inactive gage locations are shown in Figure 3, and a summary of gage information is shown in Table 7. Estimated monthly stream flows according to the BLM analysis are shown in Table 8. East Fork Dry Creek monthly flows range from 0.7 to 113 cfs, West Fork Dry Creek flows range from 0.3 to 56.4 cfs, and Dry Creek monthly flows range from 1.2 to 208.9 cfs.

WWE performed an ungaged basin hydrology analysis using the USGS Streamstats tool, which can be used to estimate mean, minimum, and maximum flows for an ungaged basin. There is less control of input parameters with the Streamstats tool compared to the methodology used by the BLM in their analysis, but Streamstats is capable of providing a conceptual-level estimate of stream flow statistics. The East Fork Dry Creek and West Fork Dry Creek basins are shown on Figure 3, as delineated by the USGS Streamstats tool. Regression outputs for the USGS Streamstats analysis for each basin are provided in Appendix C and summarized as follows.

According to the USGS Streamstats tool, the East Fork Dry Creek basin has a 24.6 square mile drainage basin, with mean annual precipitation of 24.6 inches per year. Annual average flows for the East Fork Dry Creek Basin range from 2.4 to 20.6 cfs. The West Fork Dry Creek basin has an 11.3 square mile drainage basin, with mean annual precipitation of 26.4 inches per year. Annual average flows for the West Fork Dry Creek Basin range from 1.18 to 12.2 cfs. Prediction errors associated with these estimated stream flows range from 77 to 120 percent.

Average monthly stream flows estimated by the BLM were generally higher in spring runoff months compared to WWE/USGS Streamstats estimates. For example, the estimated May flow on East Fork Dry Creek was 113 cfs in the BLM analysis, and 19.8 cfs in the WWE/USGS analysis. BLM estimates during low-flow months were typically also lower than WWE/USGS estimates. For example, the estimated January flow on West Fork Dry Creek was 0.3 cfs in the BLM analysis, and 1.34 cfs in the WWE/USGS analysis.

In general, accurately estimating stream flows without the assistance of stream gage information is a difficult task. Results can vary greatly according to the quality of input parameters, as seen in this comparison of the BLM and WWE/USGS Streamstats calculations. Physical measurements are recommended to further refine estimates of stream discharge, and thus water yield for the East Fork Dry Creek and West Fork Dry Creek basins.

6.0 ALTERNATIVES ANALYSIS

Six alternatives for enhancing and protecting Olathe's water rights are presented below. The alternatives are: 1) municipal use 2) agricultural irrigation use, 3) instream flow leasing, 4) inclusion in a Colorado River Water Conservation Board Water Bank program, 5) hydropower development, and 6) Pilot CWCB Conservation Program. These alternatives are not mutually exclusive. Opinions of probable cost in this report are highly conceptual, based on limited information, and should be considered preliminary order of magnitude estimates.

6.1 Alternative 1: Municipal Use

Municipal supply depending solely on Project 7 water may become an issue if significant growth in Olathe is realized. Utilizing the Olathe pre-compact water rights for municipal use involves significant upgrades to infrastructure in order to provide a reliable supply of water, estimated at \$10,000,000 (see Estimate 1). The cost estimate was prepared assuming a full replacement of the 20.8-mile pipeline system and construction of a 0.42 MGD treatment plant in Olathe. The treatment plant size of 0.42 MGD was chosen based on the peak month of purchased water from Table 5 (12.97 million gallons over 31 days in July 2010), and is not sized for anticipated municipal growth. Physical water supply may limit the treatment plant capacity especially during winter months and dry years, and therefore additional storage beyond what is considered in this estimate may be required. Details regarding the specifics of a treatment plant design are beyond the scope of this report, and an in-depth feasibility study is recommended to optimize treatment plant and storage size requirements if this alternative is pursued. Operations and maintenance costs are not considered in this estimate.

6.2 Alternative 2: Agricultural Irrigation Use

6.2.1 Irrigation In-Town Use

The Olathe pipeline system is specifically decreed for domestic, municipal, commercial, irrigation, and other purposes incident to the inhabitants of the Town of Olathe (see Table 1). Utilizing the existing pipeline system to deliver irrigation water to Olathe for landscaping would require reconstruction of the majority of the pipeline to ensure reliable delivery. For the purposes of this estimate, a full replacement scenario was selected. The full replacement cost of the 20.8-mile pipeline for irrigation use is estimated at \$6,000,000 (see Estimate 2a). This estimate does not consider additional infrastructure improvements beyond the end of the main pipeline for distribution, such as a non-potable distribution system.

There may be alternative ways of delivering the irrigation water to Olathe, such as moving the point of diversion for the pipeline which are not considered in this estimate. If the alignments of

the pipelines are changed, there may be additional engineering and environmental permitting needs that are not reflected in the cost estimate.

Estimated historical depletions for domestic plus lawn and garden uses are approximately 33.2 AF (see Table 6). Dividing the 33.2 AF historical depletions by an irrigation water requirement (IWR) of 22.8 inches per year for pasture grass in the Olathe area gives a potential of 17.5 acres that could be irrigated using the pipeline.

6.2.2 Agricultural Irrigation Leasing

Leasing pipeline water for stock use would likely require a change in water right for place of use and type of use. The cost of implementing agricultural irrigation leasing is estimated at \$105,000 (see Estimate 2b). This cost estimate assumes a typical cost of \$50,000 to \$100,000 for changing the water right, some upfront lease administration costs, and minor pipeline repairs to ensure more reliable delivery, which were limited to \$20,000 for the purposes of this estimate. Actual pipeline repair costs may be more or less, and a detailed physical assessment along the entire length of the pipeline is recommended if this option is considered. Ongoing or long-term lease administration costs are not considered in this estimate. It is important to note that a change in water right would likely reduce the decreed rate of diversion.

6.3 Alternative Three: Instream Flow (ISF) Lease

6.3.1 General Background

The Colorado state legislature established an ISF program in 1973 to obtain water rights in the interest of preserving or improving the natural environment to a reasonable degree. This program is managed by the CWCB. For a stream segment to be considered for an ISF appropriation, it must meet the following criteria: a natural environment must be present, water must be available for appropriation, and the appropriation cannot cause injury to other water users. New CWCB ISF appropriations are considered junior water rights, with the intent of preserving current conditions such that future developments must take into account and not

injure the ISF water rights. There are three ISF reaches decreed in Dry Creek and its tributaries, which is beneficial when considering participation in an ISF donation or leasing program.

The CWCB Instream Flow Program acquires water rights by donation, purchase, lease, or loan, with each case being unique. This program uses a market-based approach for protecting stream flows by matching willing sellers or lessors with a willing buyer or lessee. The flows can be acquired on a temporary or permanent basis, and used in a quantity that improves the natural environment to a reasonable degree. Storage rights may be acquired under the program as well, which allow for more flexibility to release water at critical times. Water acquired for ISF use must not injure other water rights, requiring either water court or other administrative approval depending on the type of transaction.

The Colorado Water Trust is a private, non-profit organization that supports voluntary efforts to restore and protect stream flows in Colorado, which was formed to partner with the ISF program. The Colorado Water Trust can help facilitate ISF transactions by assisting with CWCB and legal processes. They can also assist with fundraising efforts and technical assistance.

Based on conversations with the CWCB, the Colorado Water Trust, and review of available documents and pertinent statutes, the following sections of this report describe some of the possible ways to utilize the Town of Olathe's water rights in the ISF program according to WWE's understanding. Further information can be obtained through the CWCB ISF Program website and the Colorado Water Trust Website available at:

<http://cwcb.state.co.us/environment/instream-flow-program/Pages/main.aspx>

<http://www.coloradowatertrust.org/>

A matrix of some available ISF program options and key elements are shown in Table 9. Each of these options are discussed below.

6.3.2 Permanent Transactions

Permanent transactions require a change proceeding in water court, and can be executed by donation, purchase, contract, split-season sharing, or other permanent agreement. The CWCB

may have funding available for purchase or lease of water rights for ISF purposes. It is important to note that a change in the type of use of the water right would likely reduce the decreed rate of the water right due to a historical use analysis.

6.3.3 Long-Term Leases

Long-term lease processes are governed by C.R.S. § 37-92-102(3) and provide protection for the water right owner against a reduction in historical consumptive use or claim of abandonment during the term of the lease. Lease terms are flexible in terms and length of time. Long-term leases require a change of right application through water court to obtain a decreed right to use the water for ISF purposes. The timeline may be lengthy for long-term lease execution.

6.3.4 Temporary Transfers (3-in-10 Leases)

Short-term leases of 120 days per year, for three years in a 10-year period, also known as “3-in-10” leases can be used on any stream where the CWCB currently holds an ISF right up to the decreed ISF amount. The 3-in-10 lease does not involve a water court change case. This option provides an entry-level way for a user to test the ISF program, and is ideal for quickly restoring flow during times of acute drought. During years where the water is used for ISF purposes, the water right is excluded from future analyses of consumptive use. During years where the water is not used for ISF purposes, there may not be protection for the water right if it is not being utilized for its decreed uses.

6.3.5 Substitute Water Supply Plans

A substitute water supply plan (SWSP) is another short-term change in water right that can be used to change the use of a water right as long as depletions to the river do not accrue beyond five years. Approval of an SWSP for the ISF acquisition program is limited to one year, and cannot be renewed beyond five years. SWSPs are approved by the State Engineer, rather than water court.

6.3.6 Interruptible Water Supply Agreements

An interruptible water supply agreement (IWSA) can be made with the CWCB for temporary ISF use. During the term of the agreement, the water right owner stops use so that the borrower (CWCB) can use the water for ISF purposes according to the agreement terms. Two renewals of an IWSA are allowed, and the same use restrictions as seen in the 3-in-10 lease process apply.

6.3.7 Trust Agreements

Trust agreements are a relatively new strategy for the CWCB ISF acquisition program. Pitkin County entered into a trust agreement with the CWCB in 2009 which allows the County to retain ownership of its water rights while participating in the ISF program. The agreement required a change application in water court, but also includes flexibility for the County to remove the water rights for other uses in the future. This strategy also protects the water right's historical consumptive use.

6.3.8 Split-Season Agreements

A split-season agreement allows irrigators to use water for irrigation during part of an irrigation season, typically the first half, and then curtail irrigation for the second half of the season for ISF use. This option requires a change application in water court. An advantage of this type of agreement is to attract broader participation among irrigators who may not want to dry up land for entire irrigation seasons. In the Olathe case, a split-season agreement would need to come from dry-up of other decreed uses of the pipeline, since land is not currently being irrigated with the pipeline water.

6.3.9 Use of an ISF Augmentation Plan

An augmentation plan would allow a junior ISF water right to divert water out of priority by augmenting with a senior water right. Augmentation needs to be a decreed use of the senior right, thus requiring a change in use in water court if it is not already decreed. Augmentation plans function similar to SWSPs, except on a long term to permanent basis.

6.3.10 Senate Bill 19 Conservation Plans

The governor of Colorado signed Senate Bill 13-019 into law on May 18, 2013 which allows water right users to curtail water use under an approved water conservation program for ISF use or other conservation purposes without diminishment of the water right's historical consumptive use value (see Appendix D). Qualifying conservation plans are approved by state agencies, water districts, or other authorities.

The Colorado River District serves the area where the Olathe water rights are located, and has an established framework for adopting conservation plans in compliance with Senate Bill 19. An application with a brief description of the conservation plan can be made to the Colorado River District, and no further approvals are required from the Colorado Division of Water Resources or water court. The timeline for approvals is typically shorter than other ISF acquisition methodologies. Application of the approved plan's protection can be exercised for a maximum of five years within any ten year period.

Typically an approved conservation plan applicant will be required to assume the liability for implementation of the plan. The applicant is also typically required to estimate the amount of water conserved, and a monitoring methodology is recommended as part of the conservation plan.

6.3.11 Non-Diversion Agreement

Non-diversion agreements (NDAs) are voluntary commitments to assist stream flows at times when an ISF water right is not met. More water for the ISF becomes available if a senior right can still be protected under the terms of the NDA. This strategy is most effective when the diversion structures for the senior rights are sufficiently upstream of decreed junior ISF reaches to entirely satisfy ISF flows. Non-diversion agreements can be signed with the Colorado Water Trust for ISF purposes, and do not require water court proceedings. If NDAs are used for more than two years, there may be a risk of water right abandonment.

6.3.12 Undeclared Reservoir Release

Undeclared water releases add water to ISF reaches by releasing physical storage from a senior water right, but do not protect the water downstream. Releasing physical storage may have implications in the following years based on weather patterns and water rights administration of the reservoir. This method may not effectively protect the water right from abandonment.

6.3.13 Feasibility of Utilizing Olathe Water Rights for ISF

East Fork Dry Creek, West Fork Dry Creek, and Dry Creek all have ISF water rights in place that are junior to the Olathe water rights, making an ISF use transaction a feasible option to protect and enhance Olathe's rights. The majority of ISF options employ measures to protect the acquired water rights and to not penalize the owner for using the water rights for ISF needs. There are many ISF program options that can provide flexibility in how the water rights will be protected in the future.

When water rights are not donated to the ISF program, each ISF lease is unique in value price. Water rights are typically appraised before acquisition, and the Colorado Water Trust may be available to provide appraisal assistance. Factors that determine the value of the water rights in an ISF acquisition are highly variable, and should be researched thoroughly before selecting a program option to implement. The cost associated with establishing a lease is estimated to be mostly administrative, involving proposal writing and coordination with the CWCB (see Estimate 3).

For this alternative, WWE estimated a range of administrative costs depending on the complexity of the ISF option, ranging from \$10,000 for a simple application with annual reporting to \$40,000 for a complex application with more frequent monitoring and reporting. An additional \$10,000 was added to this estimate for design and installation of flow measurement devices for reporting purposes, bringing the total estimate range to \$20,000 to \$50,000. These costs may not all be incurred at the start of the ISF program, and should be considered as total costs for the entire ISF term. Because of the wide variety of ISF program options, this cost estimate range should be considered highly preliminary. Additional costs for ISF acquisition methods that

require water court proceedings are not factored into this cost estimate. The additional cost of water court should be weighed against the terms of the lease when choosing among ISF program options.

WWE recommends close coordination with CWCB and Colorado Water Trust staff to determine the best ISF program option for the Olathe water rights if this alternative is pursued. If this alternative is pursued, cost estimates should be further refined based on the specific ISF program option that is chosen.

6.4 Alternative Four: Water Banking

The principle of water banking is that water rights can be put into a “bank” by putting fields into fallow. The bank forms contracts between suppliers and purchasers to broker the water rights. At this time, a water bank for Colorado is still in the conceptual planning phase. The proposed Colorado River Compact Water Bank would enter into interruptible supply agreements with owners of pre-compact water rights in order to prevent compact curtailment, and allow junior (post-compact) users to continue irrigation in the event of curtailment. The intent of the bank is to prevent permanent agricultural transfers on the West Slope, allow West Slope irrigators to realize value for their water rights, and allow Colorado to better manage the full use of its Colorado River entitlement under the compact.

The Colorado River Water Conservancy District (River District) is currently investigating the feasibility of implementing a Colorado River Compact Water Bank. The feasibility study has been split into three phases: Phase 1 water supply and demand analysis, Phase 2 on-farm implementation, and Phase 3 regional economic and environmental considerations. At the time of this report, the Phase 1 and Phase 2 reports were available for review.

The Phase 1 report investigated the potential water supply and shortages that could be mitigated by formation of the bank (MWH 2012). The MWH Phase 1 report concluded that deficit irrigation of grass pasture and alfalfa would be the best supply of water for the bank due to consumptive use and expected yields for those crops. The report estimated supply-limited consumptive irrigation use in the Upper Colorado Basin at 1,250,000 acre feet per year, and the

full consumptive irrigation requirement in the Basin at 1,430,000 acre feet per year. A range of the maximum annual use that could be met by the Water Bank according to the MWH 2012 report is about 200,000 acre feet per year which could be met by qualifying pre-compact water right irrigators reducing consumptive use between 25 and 50 percent depending on the type of crop.

Purchase rates vary widely according to supply and demand and local conditions. The estimated cost of water produced from deficit irrigation in the MWH Phase 1 report ranged from \$50 to over \$200 per acre foot depending on lease rates, feed replacement, or loss of income costs.

The Phase 2 report assessed feasibility for implementing the Water Bank in a number of representative pre-compact irrigation systems (MWH 2013). Physical assessments of irrigation operation to study the impacts of fallowing were conducted using test candidates. The results of the Phase 2 report show that in general, lower elevation systems that support multiple crop plantings per year are feasible candidates for fallowing or deficit irrigation. Higher elevation pasture systems that only support one or two cuttings of grass pasture would cause more significant impacts to landowners if fallowed. High elevation fallowing impacts were estimated at \$125 to \$675 per acre of grass hay and alfalfa. Large market commodity crop fallowing economic impacts were estimated at \$75 to \$750 per acre of corn and \$675 to \$1,125 per acre of grass hay and alfalfa.

Many challenges exist within a water banking system. There is a shortfall of data in many irrigation systems that prevents an accurate calculation of consumptive use savings for Water Bank contributions based on the difference between diversions and return flows. Physical storage is also an issue that has prevented water banking systems from being fully successful in the past, but utilizing Citizens Reservoir as part of the bank may improve the chance of successful bank participation. Apart from economics, many ranchers and irrigators are concerned about preserving a way of life and their heritage when considering participation in a Water Bank.

At this time the River District hopes to see a pilot project for banking in Division 5, but a full-Basin program will not be available in the near future. Exploring options of working with Project 7, or with other entities in the Gunnison and Uncompahgre Basins to develop augmentation plans or form banks in order to avoid pre-compact calls may be an option to protect pre-compact water rights in the short term.

If the bank is established, the costs for putting Olathe's pre-compact rights into the banking system would primarily be from the administrative work associated with joining the bank and at this time are largely unknown. For the purposes of this report, the cost for participating in a water banking program are estimated at \$112,500 which includes administration and installation of measurement devices (see Estimate 4). However, at this time administration costs are largely unknown because there is not an established banking system available.

6.5 Alternative Five: Hydropower Development

The topography of the existing pipeline routes provides a good potential resource for hydroelectric power development. WWE developed a cost estimate assuming generation capacity of 100 kW, which is nearly the maximum theoretical power output based on a maximum of 300 psi working pressure and 2 cfs of flow. The estimate also includes building an approximately 6.5 mile long penstock to feed the power plant. Using these assumptions, this alternative is estimated to cost \$3,000,000 (see Estimate 5). The elevation change between the source of the supply water and the town is so great that siting a hydroelectric plant will require careful planning and the available generation capacity will be limited by the maximum pressure rating of the pipe. Depending on siting, there may be additional costs of pressure reducing valves, or transmission upgrades to the power grid that are not considered in this cost estimate.

While physically possible, hydropower development comes with a high initial cost which may only become fiscally practical if grants or subsidies are available to assist funding the infrastructure. Water availability is also a factor that will play into generation capacity. During dry years, there may not be enough flow to consistently produce power during winter months.

Further analysis of the transmission infrastructure in the area is recommended to further better investigate the feasibility of hydropower development.

6.6 Alternative Six: Pilot CWCB Conservation Program

Pre-proposals for a pilot conservation program are being accepted by the CWCB for voluntary conservation projects that can be implemented in 2016. The goal of this pilot project is to explore the effectiveness of voluntary conservation measures in an effort to maintain sufficient levels in Lake Powell for hydroelectric production and protect Colorado River Compact entitlements. The pre-proposal deadline for 2016 projects is November 1, 2015. Proposals received after November first may still be considered if there is sufficient funding. A memo to interested Upper Colorado Basin water users outlining the details of this program is provided in Appendix E. Applications to accompany proposals can be obtained from the CWCB.

This pilot conservation program requires a reduction in consumptive use, and a methodology to support the estimated reduction in consumptive use. Funding can be requested as part of the proposal to offset costs to participate in the program. The length of participation in this program is short-term, and at this time limited to projects that can be implemented in 2015 and 2016, as of the time this report was written.

Participation in this program may require modification of the Olathe Pipeline to bypass water into East Fork Dry Creek or at the pipeline points of diversion, installation of a measuring device to measure the bypass flow, and monitoring the amount bypassed. These costs may be candidates for matching funds through the pilot project application. Availability of matching funds available from CWCB is not known at this time. The total cost to participate in this pilot program is estimated at \$15,000, based on fees for administration and monitoring, modifications to the pipeline, and installation of measurement devices (see Estimate 6).

It is not known to the extent that the water rights can be protected under this program, or the duration of this pilot program. Further coordination with the CWCB is recommended if this option is considered. Funding availability at the time of this report is also not known.

7.0 LIMITATIONS OF ANALYSIS AND ADDITIONAL INFORMATION NEEDS

This analysis should be considered preliminary and for planning purposes only. WWE made assumptions and approximations regarding water use, water availability, infrastructure requirements, and material costs. These assumptions should be further investigated prior to proceeding with development of any of the proposed alternatives. The following is a list of potential information that could be collected to refine the assumptions of each alternative:

- WWE recommends obtaining an attorney's opinion regarding the decreed uses of the Town of Olathe pipeline system.
- An assessment of the condition of the pipelines and Citizens Reservoir should be conducted to determine the extent of repairs or modifications required to further develop water rights under any of the proposed alternatives.
- A full hydropower feasibility study will be required if hydropower development is pursued.
- Grant opportunities and potential subsidies should be researched for municipal, agricultural, or hydropower infrastructure development.
- A survey to determine potential water banking buyers should be conducted.
- Operations, maintenance, and replacement costs were not closely analyzed as part of this study, and should be researched if infrastructure improvements are pursued.
- Documentation needs to be improved regarding diversion and use records for the Town of Olathe water rights.

8.0 RECOMMENDATIONS

WWE investigated seven alternatives to protect and enhance Town of Olathe pre-compact water rights. Table 10 provides a summary of conceptual-level opinions of probable costs. Recommendations are further explained below.

1. Writing and implementing a water conservation plan. Olathe municipal water use is near its full Project 7 allocation, and implementing a conservation plan can reduce water demands. There may be grant funding available through CWCB to assist with the conservation plan.
2. A combination of Instream Flow Leasing (Alternative 3) and implementation of a Water Conservation Plan. A Water Conservation Plan will evaluate and provide recommendations for how Olathe may best conserve and manage its current Project 7 supply in order to meet its water supply needs into the future, thus allowing Olathe to use its pre-compact water rights to participate in a Senate Bill 19 Conservation Program. This will protect the pre-compact rights until such a time when Olathe requires those water rights to supplement its Project 7 water supply. Instream Flow Leasing is a strategy that appears to have a strong potential for success due to the low cost of implementation, flexibility in acquisition methods, and the location of designated ISF reaches in the project area. Utilizing a Senate Bill 19 Conservation Program is an attractive option for participation in the ISF program because no water court proceedings are required, and there is less administrative burden than other ISF program options.
3. Coordination with the Water Trust and CWCB is highly recommended before making a final decision on the best ISF program methodology for Olathe if an ISF-related strategy is pursued.
4. Begin measuring water use. WWE recommends that measurement devices be added to diversion structure headgates to assist in water use data collection.
5. Evaluate the feasibility of increasing the Project 7 allocation from the current 300 AF per year, which has remained the same since Olathe connected to the Project 7 system in 1980 and of which Olathe currently uses 90 percent, or 270 AF per year on average.
6. If Olathe wishes to continue leasing water for agricultural (stock) purposes, WWE recommends that Olathe consult with an attorney to evaluate the water rights' decreed

types and place of use, and to evaluate filing for an additional junior water right for stock use.

9.0 CONCLUSION

Given that Olathe is currently using about 90 percent of its Project 7 allocation, water rights associated with the Town of Olathe Pipeline system are an important component of the Town's water supply. Olathe's alternatives to protect its pre-compact water rights are numerous. It is in Olathe's best interest to use an approach that will simultaneously and holistically consider its water system into the future while not requiring a change of the water rights in court. Of the options available, WWE recommends that initially, Olathe develop a Water Conservation Plan and participate in the Senate Bill 19 Conservation Program. Grant opportunities through the CWCB for Water Conservation Planning are available. In the future, as the Olathe population grows and the benefits of the Water Conservation Plan have plateaued, Olathe may consider infrastructure improvements to utilize its water rights and enhance municipal supply.

10.0 REFERENCES CONSULTED

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MWH Americas, Inc.; Colorado River Water Bank Feasibility Study Phase 1; June 2012.

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Scanga Jr., Ralph, Update of Water Banking in the Arkansas Presented to the Interim Water Resources Review Committee, August 2013.

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West Water Research, Inc.; Review of Western U.S. Environmental Water Leasing Programs; July 2003.

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TABLES

Table 1
Water Rights Tabulation*
Town of Olathe
Draft - Internal Use Only

STRUCTURE	STRUCTURE ID	ADMINISTRATION NUMBER	ADJUDICATION DATE	APPROPRIATION DATE	DATE PLACED TO BENEFICIAL USE ¹	CASE NUMBER	DECREED RATE (CFS)	DECREED VOLUME (AF)	STATUS	PRIORITY	DECREED USES	COMMENT
Town of Olathe Pipeline	576	22523.00000	4/25/1916	9/1/1911	9/1/1911	CA2127	1.3		Absolute	126	Municipal, domestic and other purposes incident to the inhabitants of the Town of Olathe	
Moffit Spring Pipeline	682	29038.22919	12/4/1941	10/1/1912	10/1/1912	CA4573	0.3		Absolute	192	Domestic, commercial and irrigation	
East Fork Feeder Pipeline	625	30613.00000		10/25/1933	1934		1		Absolute	204		
Citizen's Reservoir (Olathe Reservoir No.2)	3651	29038.22889		9/1/1912	9/1/1912			118	Absolute	191	Storage for commercial, domestic and irrigation	
		33575.29675	10/26/1933	4/1/1931	10/26/1933	CA6466		58.67	Absolute	210	Storage for commercial, domestic and irrigation	Per decree, derives supply from Gooseberry Creek and from the Town of Olathe pipeline.
								64	Conditional			
		49445.00000	12/31/1985	4/17/1985	-	85CW110					Added hydroelectric power generation to other uses	
Total							2.6	241				

*Source: Decrees as listed in the Case Number column, available from CDWR Laserfiche online application.

Note:

1 Date placed to beneficial use is estimated as the construction completion date unless found otherwise in the applicable decree.

Table 2
Colorado Water Conservation Board Instream Flow Water Rights Tabulation
Town of Olathe
Draft - Internal Use Only

STRUCTURE	STRUCTURE ID	ADMINISTRATION NUMBER	ADJUDICATION DATE	APPROPRIATION DATE	CASE NUMBER	DECREED RATE (CFS)	STATUS	DECREED USE
Dry Creek	886	56638.00000	12/31/2005	1/25/2005	05CW150	3.0 cfs (3/1-3/31) 7.3 cfs (4/1-6/14) 3.0 cfs (6/15-7/31) 1.2 cfs (8/1-2/28)	Absolute	Instream flow to preserve the natural environment to a reasonable degree
W. Fork Dry Creek	705	56638.00000	12/31/2005	1/25/2005	05CW155	0.85 cfs (3/1-3/31) 3.4 cfs (4/1-6/14) 0.85 cfs (6/15-7/31) 0.3 cfs (8/1-2/28)	Absolute	
E. Fork Dry Creek	701	56638.00000	12/31/2005	1/25/2005	05CW151	1.6 cfs (3/1-3/31) 3.6 cfs (4/1-6/14) 1.6 cfs (6/15-7/31) 0.6 cfs (8/1-2/28)	Absolute	

Source: Water Rights Decrees: 05CW150, 05CW155, 05CW151

Table 3
Town of Olathe Population Data
Town of Olathe
DRAFT-For Internal Use Only

Census Year	Total Population	Percent Change	Average Annual Rate
1910	458		
1920	491	7.21%	0.7%
1930	593	20.77%	1.9%
1940	705	18.89%	1.8%
1950	810	14.89%	1.4%
1960	773	-4.57%	-0.5%
1970	756	-2.20%	-0.2%
1980	1262	66.93%	5.3%
1990	1263	0.08%	0.0%
2000	1573	24.54%	2.2%
2010	1849	17.55%	1.6%
Average	958	16.41%	1.42%
Pre-Project 7 Average (1910-1980)	731	17.42%	1.49%
Post-Project 7 Average (1980-2010)	1487	27.28%	2.28%

Source: Department of Local Affairs website, accessed 5/18/15

Notes:

The Town of Olathe incorporated in 1907.

Data does not exist prior to the census year 1900.

Table 4
Summary of Historical Diversion Records*
Town of Olathe
Draft - Internal Use Only

Year	Decreed Water Rights Structures - Annual Diversions (Acre-Feet)					
	Town of Olathe Pipeline ⁴ (decreed: 1.3 cfs)	Days Carried	East Fork Feeder Pipeline ⁵ (decreed: 1 cfs)	Days Carried	Moffitt Spring Pipeline ⁶ (decreed: 0.3 cfs)	Days Carried
	(Acre-Feet)	(Days)	(Acre-Feet)	(Days)	(Acre-Feet)	(Days)
1912	417	365	47	365	226	365
1913	417	365	47	365	226	365
1914	417	365	47	365	226	365
1915	417	365	47	365	226	365
1916	417	365	47	365	226	365
1917	417	365	47	365	226	365
1918	417	365	47	365	226	365
1919	417	365	47	365	226	365
1920	417	365	47	365	226	365
1921	417	365	47	365	226	365
1922	417	365	47	365	226	365
1923	417	365	47	365	226	365
1924	417	365	47	365	226	365
1925	417	365	47	365	226	365
1926	417	365	47	365	226	365
1927	417	365	47	365	226	365
1928	417	365	47	365	226	365
1929	417	365	47	365	226	365
1930	417	365	47	365	226	365
1931	417	365	47	365	226	365
1932	417	365	47	365	226	365
1933	417	365	47	365	226	365
1934	417	365	47	365	226	365
1935	417	365	47	365	226	365
1936	548	365	47	365	226	365
1937	467	365	47	365	226	365
1938	467	365	47	365	226	365
1939	365	365	47	365	226	365
1940	366	365	47	365	226	365
1941	592	365	47	365	292	365
1942	529	365	47	365	182	365
1943	529	365	47	365	182	365
1944	365	365	47	365	256	365
1945	482	365	47	365	219	365
1946	365	365	47	365	0	0
1947	482	365	47	365	226	365
1948	365	365	47	365	226	365
1949	365	365	47	365	219	365
1950	365	365	47	365	226	365
1951	365	365	47	365	226	365
1952	387	365	44	42	0	0
1953	365	365	36	365	45	45
1954	365	365	37	61	2	61
1955	423	365	72	60	0	0
1956	365	365	48	45	15	365
1970	365	365	47	115	226	365
1971	365	365	47	115	226	365
1972	365	365	47	115	226	365
1973	365	365	47	115	0	0
1974	365	365	47	115	0	0
1975	417	365	47	115	226	365
1976	417	365	47	115	226	365
1977	417	365	47	115	226	365
1978	417	365	47	115	226	365

Year	Decreed Water Rights Structures - Annual Diversions (Acre-Feet)					
	Town of Olathe Pipeline ⁴ (decreed: 1.3 cfs)	Days Carried	East Fork Feeder Pipeline ⁵ (decreed: 1 cfs)	Days Carried	Moffit Spring Pipeline ⁶ (decreed: 0.3 cfs)	Days Carried
	(Acre-Feet)	(Days)	(Acre-Feet)	(Days)	(Acre-Feet)	(Days)
1979	417	365	47	115	226	365
1980	417	365	47	115	226	365
1981	88	365	47	115	226	365
1982	88	365	47	115	226	365
1983	88	365	47	115	226	365
1984	88	365	47	115	226	365
1985	88	365	47	115	226	365
1986	88	365	47	115	226	365
1987	88	365	47	115	226	365
1988	88	365	47	115	226	365
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2005	88	365	47	115	226	365
2006	88	365	47	115	226	365
2007	88	365	47	115	226	365
2008	88	365	47	115	226	365
2009	88	365	47	115	226	365
2010	88	365	47	115	226	365
2011	88	365	47	115	226	365
2012	88	365	47	115	226	365
2013	88	365	47	115	226	365
2014	88	365	47	115	226	365
Average 1912 to 1980	415	365	47	294	195	321
Average 1981 to 2014	88	365	47	115	226	365
Average 1912 to 2014	292	365	47	226	207	338

Source: CDWR laserfiche site, Diversion Records

Notes:

1. *This table is not necessarily exhaustive of existing historical diversion records and represents only those that could be found using CDWR's online application. Gaps in records have been filled using historical average data.
2. Water from Citizens Reservoir is delivered through Town of Olathe Pipeline; these structures are synonymous in the Water Commissioner's records. Many of the Commissioner's records only reflect data for the Town of Olathe Pipeline system as a whole, rather than the individual points of diversion.
3. Prior to 1936 and after 1955 there were different Water Commissioners; the digitally-archived historical record seems to primarily reflect the tenure of only one Commissioner.
4. Periods with no record between 1912 and 1980 for the Town of Olathe Pipeline were assumed used for municipal (domestic) purposes, and values were filled using the average of records between 1936 to 1974. Gaps in diversion records after 1980 were filled based on 1 AF per year of stock use, and 87 AF per year to fill the reservoir. 1 AF per year stock use is based on an estimated 1,000 AUM capacity at 300 gallons per AUM per discussions with a local rancher. 87 AF per year is based on an estimated Citizen's Reservoir filling rate of a one-quarter full 6-inch pipe flow according to discussions with Town of Olathe Public Works staff.
5. Gaps in diversion records for the East Fork Feeder Pipeline were filled using historical averages from 1952 to 1956.
6. Gaps in diversion records for the Moffit Spring Pipeline were filled using historical averages from 1941 to 1945.

Table 5
Water Purchase Record for Town of Olathe
Town of Olathe
DRAFT-For Internal Use Only
 (All Values in Gallons)

Month	2010	2011	2012	Average
January	4,779,000	6,434,400	3,980,600	5,064,667
February	4,404,700	3,951,900	3,441,600	3,932,733
March	5,060,200	4,353,900	4,627,900	4,680,667
April	6,799,500	5,862,200	7,473,400	6,711,700
May	9,173,300	7,937,700	10,629,700	9,246,900
June	11,685,200	11,162,100	12,033,700	11,627,000
July	12,974,800	11,383,400	11,193,900	11,850,700
August	11,246,800	13,402,100	10,981,300	11,876,733
September	9,068,400	8,759,400	8,144,800	8,657,533
October	6,627,400	6,172,600	5,850,500	6,216,833
November	4,693,600	3,959,900	3,848,200	4,167,233
December	5,561,600	3,791,400	4,200,400	4,517,800
Total	92,074,500	87,171,000	86,406,000	88,550,500
Percent of Town Project 7 Allocation of 301.29 AF per year Utilized²	94%	89%	88%	90%
Percent of Project 7 sales ³	3.1%	2.9%	2.8%	2.9%
Average Daily Use (cfs) ⁴	0.39	0.37	0.37	0.38
Peak Month Daily Use (cfs) ⁵	0.65	0.67	0.62	0.65
Peak Month to Average Day Ratio ⁶	1.66	1.81	1.69	1.72
Estimated Peak Day (cfs) ⁷	1.30	1.34	1.24	1.29

Notes:

- (1) Source: Monthly data from Town of Olathe Project 7 Purchase Records, calculations by WWE.
- (2) Olathe holds a 300 AF contract to purchase raw water from Ridgway Reservoir from Tri County Water Conservancy District, and has an additional 1.29 AF allocation from the winter stock water program. Ridgway Reservoir water is exchanged with treated Project 7 water. Percentage equals Total Gallons of Purchased Water divided by 98,175,648 gallons (301.29 AF x 325,851 gallons per AF).
- (3) Percent of annual Project 7 sales according to Town of Olathe Project 7 purchase records.
- (4) Equals Total Gallons / 365 days per year / 86,400 seconds per day / 7.48 gallons per cubic foot.
- (5) Equals Peak Month gallons / days per month / 86,400 seconds per day / 7.48 gallons per cubic foot.
- (6) Equals (3) / (2).
- (7) Equals 2 x Peak Month cfs.

Table 6
Historical Depletion Estimates By Population
Town of Olathe
Draft - For Internal Use Only

Year	Population	Estimated Diversions			Estimated Demands				Estimated Depletions						
		Diversions - Olathe Pipeline	Diversions - East Fork Feeder Pipeline	Diversions - Moffitt Spring Pipeline	Domestic	Lawn & Garden	Livestock and Citizen's Reservoir Filling	Total Estimated Demand	Domestic	Lawn & Garden	Livestock and Citizen's Reservoir Filling	Citizens Reservoir Net Pond Evaporation	Total Depletions to Uncompahgre River	Total Depletions to Dry Creek System	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
		(Number of People)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)
1912	458	417	47	226	71.8	19.4	0.0	91.3	7.2	15.5	0.0	45.4	68.1	690	
1920	491	417	47	226	77.0	20.8	0.0	97.8	7.7	16.7	0.0	45.4	69.7	690	
1930	593	417	47	226	93.0	25.2	0.0	118.2	9.3	20.1	0.0	45.4	74.8	690	
1940	705	366	47	226	110.6	29.9	0.0	140.5	11.1	23.9	0.0	45.4	80.4	639	
1950	810	365	47	226	127.0	34.4	0.0	161.4	12.7	27.5	0.0	45.4	85.6	638	
1960	773	365	47	226	121.2	32.8	0.0	154.0	12.1	26.2	0.0	45.4	83.7	638	
1970	756	365	47	226	118.6	32.1	0.0	150.6	11.9	25.7	0.0	45.4	82.9	638	
1980	1262	417	47	226	197.9	53.5	0.0	251.4	19.8	42.8	0.0	45.4	108.0	690	
1990	1263	88	47	226	0.0	0.0	88.0	88.0	0.0	0.0	1.0	45.4	46.4	46.4	
2000	1573	88	47	226	0.0	0.0	88.0	88.0	0.0	0.0	1.0	45.4	46.4	46.4	
2014	1804	88	47	226	0.0	0.0	88.0	88.0	0.0	0.0	1.0	45.4	46.4	46.4	
Average 1912-1980	731	391	47	226	115	31	0	146	11	25	0	45	82	664	
Average 1980-2014	1476	170	47	226	49	13	66	129	5	11	1	45	62	207	
Average 1912-2014	953	308	47	226	83	23	24	130	8	18	0	45	72	496	

Notes

- (1) Source: US Census Bureau American Fact Finder (all years). 2014 population data is an estimate.
- (2) From historical diversion records (see Table 4).
- (3) From historical diversion records (see Table 4).
- (4) From historical diversion records (see Table 4).
- (5) Based 350 gallons per household per day, 2.5 people per household average for 1912 to 1980. After 1980, the Town of Olathe municipal water supply switched to Project 7.
- (6) Based on 2000 square feet of irrigated lawn per 2.5 capita at 0.09 AF/year and Irrigation Water Requirement (IWR) of 22.8 inches per year calculated by modified Blaney-Criddle Method for Town of Olathe Climate Station (OTH01), and NRCS TR-21 coefficient for Kentucky Bluegrass, and a climate data period of record of 1993 to 2014.
- (7) Demands from 1912 to 1980 are based on domestic and lawn and garden uses only. Demands on the Town of Olathe Pipeline after 1980 are limited to livestock use and filling Citizen's Reservoir for recreation and piscatorial use.
- (8) Equals (5) + (6) + (7)
- (9) Based on 90% return flow to the Uncompahgre River from wastewater treatment lagoons (10% depletion)
- (10) Based on 80% of irrigation water demand depleted from the Uncompahgre River.
- (11) Based on 100% of Citizen's Reservoir evaporation and 1 AF per year of livestock demands are depleted from the Uncompahgre River (see Table 4). Overflow and outflow from Citizen's Reservoir after 1980 returns to the Dry Creek system due to Town of Olathe Pipeline damage beyond Moffit's Gap, and the Town of Olathe's connection to Project 7 for municipal and domestic use.
- (12) Calculated based on 15 acre surface area, 40.7 inch gross evaporation rate per NOAA TR33, Average precipitation from Olathe Climate Station, and evaporation distribution adjustment for sites over 6,500 ft elevation.
- (13) Equals (9) + (10) + (11) + (12).
- (14) Equals (2) + (3) + (4) before 1980. Equals (13) after 1980 due to pipeline damage beyond Moffit's Gap and connection of Town of Olathe to Project 7.

Table 7
USGS Stream Gages on Dry Creek
Town of Olathe
DRAFT - For Internal Use Only

Site Number	Site Name	Latitude	Longitude	Average Streamflow (cfs)	Average Streamflow Period of Record	Average Annual Peak Streamflow (cfs)	Peak Streamflow Period of Record	Notes
383246108030801	DRY CREEK UPSTREAM FROM CQ LATERAL	38.54609729	-108.052847					No data available online
9149450	DRY CREEK NEAR OLATHE, CO.	38.5552638	-108.0459022	81	4/12/85-9/1/95	351	1980-1995	
383416108022401	DRY CREEK AT 5600 ROAD	38.57109698	-108.0406242				2/11/1992	Water quality data only
383623108014901	DRY CREEK AT HIGHWAY 348	38.6063743	-108.0309014				2/10/1992	Water quality data only
383847108025401	DRY CREEK AT BEGONIA ROAD	38.6463739	-108.0489577				2/10/1992	Water quality data only
9149480	DRY CREEK AT BEGONIA RD, NR DELTA, CO.	38.645818	-108.048958	81	10/1995-10/1998	331	1996-1998	
384202108032001	DRY CREEK AT MOUTH, NEAR DELTA	38.70053998	-108.05618	79	7/2013-5/2015			Active - no peak records exist

Note: No historical or current stream gages exist for East Fork Dry Creek or West Fork Dry Creek.

Table 8
Estimated Streamflow
Town of Olathe

All values in cubic feet per second (cfs)

DRAFT - For Internal Use Only

Month	East Fork Dry Creek		West Fork Dry Creek		Dry Creek	
	Decreed CWCB Instream Flow	Estimated Streamflow	Decreed CWCB Instream Flow	Estimated Streamflow	Decreed CWCB Instream Flow	Estimated Streamflow
	(1)		(2)		(3)	
January	0.6	0.7	0.30	0.3	1.2	1.2
February	0.6	1.4	0.30	0.7	1.2	2.6
March	1.6	2	0.85	1	3.0	3.8
April	3.6	31	3.40	15.5	7.3	57.3
May	3.6	113	3.40	56.4	7.3	208.9
June 1- June 14	3.6	51.9	3.40	25.9	7.3	95.8
June 15- June 30	1.6	51.9	0.85	25.9	3.0	95.8
July	1.6	2.7	0.85	1.3	3.0	4.9
August	0.6	1	0.30	0.5	1.2	1.9
September	0.6	0.8	0.30	0.4	1.2	1.6
October	0.6	0.8	0.30	0.4	1.2	1.5
November	0.6	0.8	0.30	0.4	1.2	1.4
December	0.6	0.7	0.30	0.4	1.2	1.3

Notes:

- (1) From CWCB Executive Summary, East Fork Dry Creek, CWCB ID # 05/04/A-015, Case No. 05CW0151
- (2) From CWCB Executive Summary, West Fork Dry Creek, CWCB ID # 04/4/A-010, Case No. 05CW0155
- (3) From CWCB Executive Summary, Dry Creek, CWCB ID # 05/04/A-014, Case No. 05CW0150

Table 9
CWCB Instream Flow Program Options
Town of Olathe
DRAFT-For Internal Use Only

ISF Option	Water Court Required?	Short Term, Long Term, or Permanent	Notes
Permanent Transaction	Yes	Permanent	Historical use must be ceased to free up water right for ISF use
Long-Term Lease	Yes	Long Term	Historical use must be ceased to free up water right for ISF use
Temporary Transfer (3-in-10 Lease)	No	Short Term	Can be used 120 days in a calendar year, and only 3 years over a 10-year period. Future consumptive use analyses exclude years where right was used for ISF.
Substitute Water Supply Plan (SWSP)	No	Short Term	Approval is for 1 year, cannot renew past 5 years.
Interruptible Water Supply Agreement (IWSA)	No	Short Term	Can transfer a portion of a consumptive use to ISF, upon showing non-injury. Only 2 renewals allowed. Term is a 10-year period.
Trust Agreement	Yes	Long Term	Can retain ownership of rights, and remove the water rights for other uses in the future.
Split-Season Agreement	Yes	Short Term	Allows for a partial season dry up of fields, where the CWCB could contract for ISF water for part of an irrigation season.
Use of an ISF Augmentation Plan	Yes	Long Term	Water right needs to have an augmentation use.
Senate Bill 19 Conservation Plan	No	Long Term	Approval is by a State Agency, water conservation district, water district, water authority, or formal written ordinance.
Non-Diversion Agreement	No	Short Term or Long Term	Is most successful based on the location of distance between non-diverted right and next senior right.
Undeclared Reservoir Release	No	Short Term or Long Term	May have storage implications for the following season.

Sources: 1. Discussions between Wright Water Engineers (WWE) and Colorado Water Conservation Board (CWCB)
2. CWCB Website <http://cwcb.state.co.us/Pages/CWCBHome.aspx> accessed July 2015
3. Colorado Water Trust Website <http://www.coloradowatertrust.org/> accessed July 2015

Table 10
Cost Comparison of Alternatives
Town of Olathe
DRAFT - For Internal Use Only

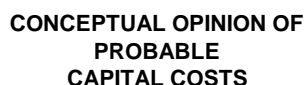
	ALTERNATIVE 1 MUNICIPAL	ALTERNATIVE 2a AG/IRRIGATION TOWN USE	ALTERNATIVE 2b AG/IRRIGATION LEASE	ALTERNATIVE 3. ISF LEASE	ALTERNATIVE 4. WATER BANK	ALTERNATIVE 5. HYDROPOWER	ALTERNATIVE 6. PILOT WATER CONSERVATION PILOT PROGRAM
	(1)	(2a)	(2b)	(3)	(4)	(5)	(6)
CONCEPTUAL COST	\$6,671,875	\$4,071,875	\$70,000	\$20,000 to \$50,000	\$75,000	\$1,970,313	\$10,000
50% CONTINGENCY	\$3,335,938	\$2,035,938	\$35,000	-	\$37,500	\$985,156	\$5,000
TOTAL CONCEPTUAL COST	\$10,000,000	\$6,000,000	\$105,000	\$20,000 to \$50,000	\$112,500	\$3,000,000	\$15,000

Notes:

- (1) Conceptual cost assumptions are shown in Estimate 1.
- (2a) Conceptual cost assumptions are shown in Estimate 2a.
- (2b) Conceptual cost assumptions are shown in Estimate 2b.
- (3) Conceptual cost assumptions are shown in Estimate 3.
- (4) Conceptual cost assumptions are shown in Estimate 4.
- (5) Conceptual cost assumptions are shown in Estimate 5.
- (6) Conceptual cost assumptions are shown in Estimate 6.
- (7) Cost estimates listed in this table are preliminary and limited based on assumptions presented in the report.

CONCEPTUAL OPINION OF PROBABLE COST

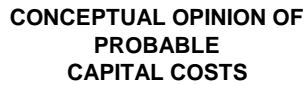
Wright Water Engineers, Inc.



Project No: 141-059.000	
Sheet 1 of 1	
By: MD	Ckd: PF
Date: 7/6/15	Date:

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Wright Water Engineers, Inc.



Project No: 141-059.000	
Sheet 1 of 1	
By: MD	Ckd: PF
Date: 7/6/15	Date:

Des by: MD
Ckd by: PF

Wright Water Engineers, Inc.



WWE
WRIGHT WATER
ENGINEERS, INC.

Date:

Water Rights Alternatives

Des by: MD
Ckd by: PF

Wright Water Engineers, Inc.



WWE
WRIGHT WATER
ENGINEERS, INC.

Project No: 141-059.000	
Sheet 1 of 1	
By: MD	Ckd: PF
Date: 7/6/15	Date:

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Wright Water Engineers, Inc.



WWE
WRIGHT WATER
ENGINEERS, INC.

Project No: 141-059.000	
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By: MD	Ckd: PF
Date: 7/6/15	Date:

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Wright Water Engineers, Inc.

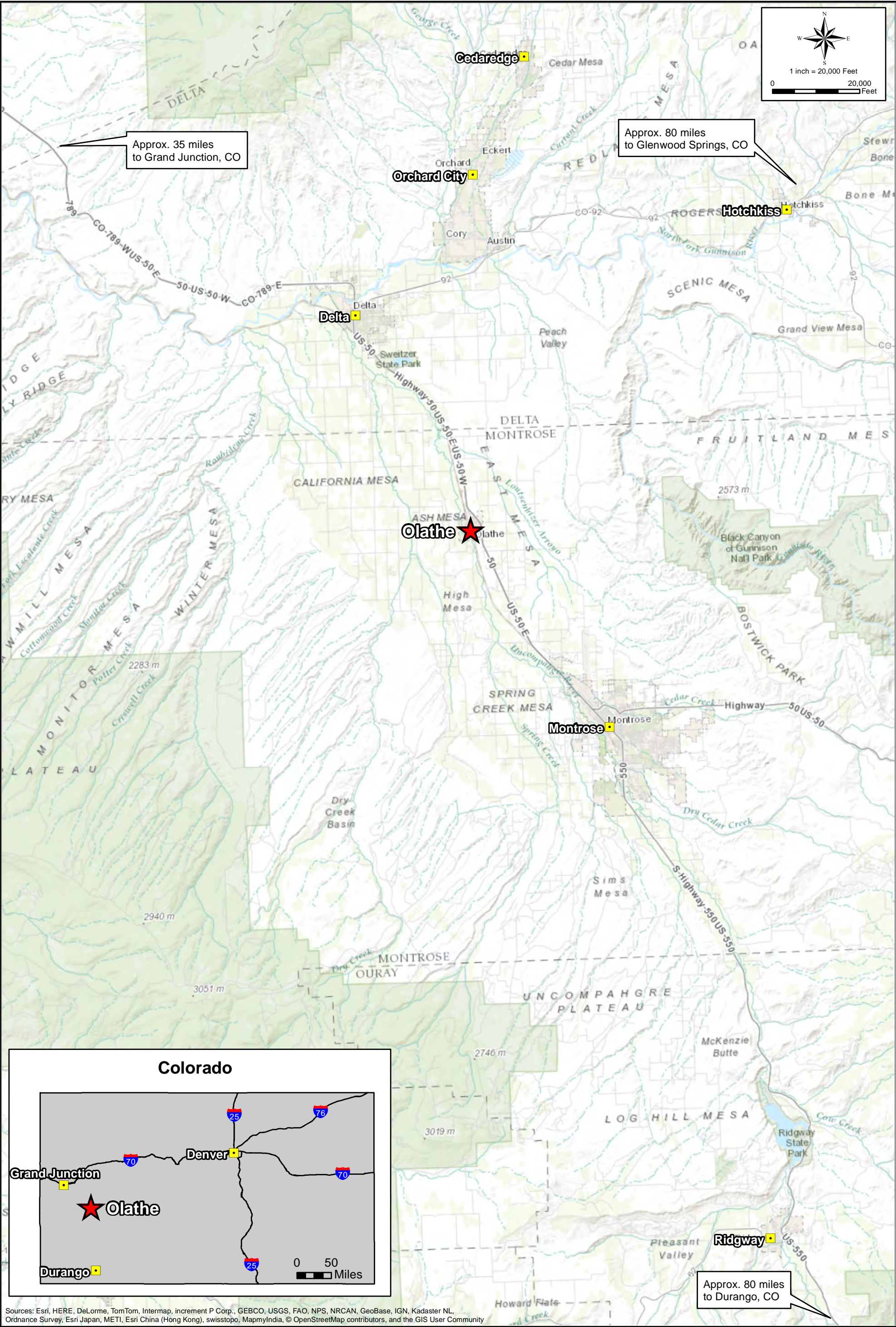


WWE
WRIGHT WATER
ENGINEERS, INC.

Project No: 141-059.000	
Sheet 1 of 1	
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Date: 8/21/15	Date:

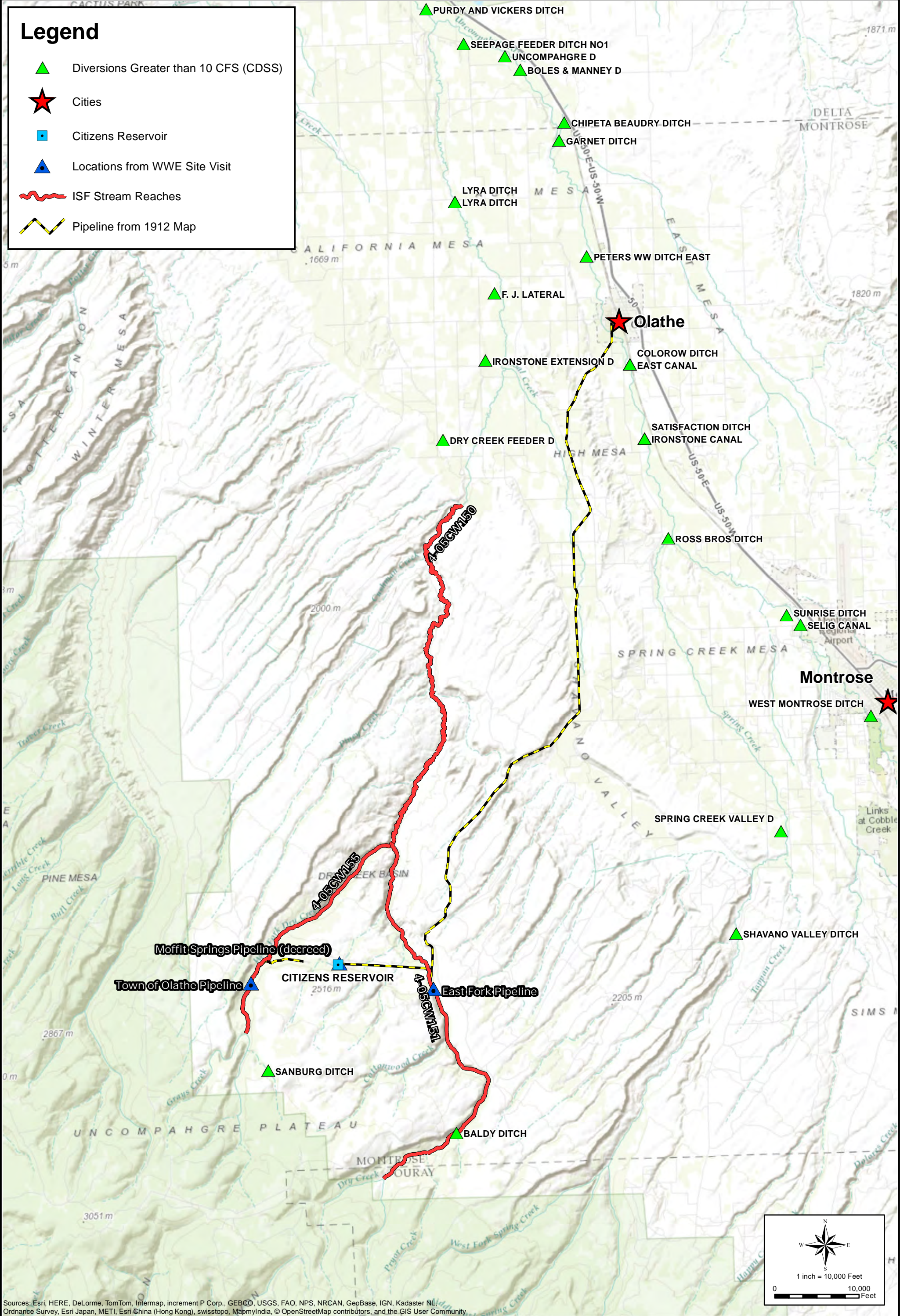
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FIGURES



Legend

-  Diversions Greater than 10 CFS (CDSS)
-  Cities
-  Citizens Reservoir
-  Locations from WWE Site Visit
-  ISF Stream Reaches
-  Pipeline from 1912 Map



Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Document Path: P:\141-059 Olathe\000\Mapping\Olathe Pipeline with all diversions.mxd



Wright Water Engineers, Inc.
1666 N. Main Ave., Ste.C
Durango, CO 81301
(970) 259-7411 ph 259-8758 fx

MONTROSE COUNTY, CO

OLATHE PIPELINE AND NEARBY DIVERSION STRUCTURES

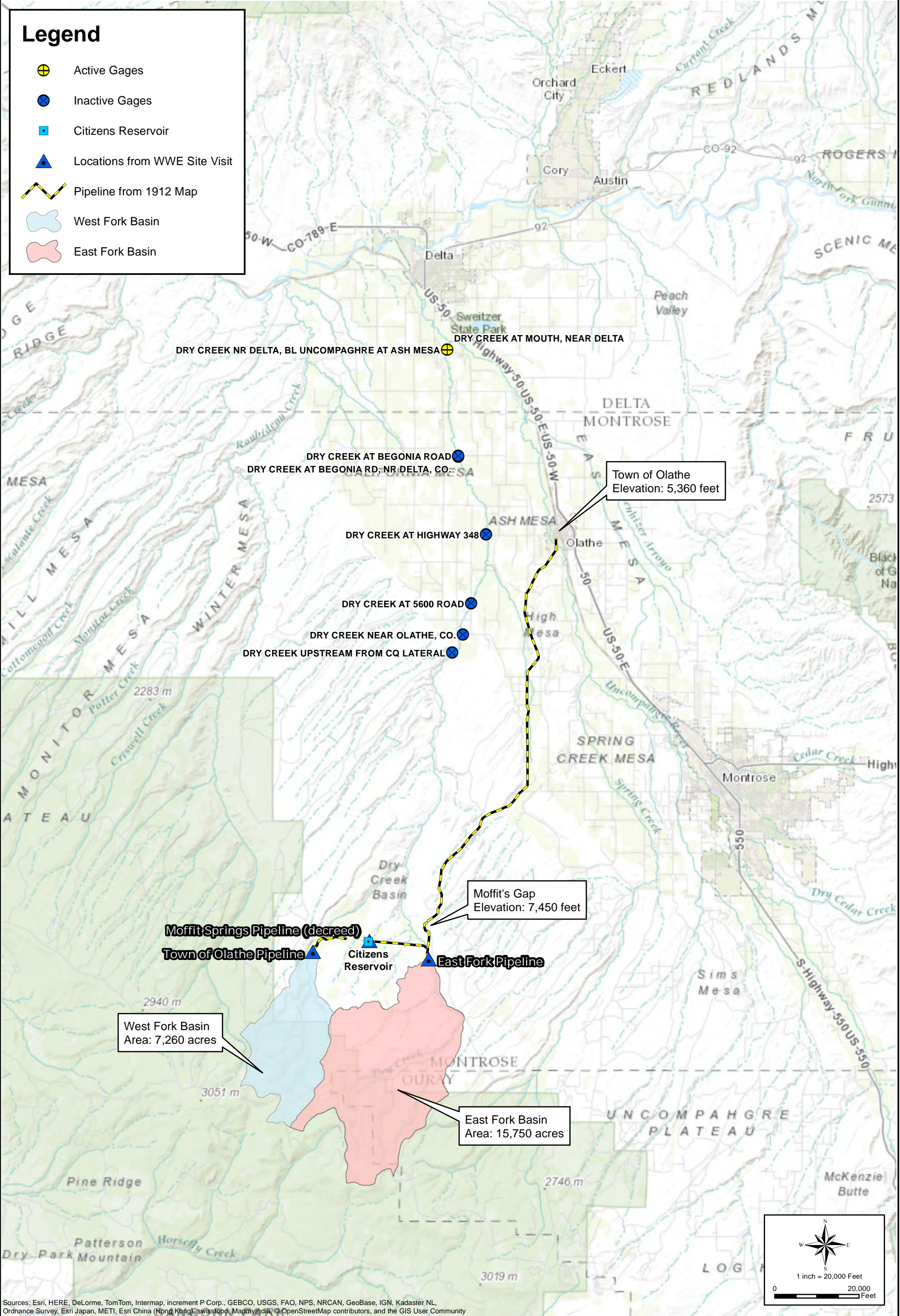
PRIVILEGED AND CONFIDENTIAL INFORMATION
TOWN OF OLATHE

PROJECT NO.
141-059.000

DRAFT
FIGURE
2

Legend

- Active Gages
- Inactive Gages
- Citizens Reservoir
- Locations from WWE Site Visit
- Pipeline from 1912 Map
- West Fork Basin
- East Fork Basin



Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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MONTROSE COUNTY, CO

OLATHE PIPELINE AND STREAM GAGES

PRIVILEGED AND CONFIDENTIAL INFORMATION

TOWN OF OLATHE

PROJECT NO.
141-059.000

DRAFT
FIGURE
3



Wright Water Engineers, Inc.
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APPENDICES

Appendix A
Town of Olathe
Water Right Decrees

CA2127

Town of Olathe Pipeline

2127

STATE OF COLORADO,
County of Montrose.

ss.

IN THE DISTRICT COURT .

IN THE MATTER OF PRIORITIES OF WATER RIGHTS
IN WATER DISTRICT NO. 41.

2127.

THE TOWN OF OLATHE, A MUNICIPAL CORPORATION,
THE MONTROSE FLOUR MILLING COMPANY,
A CORPORATION,

DECREE .

IDA S. KESLING, ——— DUFFIELD, J. F. FRENCH,
AND J. K. YOUNG.

PETITIONERS.

Now on this twenty-fifth day of April, A. D. 1916,
this matter coming on for final hearing and adjudication upon the
report of Joseph L. Atkinson, Referee appointed herein, and to
whom this matter was by order of this Court, entered on the 29th,
day of June, A. D. 1914, referred for the purposes in said order
mentioned, as well upon the several findings upon the evidence
produced in this matter as upon the evidence taken by and before
said Referee, all of which evidence having been filed and among
the records of this Court, and the Court being satisfied from the
several notices, certificates of publication, affidavits and cer-
tificates of said Referee, and the testimony returned, upon which
the findings here returned have severally been made, was taken
upon due and lawful notice in all respects according to the statute
in such case made and provided, and the rules and orders of this
Court in that behalf made and entered, and that all rules and
requirements heretofore made by this Court in reference to the
making of said Referee of said findings of fact; and further that
all interested in this matter and entitled to notice in any stage
of the proceedings therein have at all times been duly notified,
according to the law and the orders of this Court, and the report
of the said Referee, Joseph L. Atkinson, together with the returns
of services of notices, affidavits, etc., being found in due form,
and the Court, now here having in open Court, heard all parties
and their attorneys, so far as they desired to be heard respectively,

touching the several matters herein,

It is by the Court in consideration of all the premises, hereby ORDERED, ADJUDGED AND DECREED, that the several findings of the ^{said} Referee, as reported to and filed in this Court, be in all things approved and confirmed, and that they be taken, deemed and held as the findings of the Court in this matter.

And it further appearing to the Court that heretofore and on to-wit; November 14, 1888, by a decretal order, entered at that time, adjudicating the priorities of Water Rights, including the waters of Dry Creek, a natural stream, and a tributary of the Uncompahgre River, in said Water District No. 41, and that certain priorities and adjudications were therein awarded to certain ditches and canals in said decree set forth.

And that thereafter a further and additional general adjudication of water rights was had in said Water District No. 41, of the State of Colorado, awarding to certain ditches and canals priorities as therein set forth, said further and additional adjudication decretal order being made and entered on February 1, 1892.

Now therefore, it is ORDERED, ADJUDGED and DECREED by the Court that all of the adjudication in this matter be designated as "(Series 1915)." This decree shall be taken, deemed and held as intending to determine and establish the several priorities of right by appropriation of water from the streams and spring of said Water District No. 41, for the purposes of power, irrigation, domestic and other purposes, incident to the uses of the inhabitants of a municipal corporation; concerning which testimony has been offered in this matter, according to the construction thereof, with the amount of water held to be appropriated thereby.

It is further ORDERED, ADJUDGED and DECREED, as in and by the findings of said Referee, as follows:

That the said ditches and pipe line, be and the same are hereby separately numbered according to the date of their several and respective constructions, and the dates of said constructions are found and decreed to be as follows to-wit:

No. 1. (Series 1915). The Montrose Flouring Mill Ditch,
date of construction, August 29, 1883.

No. 2. (Series 1915). The Lyra Ditch,
date of construction, December 19, 1889.

No. 3. (Series 1915). The Town of Olathe Pipe Line,
date of construction, September 1, 1911.

And the several appropriations of water for said ditches
and pipe line, respectively are hereby decreed to be as of the
following dates, as to the ditches:

No. 1. (Series 1915).

The Montrose Flouring Mill Ditch, August 29, 1883.

No. 2. (Series 1915).

The Lyra Ditch, December 19, 1889.

As to the pipe line:

No. 3. (Series 1915).

The Town of Olathe Pipe Line, September 1, 1911.

That the amounts of water appropriated by said ditches and
pipe line respectively, for which they are entitled to decree of
appropriation under these proceedings are found and decreed to be
as follows, as to the ditches:

No. 1. (Series 1915).

The Montrose Flouring Mill Ditch,

50 cubic feet of water per second of time.

No. 2. (Series 1915).

The Lyra Ditch, 5.47 cubic feet of water per second
of time.

As to the pipe line: No. 3. (Series 1915)

The Town of Olathe Pipe Line, 1.30 cubic feet of water
per second of time.

And more particularly in regard to said ditches and
pipe line, respectively, the Court finds and decrees as follows:

No. 1. (Series 1915). THE MONTROSE FLOURING MILL DITCH .

That said ditch is entitled to Priority No. 1, (Series 1915).

That the claimant of said ditch is the Montrose Flour Milling Company, a corporation.

That said ditch draws its supply of water from the Uncompahgre River, a natural stream, in Water District No. 41, State of Colorado.

That the headgate of said ditch is located at a point from which the SW corner of the SE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 33, Tp. 49 N., R. 9 W. N. M. P. M. bears South 66° 40' West 1041 ft.; running thence North 20° 30' East 49 ft., thence North 41° 21' East 380 ft., thence North 2° 25' East 590 ft., thence North 9° 9' West 189.5 ft., thence North 24° West 361 ft., thence North 21° 15' West 379 ft., thence North 18° West 395 ft., thence North 11° West 100 ft., thence North 12° 12' East 103.1 ft., thence North 31° 55' East 150 ft., thence North 0° 5' East 435 ft., thence North 319° 38' East 1.4 ft., thence 8° 29' East 106 ft., thence North 1° 53' East 151 ft., thence North 16° 41' West 158 ft., whence the NE corner of the SE $\frac{1}{4}$ NE $\frac{1}{4}$, said Sec. 33 bears due East 196 ft.

That the date of the appropriation of water through and by means of said ditch for actual and beneficial use for power purposes was about the 29th day of August 1883. That appropriation of water through and by means of said ditch, not to exceed fifty cubic feet of water per second of time has been continuously made since said August 29, 1883, for beneficial use for power purposes, for the development of power for the purpose of the operation of the machinery of The Montrose Flour Milling Company's Mill, said mill being, lying and situate in the County of Montrose, and State of Colorado, all in Water District No. 41, State of Colorado.

That fifty cubic feet of water per second of time are necessary for the operation of said mill; and that said ditch, THE MONTROSE FLOURING MILL DITCH, should be entitled to, and it is hereby ordered, adjudged and decreed, that there be allowed and permitted to flow into said ditch for the purpose of the development

or generation of power only, fifty cubic feet of water per second of time, said fifty cubic feet of water per second of time, to be returned to the said the Uncompahgre River, without any thereof being used, except for the purpose of generating power, as Priority No. 1. (Series 1915).

No. 3. (Series 1915).

THE LYRA DITCH.

That said ditch is entitled to Priority No. 3, (Series 1915)

That the claimants of said ditch are Ida S. Keeling,

____ Duffield, J. F. French and J. K. Young.

That said ditch draws its supply of water from the waters of Dry Creek, a natural stream, and Swill Gulch also known as Swill Creek, a tributary of Dry Creek, in Water District No. 41, State of Colorado.

That the headgates of said ditch are located as follows: the principal headgate of said ditch is in Montrose County, Colorado, on the right bank of Dry Creek at a point whence the quarter section corner between Sections 25 and 36, Township 51 North of Range 11 West of the New Mexico Principal Meridian bears North 19 chains distant, from which point the route of said ditch runs as follows: North 17 chains; thence North $50^{\circ} 0'$ East 3 chains; at said point in Swill Gulch there is another headgate appropriating water from said gulch. The route of said ditch from said Swill Gulch is as follows: North $10^{\circ} 30'$ West 40 chains; thence North 1° West 55 chains; thence North $10^{\circ} 45'$ East 15.50 chains; thence by laterals to the lands to be irrigated.

The Court finds that construction was begun on about December 19, 1889; that within a reasonable time thereafter, and in the exercise of due diligence the construction of said ditch was completed, and that the date of appropriation of water through and by means of said ditch for actual use for irrigation of the lands thereunder was about December 19, 1889; that about 219 acres of land were irrigated during the irrigation season of 1890, and that about 219 acres have been irrigated continuously since 1890 by means of

said ditch. That in that vicinity it requires 1 cubic foot of water per second of time to properly irrigate 40 acres of land; that said ditch is entitled to and it is hereby ordered, adjudged and decreed, that there be permitted to flow into said ditch, from the waters of said Dry Creek and said Swill Gulch, also known as Swill Creek, 5.47 cubic feet of water per second of time, as Priority No. 2, (Series 1915).

✓ No. 3. (Series 1915) THE TOWN OF OLATHE PIPE LINE.

That said The Town of Olathe Pipe Line is entitled to Priority No. 3, (Series 1915).

That the claimant of said pipe line is The Town of Olathe, a municipal corporation.

That said pipe line draws its supply of water from Dry Creek, a natural stream, and at times from Moffitt Spring, in Water District No. 41, State of Colorado.

That the headgate of said pipe line is located at a point on the West Branch of Dry Creek at a point approximately whence the East quarter corner of Section 24, Township 48 North, Range 12 West, N. M. P. M. bears North 81° 30' West for a distance of 9925 feet.

That the date of appropriation of water through and by means of said pipe line for actual and beneficial use for municipal, domestic and other purposes incident to the uses of the inhabitants of said Town of Olathe, was about September 1, 1911.

That the diameter of said pipe line is six inches; that the carrying capacity of said pipe line, as at present constructed, is one and thirty one-hundredths, (1.30) cubic feet of water per second of time.

And it is hereby ordered, adjudged and decreed that there be allowed to flow into said pipe line from said stream and spring for the uses aforesaid and the parties lawfully entitled thereto, under and by virtue of said appropriation, by construction, and Priority No. 3, (Series 1915), so much water as will flow therein,

said pipe line being six inches in diameter, not to exceed 1.30
cubic feet of water per second of time, as Priority No. 3 (Series 1915)

The decrees herein entered are subject to all
former decrees.

By the Court,

----- Thomas J. Black -----
Judge.

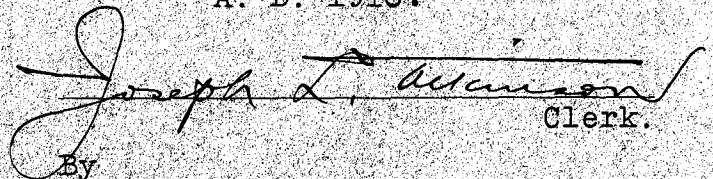
STATE OF COLORADO, }
County of Montrose. } ss.

I, Joseph L. Atkinson, Clerk of the District Court of Montrose County, the same being a Court of Record, in the state aforesaid, do hereby certify the foregoing to be a true, perfect and complete copy of Decree, In the matter of Priorities of Water Rights in Water District No. 41,

The Town of Clathe, a municipal corporation, et al, Petitioners,

as the same appears ~~on file and~~ of record in my office.

IN WITNESS WHEREOF, I have hereunto set
my hand and affixed the seal of said Court,
at Montrose, this second day of
June A. D. 1916.


Clerk.

By

Deputy Clerk.

CA4573

Moffit Spring Pipeline

East Fork Feeder Pipeline

Citizens Reservoir

IN THE DISTRICT COURT OF
MONTROSE COUNTY, COLORADO.

Case No. 4573

IN THE MATTER OF THE PRI-
ORITIES OF WATER RIGHTS
IN WATER DISTRICT No. 41.

REVISED DECREE

1910

0151

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to
DEGREE.**

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MOORE, GEORGE W., DITCH * * * * *	56
McCOLLUM DITCH * * * * *	76
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NUTTING, OLIVER, DITCH * * * * *	83

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STATE OF COLORADO, }
COUNTY OF MONTROSE. } ss

IN THE DISTRICT COURT.

No. 4573.

IN THE MATTER OF THE PRIORITY OF)
WATER RIGHTS IN WATER DISTRICT)
NO. 41, of the STATE OF COLORADO,)
J. F. DARTER, MORTIMER P. WEEKS,)
and A. G. HAUGSTED,)
Petitioners.)

REVISED DECREE

NOW, on this 4th day of December

A. D. 1941, this matter coming on for final hearing and adjudication upon the Findings and Report of Clyde W. McGlean, Referee, heretofore appointed herein, and to whom this matter, subsequent to the reopening thereof, and on September 14, 1940, was, by order of this Court, referred for the purpose of completing the taking of evidence therein, the making of abstract and Findings and Report, and proposed decree, cancelling, revoking and replacing the decree heretofore, and on February 20, 1937, entered in this proceeding; all of which evidence, abstract and findings have been and are duly filed among the records of this court; as well as marshalling, coordinating and renumbering all priorities and ditches in one system of consecutive district numbers in said Water District No. 41, in accordance with their respective dates of appropriation, giving precedence to the awards in each decree in accordance with its respective date of entry; and to coordinate and relate the priorities awarded in this proceeding, irrespective of whether established in said decree of February 20, 1937 or subsequent thereto; And the Court having been fully advised in the prem-

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ises, and being fully satisfied from the returns of notices, certificates of publication, affidavits and certificates of said Referee, that the said testimony returned was taken upon due and lawful notice in all respects according to the provisions of the statutes in such case made and provided, and the rules and orders of this court in that behalf in this matter made and entered; And further that all parties interested have been notified of the time of the filing of the findings and report of said Referee; and that the notices of the time set for filing exceptions in this matter to said report and findings, and the time set for final hearing thereof, have been duly served upon all the parties entitled to notice under the order of Court in this behalf heretofore entered; and further, that all interested in this proceeding and entitled to notice in any stage of the proceedings therein, have at all times been duly notified according to law and the orders of this Court; and the report of the said Referee, Clyde N. McGlean, together with the evidence, findings, return of service of notices, affidavits and notices having been found to be in due form; and the Court having now herein open court heard all parties and their attorneys as far as they desire to be heard respectively touching the several matters herein, and being fully advised in the premises:

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Court, that the said Decree of February 20, 1937, entered in this matter be, and the same is, hereby cancelled, revoked and entirely replaced by the provisions of this decree.

AND IT IS FURTHER ORDERED, ADJUDGED AND DECREED by the Court, that the several Findings of the Referee, as reported to and filed in this Court, be in all things approved and confirmed, and that they be taken, deemed and held in all re-

spects as the findings of the Court in this matter; and further, that all and singular, the several ditches, canals and pipe lines, and their enlargements and extensions; and reservoirs hereinafter set forth, be ordered, adjudged and decreed to have the several rights, numbers and priorities to the waters of the several streams and other sources respectively, in said Water District No. 41, as hereinafter more particularly set forth, subject, however, to the following next mentioned provisions, to-wit:

1st. No part of this decree shall in any case be taken, deemed or held to confirm, impair or in any manner affect any claim of right or property held or claimed by any person, association, corporation or joint stock company in or to any ditch, canal, flume, pipe-line or reservoir, or any part thereof, or the land, or any part thereof, on which any such of the same may be situated, or the land held or claimed as right of way or any or either of them; or any right, interest or claim of property whatever in or relating to any of them.

2nd. No part of this decree shall be taken, deemed or held as affecting in any manner any question or claim of right between the owners or claimants of or under any such ditch, canal, flume, pipe-line or reservoir, as between each other; whether as part owners or shareholders therein, either as stockholders in any corporation or shareholders in any joint stock company, or as individuals claiming or to claim the use of the waters or any stream under or through the same or any part thereof; nor shall it affect the right, interest or claims of any consumer or consumers of water for irrigation, power, storage or domestic purposes, whether as part owner, lessee, shareholder or stockholder in any corporation, association or joint stock company owning, holding or controlling the same, or as

purchaser therefrom, as against the rights, interests or claims of any other party or parties interested, or claiming right or interest in or to such ditch, canal, flume, pipe-line or reservoir as owner, lessee or part owner thereof, or as shareholder or stockholder in any joint stock company, association or corporation claiming the same or any part thereof, or purchaser of water therefrom; neither shall it affect any claim of priority made or resisted as between parties using water for said purposes, or either of them, from the same ditch or canal, flume, pipe-line or reservoir.

3rd. No part of this decree shall affect in any way, any right, claim or interest now or hereafter held or claimed to any appropriation of water made after the closing of testimony touching the construction or enlargement of the ditch, canal, flume, pipe-line or reservoir, by means of which such appropriation may be or shall have been made.

4th. No part of this decree shall be taken or held as adjudging to any claimant, or present or future representative or representatives of any claimant to any ditch, canal, flume, pipe-line or reservoir; or to the use of water thereunder or therethrough any right to take and carry by means of any canal, ditch, flume, pipe-line or reservoir herein mentioned, or by means of any appropriation herein adjudged, any water from any natural stream or other source except for lawful and beneficial purposes.

5th. No part of this decree shall be taken, deemed or held to award to any ditch, canal, flume, pipe-line, or enlargement or extension thereof, or reservoir or enlargement thereof, a priority of right to a greater quantity of water than the actual carrying capacity of said ditch, canal, flume, pipe-line or enlargement or extension thereof, or reservoir as originally

constructed or enlarged.

6th. No part of this decree shall be taken, deemed or held as giving or adjudicating to any claimant, or present or future representative of any claimant, of any ditch, canal or reservoir, or to the person or persons holding, using or controlling the same, any right to take and divert continuously the volume of water appropriated, but only the right to divert the same at such times as the same may be reasonably and actually needed; nor any right to take and divert the full quantity of water appropriated, except when the same may be reasonably and actually needed; all for the purposes and uses for which the appropriation has been made.

7th. Water shall not, in any case be diverted or held for mere purposes of speculation; and in all cases the right to flow and use of water, under the several priorities hereby found and adjudged, shall be limited in time as well as volume or quantity, to the reasonable and actual needs, or other beneficial use, for which the same shall have been appropriated, whether the water be supplied by one or two or more ditches, canals and/or reservoirs; and cumulative appropriation and use of water, from different ditches, canals, and/or reservoirs, for the same land, in excess of the actual amount necessary for the irrigation thereof, shall not be allowed.

8th. This decree shall be taken, deemed and held as determining and establishing the several priorities of right, by actual appropriation of water from the streams and other sources in said Water District No. 41, for irrigation, domestic, Power, and any and all other beneficial and lawful purposes and uses, by means of the several ditches, canals, flumes, pipe-lines and reservoirs, and enlargements and extensions thereof, in said district concerning which testimony has been offered in this

matter, each according to the construction, enlargement or extension thereof, with the amount of water held to have been appropriated thereby.

9th. That in all cases in this decree, where two or more ditches have been awarded identical priority dates, the respective priority numbers shall govern and control, except where otherwise specifically found and decreed.

10th. This Decree shall be taken, deemed and held as ratifying, approving and confirming all prior adjudication decrees within said district relating to and determining rights to the use of water from any and all sources therein; and as renumbering in one system of consecutive district numbers, all priorities heretofore awarded in said Water District No. 41, in and by the various adjudication decrees therein, without affecting in any manner the relative rights and priorities as therein fixed. (Decree of Feb. 20, 1937, herein revoked, excepted)

And it is Further Found by the Court, in accordance with the Findings and Report of the Referee that six Orders or Decrees affecting priorities of right to the use of water in said Water District have been heretofore entered of record in the District Courts of Montrose and Delta Counties, Colorado, -the only counties in which said Water District No. 41 extends; said orders and decrees, in the chronological order of their entry, being as follows:

- (1) Case No. 149 in the District Court of Montrose County, Colorado, being the first adjudication proceeding in Water District No. 41. Decree entered on November 14, 1888 awarding 111 priorities to 60 ditches, and 4 priorities to 4 reservoirs; -not making in either case a consecutive chronological numbering of priorities in the district as a whole.

- (2) On June 30, 1890 an Order or Decree was entered in the District Court of Delta County, Colorado, in a proceeding in the nature of a review of the above Case No. 149, in which proceeding additional awards were made of 5 priorities to 4 ditches, which were not presented in said original cause. Said Decree directing coordination with the priorities previously awarded in said Case No. 149, the same as though rendered therein.
- (3) Case No. 561 in the District Court of Montrose County, Colorado, being a supplemental adjudication proceeding in Water District No. 41. Decree entered on February 1, 1892, awarding 4 priorities to 2 ditches, without distinctive district numbers.
- (4) Case No. 1397 in the District Court of Montrose County, Colorado, being a suit to determine the relative district order of priority theretofore, and in Case No. 149, above referred to, awarded to the Ross Brothers Ditch out of Spring Creek, in which decree said Ditch was numbered 2 and awarded priority No. 2 out of Spring Creek, without determining its relation to other ditches in the district, except on Spring Creek. Final order was entered declaring that the rights awarded to said Ross Brothers Ditch should not be subject to any rights in the District save the rights awarded in said Case No. 149, as Priority No. 1 out of said Spring Creek.
- (5) Case No. 2127 in the District Court of Montrose County, Colorado, being a supplemental adjudication proceeding in Water District No. 41. Decree entered on April 26, 1916, awarding 3 priorities to 3 ditches

again without distinctive district numbers.

- (6) Case No. 3728 in the District Court of Montrose County, Colorado, being a supplemental adjudication proceeding in Water District No. 41. Decree entered on July 3, 1929, awarding 34 priorities to 33 ditches and 1 priority to 1 reservoir. In the preparation of said decree an apparent research was made of the records of previous adjudication proceedings in said District, in an attempt to find the number of priorities theretofore awarded, and to establish a point at which to begin district numbering in this proceeding; and it was found and decreed that the priorities therein should be numbered consecutively beginning with Number 127; it being also apparently found that 71 ditches had been involved in said former adjudication proceedings, as the ditches in this decree were consecutively numbered beginning with Number 72. No attempt, however, was made to determine the distributive order of the priorities theretofore in said various adjudication proceedings awarded, wherein no consecutive district numbers were fixed.

That the several proceedings for change of point of diversion, are not herein considered.

And the Court Finds, in accordance with the findings and recommendations of the Referee, that the above mentioned computation in Case No. 3728, of ditches and priorities in all decrees previous thereto, is correct, except as to ditches; that the actual number of ditches involved in said district was 69 instead of 71. However, the error is immaterial, and to avoid disturbing the numbering of ditches in said Case No. 3728, in the re-numbering affected herein, IT IS ORDERED that the numbers

70 and 71, as applied to ditches, be, and they are hereby eliminated and declared to have no application to any ditches in said Water District Number 41.

Therefore, in accordance with the above findings:-

IT IS HEREBY ORDERED, ADJUDGED AND DECREED, that each and all of said prior adjudication decrees, in the order of their entry, and the priorities respectively awarded therein, in their order of award, be, and they are hereby ratified, confirmed and approved; and that they be, in such order, marshalled, co-ordinated and renumbered in one list of priorities, to precede and subordinate the priorities awarded in this proceeding.

That the numbers of the ditches, as therein originally given, and as herein marshalled, coordinated and renumbered; the names of said ditches; the sources from which water is taken; the priority numbers as originally given, and as herein marshalled, coordinated and renumbered; the dates of appropriation awarded thereto, and the amount of cubic feet of water per second of time, or fraction thereof, appropriated thereby, are as follows:

1st: As to ditches and canals in Case No. 149, District Court of Montrose County, Colorado, with which are coordinated the ditches in review of said case in the Delta County, Colorado District Court in order of June 30, 1890:-

DITCH			A P P R O P R I A T I O N				
Number Originally Decreed to Ditch	Co-Ordinated Number	Name	Source	Number Priority Originally Decreed to Ditch	Co-Ordinated Number	Date	Amount Cu. Ft. Per Second
1	1	Reservation (U.S.) Ditch	Uncompahgre River	1	1	July 1, 1880	2.69
2	2	Egleston Ditch	Uncompahgre River	2	2	Nov. 21, 1881	6.00
3	3	Uncompahgre Ditch (Delta Co.)	Uncompahgre River	3	3	Dec. 8, 1881	12.00
None	4	Boles & Manney Ditch	Uncompahgre River	14	4	Dec. 27, 1881	3.21
4	5	Homestead Ditch	Uncompahgre River	4	5	Jan. 5, 1882	11.00
5	6	Gus A. Frost Ditch	Uncompahgre River	5	6	Jan. 27, 1882	2.50
6	7	Hull Private Ditch	Uncompahgre River	6	7	Feb. 3, 1882	3.00
7	8	Eagle Ditch	Uncompahgre River	7	8	Feb. 10, 1882	17.85
8	9	Satisfaction Ditch	Uncompahgre River	8	9	Feb. 11, 1882	12.00
9	10	Uncompahgre (Loutsen- hizer Ditch)	Uncompahgre River	9	10	Feb. 23, 1882	18.00
10	11	Chipeta-Bandery Ditch	Uncompahgre River	10	11	March 1, 1882	9.00
11	12	Delta Ditch	Uncompahgre River	11	12	March 2, 1882	15.00
12	13	West Montrose Ditch	Uncompahgre River	12	13	Mar. 10, 1882	8.00
13	14	Sunrise Ditch	Uncompahgre River	13	14	Apr. 30, 1882	6.00
14	15	Elise Ditch	Uncompahgre River	14	15	Apr. 30, 1882	4.50
15	16	Swanson Ditch	Uncompahgre River	15	16	May 1, 1882	5.50
16	17	Supply Ditch	Uncompahgre River	16	17	May 7, 1882	2.00

None	18	East Side Ditch	Uncompahgre River	22 1/2	18	May 10, 1882	3.12
1	19	Dry Creek Ditch	Dry Creek	1	19	June 1, 1882	.98
1	20	S. E. Dillon Ditch	Spring Creek	1	20	Oct. 1, 1882	.99
17	21	Foster Ditch	Uncompahgre River	17	21	Oct. 1, 1882	2.50
18	22	Stark Volkmann Rose Mill- vers Ditch	Uncompahgre River	18	22	Oct. 12, 1882	13.00
2	23	Ross Bros. Ditch (In Case No. 1397 the above priority to the Ross Bros. Ditch was declared to be independent of and not subject to any priority in water District No. 41, except Priority No. 1 out of Spring Creek, said priority being to the S. E. Dillon Ditch)	Spring Creek	2	23	Nov. 1, 1882	6.00
19	23	Ross Bros. Ditch	Uncompahgre River	19	24	Nov. 1, 1882	6.00
20	24	Ironstone Ditch	Uncompahgre River	20	25	Nov. 7, 1882	37.50
17	21	Foster Ditch	Uncompahgre River	21	26	Nov. 21, 1882	1.83
2	25	Cushman Ditch	Dry Creek	2	27	Dec. 17, 1882	96.50
21	26	Val Verde Ditch	Uncompahgre River	22	28	Feb. 20, 1883	5.00
9	10	Uncompahgre (Loutsenhiser Ditch)	Uncompahgre River	23	29	Feb. 23, 1883	30.00
22	27	Stittler Ditch	Uncompahgre River	24	30	March 2, 1883	2.05
23	28	Uncompahgre Canal	Uncompahgre River	25	31	April 7, 1883	100.00
24	29	Ben Davis Ditch	Uncompahgre River	26	32	May 1, 1883	3.00
3	30	Neugart Ditch	Spring Creek	3	33	June 1, 1883	2.08
4	31	Spring Creek Valley Ditch	Spring Creek	4	34	June 13, 1883	65.10
25	32	Garnett Ditch	Uncompahgre River	27	35	June 18, 1883	45.00
26	33	Home Run Ditch	Uncompahgre River	28	36	Aug. 25, 1883	25.00

27	34	Selle Ditch	Uncompahgre River	29	37	Oct. 29, 1883	14.50
28	35	O. B. Jones and North Mass Ditch	Uncompahgre River	30	38	Nov. 30, 1883	7.00
1	36	Buckhorn Ditch	Beaton Creek	1	39	Dec. 10, 1883	6.25
1	37	Uncompahgre Ditch	Cedar Creek	1	40	Dec. 13, 1883	44.10
29	38	Woodgate & Callaway Ditch	Uncompahgre River	31	41	Dec. 15, 1883	2.00
None	39	Purdy & Vickers Ditch	Uncompahgre River	23 1/2	42	Dec. 25, 1883	3.29
30	40	Chipeta Ditch (Montrose County)	Uncompahgre River	32	43	Jan. 24, 1884	17.50
5	41	Keystone Ditch	Spring Creek	5	44	March 7, 1884	14.58

(Priority No. 45, as shown in Schedule of Reservoirs, is given to the Keystone Reservoir)
(Priority No. 46, as shown in Schedule of Reservoirs, is given to the Buckhorn Ditch Reservoir)

31	42	Montrose City Ditch	Uncompahgre River	33	47	April 5, 1884	18.00
23	28	Uncompahgre Canal	Uncompahgre River	34	48	April 7, 1884	100.00
2	43	Beaton Ditch	Beaton Creek	2	49	Apr. 10, 1884	8.33
13	14	Sunrise Ditch	Uncompahgre River	35	50	Apr. 15, 1884	3.00
6	44	H. O. K. Lamb Ditch	Spring Creek	6	51	May 30, 1884	3.53
1	45	Baldy Ditch	East Fork of Dry Creek	1	52	June 20, 1884	30.00
32	46	Delta Chief Ditch	Uncompahgre River	36	53	Aug. 24, 1884	21.00
33	47	Silver Springs Ditch	Uncompahgre River	37	54	Sept. 23, 1884	7.00
34	48	Logan Ditch	Uncompahgre River	38	55	Sept. 24, 1884	15.00
7	49	Shavano Valley Ditch	Spring Creek	7	56	Nov. 21, 1884	7.81

35	50	Malloy Ditch	Uncompahgre River	39	57	Feb. 1, 1885	3.00
8	51	Heath Ditch	Spring Creek	8	58	Feb. 21, 1885	2.00
2	52	Cedar Creek Ditch	Cedar Creek	2	59	Feb. 24, 1885	9.85
10	11	Chilpeta-Bendery Ditch	Uncompahgre River	40	60	March 8, 1885	6.00
None	53	Wilson-Davis Ditch	Uncompahgre River	23-2/3	61	March 10, 1885	1.85
36	54	Reservation Ditch	Uncompahgre River	41	62	March 20, 1885	15.00
22	27	Stiteler Ditch	Uncompahgre River	42	63	March 31, 1885	5.32
23	28	Uncompahgre Canal	Uncompahgre River	43	64	March 31, 1885	50.00
37	55	Uncompahgre and Cedar Creek Valley Ditch	Uncompahgre River	44	65	April 1, 1885	25.00
3	56	Fendall Ditch	Cedar Creek	3	66	April 6, 1885	2.08
1	57	Benoroff Ditch	Mexican Springs Branch	1	67	April 25, 1885	1.00
38	58	Colorow Ditch	Uncompahgre River	45	68	July 31, 1885	24.64
4	59	Wahl Ditch	Cedar Creek	4	69	Feb. 1, 1886	4.16
None	39	Purdy & Vickers Ditch	Uncompahgre River	33-2/3	70	Feb. 9, 1886	.98
39	60	Midland Ditch	Uncompahgre River	46	71	March 20, 1886	27.95
20	24	Ironstone Ditch	Uncompahgre River	47	72	March 31, 1886	76.00
5	61	Wahl & Wahl Ditch	Cedar Creek	5	73	April 1, 1886	4.79
1	62	Freeman Ditch	Felton Gulch	1	74	April 15, 1886	.99
1	63	T. J. T. Ditch	Sheep Ranch Creek	1	75	May 24, 1886	30.00
28	35	G. B. Jones and North Kesa Ditch	Uncompahgre River	48	76	July 12, 1886	33.33

(Priority No. 77, as shown by Schedule of Reservoirs, is given to the Reservoir No. 1 and feeder)
(Priority No. 78, as shown by Schedule of Reservoirs, is given to the Oushman Reservoir)

27	34	Selig Ditch	Uncompahgre River	49	79	Feb. 7, 1888	56.10
40	64	Platt Ditch	Uncompahgre River	50	80	March 12, 1888	2.08

The above were all absolute decreed priorities awarded in said Case No. 149, and Review Thereof.

That in the same case the following CONSTRUCTIVE PRIORITIES were awarded; said priorities being consecutively numbered, but without priority dates:

2	2	Egleston Ditch	Uncompahgre River	51	81		1.81
3	3	Uncompahgre Ditch (Delta Co.)	Uncompahgre River	52	82		4.95
4	5	Homestake Ditch	Uncompahgre River	53	83		9.18
5	6	Cas A. Frost Ditch	Uncompahgre River	54	84		2.00
6	7	Hull Private Ditch	Uncompahgre River	55	85		3.25
7	8	Eagle Ditch	Uncompahgre River	56	86		16.00
8	9	Satisfaction Ditch	Uncompahgre River	57	87		7.79
9	10	Uncompahgre (Loutsen- hizer) Ditch	Uncompahgre River	58	88		13.00
10	11	Chapeta-Beaudery Ditch	Uncompahgre River	59	89		1.41
11	12	Delta Ditch	Uncompahgre River	60	90		15.00
12	13	West Montrose Ditch	Uncompahgre River	61	91		12.00
13	14	Sunrise Ditch	Uncompahgre River	62	92		2.00

14	15	Rice Ditch	Uncompahgre River	63	93	2.79
15	16	Swanson Ditch	Uncompahgre River	64	94	4.94
16	17	Supply Ditch	Uncompahgre River	65	95	1.31
17	21	Yoster Ditch	Uncompahgre River	66	96	1.67
18	22	Stark Volkmann Rose Silvers Ditch	Uncompahgre River	67	97	7.83
19	23	Ross Bros. Ditch	Uncompahgre River	68	98	6.00
20	24	Ironstone Ditch	Uncompahgre River	69	99	37.50
21	26	Val Verde Ditch	Uncompahgre River	70	100	5.00
9	10	Uncompahgre (Loutsen- hizer) Ditch	Uncompahgre River	71	101	20.60
23	28	Uncompahgre Canal	Uncompahgre River	72	102	30.00
24	29	Ben Davis Ditch	Uncompahgre River	73	103	3.25
25	32	Carnett Ditch	Uncompahgre River	74	104	48.33
26	33	Home Run Ditch	Uncompahgre River	75	105	21.88
27	34	Selig Ditch	Uncompahgre River	76	106	12.00
28	35	O. B. Jones and North Hess Ditch	Uncompahgre River	77	107	5.50
29	38	Woodgate & Callaway Ditch	Uncompahgre River	78	108	.34
30	40	Chipeta (Montrose Co.) Ditch	Uncompahgre River	79	109	17.37
31	42	Montrose City Ditch	Uncompahgre River	80	110	8.50
13	14	Sunrise Ditch	Uncompahgre River	81	111	2.02

32	46	Delta Chief Ditch	Uncompahgre River	82	112		21.50
33	47	Silver Springs Ditch	Uncompahgre River	83	113		7.16
34	48	Logan Ditch	Uncompahgre River	84	114		10.00
35	50	Kalloy Ditch	Uncompahgre River	85	115		3.25
10	11	Chipeta-Beaudery Ditch	Uncompahgre River	86	116		4.41
36	54	Reservation Ditch	Uncompahgre River	87	117		11.35
23	28	Uncompahgre Canal	Uncompahgre River	88	118		201.00
37	55	Uncompahgre and Cedar Creek Valley Ditch	Uncompahgre River	89	119		58.40

2nd: AS TO DITCHES in Case No. 561, in the District Court of Montrose County, Colorado,

Decree Dated February 1, 1892:

3	65	Ironstone Extension Ditch	Dry Creek	3	120	Feb. 28, 1885	30.00
4	66	Dry Creek Feeder Ditch	Dry Creek	4	121	Feb. 28, 1887	40.00
3	65	Ironstone Extension Ditch	Dry Creek	5	122	(No date given)	31.20
4	66	Dry Creek Feeder Ditch	Dry Creek	6	123	(No date given)	155.00

3rd: AS TO DITCHES in Case 2127, in the District Court of Montrose County, Colorado,

Decree Dated April 25, 1916:

1	67	Montrose Flouring Mill Ditch	Uncompahgre River	1	124	Aug. 29, 1883	50.00 Power
2	68	Lyra Ditch	Dry Creek	2	125	Dec. 19, 1889	5.47
3	69	Town of Olathe Pipe Line	Dry Creek & Moffatt Spring.	3	126	Sept. 1, 1911	1.30

4th: AS TO DITCHES in Case 3728, in the District Court of Montrose County, Colorado,

Decree Entered July 3, 1929:

(In this proceeding the court, without actually renumbering consecutively the ditches, reservoirs and priorities in previous decrees, calculated and ordered that for consecutive numbering the ditches should start with No. 72; the reservoirs with No. 5; and the priorities with number 127, which calculation was correct with regard to priorities and reservoirs, but incorrect with regard to ditches; there having been but 69 ditches involved in said prior adjudication decrees. However, the Court finds, in accordance with the findings and Recommendation of the Referee, that it is immaterial that the numbers 70 and 71 be used, and in order to avoid disturbing the numbering of ditches established in said Case No. 3728, the Court, in this present marshalling, coordinating and renumbering of all District ditches, adopts the numbering so established in said Case No. 3728, omitting numbers 70 and 71, and declaring them to be inapplicable to any ditch or ditches in Water District No. 41.)

72	72	J. C. Free Private Ditch	Happy Canon Creek	127	127	Sept. 2, 1911	3.65
73	73	Cedar Creek Springs Pipe-line	Spring, Tributary to Cedar Creek	128	128	Sept. 2, 1911	.014
74	74	Sampson & Fraser Ditch	Happy Canon Creek	129	129	Sept. 2, 1911	2.00
75	75	Robert Sampson Ditch	Happy Canon Creek	130	130	Sept. 2, 1911	1.00
76	76	Beach Ditch Number One	Quail Harbor Gulch	131	131	Sept. 2, 1911	.26
77	77	Beach Ditch Number Two	Quail Harbor Gulch	132	132	Sept. 2, 1911	1.17
78	78	Beach Ditch Number Three	Little Valley Gulch	133	133	Sept. 2, 1911	.52
79	79	J. E. Anderson Ditch No.1	Happy Canon Creek	134	134	Sept. 2, 1911	1.38
80	80	J. E. Anderson Ditch No.2	Happy Canon Creek	135	135	Sept. 2, 1911	1.22
81	81	Moffat Ditch	Moffat Draw	136	136	Sept. 2, 1911	1.30
82	82	Seepage Ditch No. 1	Verina Gulch	137	137	Sept. 2, 1911	1.25
83	83	Seepage Ditch No. 2	Cook Gulch	138	138	Sept. 2, 1911	1.00

84	Snipe Creek Ditch	Snipe Creek, Seepage and Waste Water	139	139	Sept. 2, 1911	1.43
85	Chapparral Ditch	Dry Creek	140	140	Sept. 2, 1911	.39
86	Carren and Lewis Ditch	Platt Gulch and Uncompagere River	141	141	Sept. 2, 1911	2.50
87	Sweetzer Gulch Waste Water Ditch	Sweetzer Gulch	142	142	Sept. 2, 1911	1.00
88	Albush Ditch	Horsefly Creek	143	143	Sept. 2, 1911	6.00
89	E. F. Krebs Ditch	Horsefly Creek	144	144	Sept. 2, 1911	1.43
90	Topliss Ditch	Waste and Surface waters	145	145	Sept. 2, 1911	2.06
91	Verzina Ditch	Seepage Stream	146	146	Sept. 2, 1911	.25
92	Halpin Lateral of the Olmaron Ditch	South Prong of Cedar Creek	147	147	Sept. 2, 1911	20.00
93	Hook Ditch	Dolores Creek	148	148	Sept. 2, 1911	4.69
(Priority No. 149, as Shown in Schedule of Reservoirs, is Given to the Hook Reservoir No. 1)						
94	Hook Feeder Ditch	Dolores Creek	150	150	Sept. 2, 1911	24.00 Con- ditional.
95	Feeder Ditch	Verzina Gulch	151	151	Sept. 2, 1911	8.00
96	Hays Ditch	Hays Draw	152	152	Sept. 2, 1911	1.56
97	Moshisky Ditch	Cedar Park Gulch	153	153	Sept. 2, 1911	1.50 Con- ditional
98	Cedar Park Ditch	Cedar Park Gulch	154	154	Sept. 2, 1911	1.95
99	Slms Enlargement and Ex- tension of the Smith Ditch	Happy Canon Creek	155	155	Sept. 2, 1911	4.68

100	100	Hays Pipe Line	Spring in Sec. 16, Twp. 48 N., R. 8 E.	156	156	Feb. 1, 1913	.10
101	101	Chas. M. Ryan Ditch	Unnamed Draw above Brown Springs, and Branson Draw	157	157	March 1, 1913	7.28
102	102	Menke Ditch	McQuinniff Draw	158	158	June 15, 1919	.60
92	92	Halfpin Lateral of The Cimarron Canal	South Prong of Cedar Creek	159	159	Nov. 1, 1923	25.00
103	103	Lee Ditch	Hicks Gulch	160	160	May 1, 1924	1.04
104	104	Enlargement of the Garrett Ditch	Dry Cedar Creek	161	161	July 1, 1925	5.50

That the numbers of the reservoirs, as in said previous decrees originally given, and as herein marshalled, coordinated and renumbered; their names, the sources from which water is taken; the priority numbers as originally given, and as herein marshalled, coordinated and renumbered; dates of appropriation awarded thereto, and amount of cubic feet of water storage capacity appropriated thereby, are:

RESERVOIR				A P P R O P R I A T I O N .			
Number	Co-ordi-	Name	Source	Number	Co-ordi-	Date	Amount
origin-	nated			Priority	ated Pri-		Cubic feet
ally	Reservoir			Origin-	ority		Storage
Decreed	Number			ally De-	Number		Capacity
to Res-				oreed to			
ervoir				Reservoir			
1	1	Keystone Reservoir	Spring Creek	1	45	March 7, 1884	No amount given
1	2	Buckhorn Ditch Reservoir	Beaton Creek	1	46	March 18, 1884	No amount given
1	3	Reservoir No. 1 and Feeder	East Fork of Dry Creek	1	77	June 18, 1887	No amount given

1	4	Cushman Reservoir	Dry Creek	1	78	Dec. 23, 1887	No amount given
5	5	McCook Reservoir No. 1	Dolores Creek	5	149	Sept. 2, 1911	36,512.57 1,569,925 Com- ditional.

AND THE COURT FURTHER FINDS, with regard to the awards granted in this proceeding, and in accordance with the Findings and Report of the Referee; that it is impossible to fix a uniform duty of water for the whole of Water District No. 41, for the reason that there exists wide variations in the condition, extent and duration of water supply, and in the porosity of soils in different sections of the District; that an amount sufficient to properly irrigate a given acreage in one section will be wholly inadequate for a like acreage in another section. IT IS THEREFORE ORDERED that all of the peculiar circumstances surrounding the operation of each individual ditch be, and they are, taken into consideration in determining the needs and requirements for proper irrigation of the lands thereunder, and that its award be fixed without reference to the requirements of any other ditch.

AND THE COURT FURTHER FINDS, with regard to the conditional priorities hereinafter awarded, that the structure or structures to which awarded, were commenced and constructed, or are to be constructed, of sufficient capacity for the irrigation of the non-irrigated lands for which such conditional priorities are granted: That because of circumstances shown by the evidence, and sufficient in law, it has been impossible, or impracticable for the claimant, or claimants, to complete the appropriation by the completion of such diversion project, or projects, or by the clearing and cultivation of such lands, and the actual irrigation thereof; that at the date of this decree an inchoate but uncompleted right of appropriation exists, which, if completed and perfected by the application of the water to the actual irrigation of such non-irrigated lands, with due and reasonable diligence, should be allowed to relate back and take priority from the date of appropriation by original con-

struction of such project, or projects, as hereinafter found.

AND IT IS FURTHER FOUND, ORDERED, ADJUDGED AND DECREED that concerning each and every ditch, canal, pipe line, or enlargement thereof, or reservoir or enlargement thereof, to which conditional decree is hereinafter awarded, that each such conditional decree is found and allowed upon the condition that the water shall be applied to the actual irrigation of such non-irrigated lands with due and reasonable diligence; and that same shall be limited to the respective amount of acreage hereinafter found as the basis thereof, and to the total amount or quantity of water hereinafter found therefor, respectively, and shall not take effect as an adjudicated priority of water right (except so far as allowed by statute) until the same shall have been reported, proven, confirmed and decreed by this Court in appropriate proceedings for that purpose; and shall in every case be limited in and to the proportion in which such non-irrigated lands shall have been placed under actual irrigation with due and reasonable diligence.

AND THE COURT FURTHER FINDS, ADJUDGES AND DECREES that all of the ditches, canals, flumes, pipe lines and their enlargements and extensions, and the reservoirs and their enlargements, hereinafter mentioned and awarded priorities, divert their water from sources of supply within Water District No. 41 in the State of Colorado.

AND THE COURT FURTHER FINDS, ADJUDGES AND DECREES that Statement of Claim for the Oscar Richards ^{Ditch} was improperly filed in this proceeding, and in the decree herein entered on February 20, 1937 was awarded Priority No. 185; that said ditch diverts its supply of water from a source in Water District No. 62, and has obtained a decree for water therefrom in an adjudication proceeding therein; And its award herein as Pri-

ority No. 185 is hereby cancelled, revoked and held for naught.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED, in accordance with the findings and Report of the Referee, the relative priorities of the several ditches, reservoirs and their enlargements and extensions, in this proceeding, are herein determined by their respective historic dates, but that regardless of historic date, said priorities, and each and all of them, are subject and subsequent in number and date to the last preceding priority in the last preceding adjudication decree in said Water District No. 41, as shown in the schedule hereinabove set forth.

Subject to the several above mentioned provisions, it is further, as to the said several ditches, canals, flumes, pipelines, reservoirs and enlargements and extensions thereof, and the several appropriations of water by means of them respectively claimed, ORDERED, ADJUDGED AND DECREED in accordance with the Findings of said Referee, as follows:

That the numbers, priority numbers and names of ditches, canals, pipe lines, and their enlargements and extensions, for which statements of claim have been filed in this proceeding and proof entered; the name or names of the claimants; the source from which water is taken; the historic date of appropriation, and decreed date of appropriation thereof; and amount of cubic feet, or fraction thereof, of water per second of time, appropriated thereby, are:

No.	DITCH NAME	Claimant	Source	Priority No.	A P P R O P R I A T I O N .		Amount On. Ft. Per Second
					Date Historio	Date Deered	
105	Keller Brothers Ditch	Alfred Keller	Spring Creek	162	April 1, 1885	July 2, 1925	2.30
106	Mill Ditch	W.E. McKie, Independent Lumber Co., Joe Armour, Leon J. Overby, Magnus Budd, Maggie Garola, J.C. Watts, John Christy, Jake Holman, Lucio Chavarez, Ernest McQuiston, George Redmond and Fay Carver.	Uncompahgre River	163	April 1, 1886	July 2, 1925	2.00
107	Sampson-Frasier Continuation Ditch	T. Bryan Miles	Springs	164	May 1, 1886	July 2, 1925	2.50
108	Spring Ditch	Maudie Homewood	Seep Springs	165	Aug. 1, 1886	July 2, 1925	3.00
109	Scott Ditch	Margaret Gallagher	Uncompahgre River, Fisher Gulch & waste & Seep	166	April 1, 1887	July 2, 1925	.37 (With permission to divert 1.00 cubic foot of water per second of time at any one time, but not to exceed 22.50 acre feet in any calendar month.)
110	E.E. Frasier Spring and Seepage Ditch	E. E. Frasier	Spring & Seepage	167	June 1, 1887	July 2, 1925	1.50
111	Delta Flour Mills Company Ditch	Delta Flour Mills Company	Uncompahgre River	168	Oct. 31, 1887	July 2, 1925	60.00 Power
112	Mexican Gulch Irrigating Ditch	Grace L. Converse, Georgia Howell, Zella E. Brown, Floyd L. Moore,	Mexican Gulch	169	July 28, 1888	July 2, 1925	8.75
152	Seepage Ditch No. 1	Louise E. Angel	Vezina Gulch	170	Aug. 1, 1888	July 2, 1925	1.25 (used in conjunction with Seepage Ditch No. 2)

Issue entered Dec 4, 1941

W.D. #41

A P P R O P R I A T I O N .

Amount On. Ft. Per Second

100

100

83	Seepage Ditch No. 2	Louise E. Angel	Cook Gulch	171	Aug. 1, 1888	July 2, 1925	1.00
(used in conjunction with Seepage Ditch No. 1)							
68	Lyra Ditch	F. B. Kessling, A. S. Kessling, W. T. Heckert, J. F. French, Lisetta Hurst	Dry Creek and Swill Gulch	172	Dec. 19, 1889	July 2, 1925	9.53
113	C. A. Palmer Ditch	Alice McCollum	Spring Creek	173	Feb. 10, 1891	July 2, 1925	2.00
114	George W. Moody Ditch	J. F. Darter, Mortimer F. Weeks, A. C. Hargett	Uncompahgre River	174	April 15, 1891	July 2, 1925	7.25
115	Subterranean Ditch Feeder No. 2	O. M. Rose	Seepage & Waste	175	Aug. 15, 1892	July 2, 1925	3.00
116	Long Ditch	Rose B. Long	Uncompahgre River	176	April 2, 1893	July 2, 1925	2.00
4	Boles & Kenney Ditch	Thomas Woods, Ed Jacobs, G. W. Young	Uncompahgre River	177	March 1, 1895	July 2, 1925	4.80
117	Oatmeal Ditch	J. C. Storts	Oatmeal Gulch	178	April 1, 1896	July 2, 1925	.75
118	Holly Ditch	Holly Sugar Corporation	Uncompahgre River	179	April 1, 1898	July 2, 1925	.50
119	Road Ditch	Hull Brothers	Oak Creek	180	April 1, 1901	July 2, 1925	4.00
120	Buckskin Ditch	Hull Brothers	Beaton Creek & Buckhorn Res- ervoir	181	April 1, 1901	July 2, 1925	7.41
121	Kenke-McCollum Ditch	Kende K. Kenke Fred August Kenke Zellen M. McCollum	Cedar Park Gulch	182	July 31, 1905	July 2, 1925	1.00 (Not subject to other priorities)

122	McCollum Ditch	Zellah W. McCollum	Shaft Draw	183	July 1, 1906	July 2, 1925	.75
84	Snake Creek Ditch	B. O. Jones, Ross Helmick, Edith Angel and H. F. Wheeler	Dry Creek and Seepage, Waste and Spring Waters	184	May 13, 1908	July 2, 1925	4.82
123	Grays Creek Ditch	Evergreen Heights Ditch & Reservoir Company	Quishman Creek	185	Aug. 31, 1908 (limited by use with other water)	July 2, 1925	9.30
124	Oliver Nutting Ditch	Oliver Nutting	Welch Gulch	186	April 1, 1911	July 2, 1925	.25
95	Feeder Ditch	Feeder Ditch Company	Vezina Gulch	187	Sept. 2, 1911	July 2, 1925	7.40
125	Greathouse Drainage Ditch	O. W. Greathouse W. H. Greathouse	Drainage Gulch & 2 unnamed Gulches	188	Jan. 30, 1912	July 2, 1925	3.00
20	S. E. Dillon Ditch	Leo L. Gust	Spring Creek	189	April 1, 1912	July 2, 1925	2.01
126	Robuck Sunrise Feeder Ditch	Lester E. Robuck Lulu Robuck	Unnamed Gulch Tributary to Uncompahgre River	190	April 1, 1912	July 2, 1925	1.00
				191	Citizens Reservoir Priority See Schedule of Reservoirs.		
127	Moffitt Spring Pipe Line	Town of Olathe, Colorado	Moffitt Spring	192	Oct. 1, 1912	July 2, 1925	.30
123	Grays Creek Ditch	Evergreen Heights Ditch & Reservoir Company	Grays Creek	193	July 3, 1913 (limited by use with other water)	July 2, 1925	9.30
128	North Wenke Ditch	F. A. Wenke W. H. Wenke	3 small seep rivulets	194	May 1, 1920 (Not subject to other priorities)	July 2, 1925	.50
129	Dry Pasture Ditch	Hull Brothers	Scottie Draw Creek	195	Mar. 17, 1921	July 2, 1925	4.00

130	Snyder Ditch	George W. Snyder	Williams Slough	196	Mar. 15, 1922	July 2, 1925	.74
49	Shavano Valley Ditch	Ray Calkins, Mrs. A. R. Calkins, Fred Donley, Sam J. Harris and Leo L. Oust	Spring Creek	197	April 1, 1925	July 2, 1925	5.44

FROM PRIORITY NO. 197 ON, HISTORIC AND DECREED DATES ARE THE SAME, SO DECREED DATE ONLY IS SHOWN.

131	Darter and Hangsted Ditch	J. F. Darter A. C. Hangsted	Uncompahgre River & seepage	198		Feb. 16, 1926	4.20
131	Darter and Hangsted Ditch	J. F. Darter	Uncompahgre River & Seepage	199		Feb. 16, 1926	2.75 Con- ditional
113	C. A. Palmer Ditch	Leo L. Oust	Spring Creek	199 200		April 1, 1926	1.00

(Oscar Richards Ditch in Decree of date Feb. 20, 1937, awarded Priority of date March 30, 1927 found to be in Water District No. 62, and adjudicated therein, and same is purged from this record of decrees)

111	Delta Flour Mills Company Ditch	Delta Flour Mills Company	Uncompahgre River	200		Jan. 6, 1929	90.00 Power
132	Fall Creek Mesa Ditch	Joseph Savornin	East Fork of Dry Creek Tributary	201		July 24, 1929	3.00 (Used with Beaver Dam Gulch Ditch)
133	Beaver Dam Gulch Ditch	Joseph Savornin	Beaver Dam Gulch	202		Sept 1, 1932	3.00 (Used with Fall Creek Mesa Ditch)
4	Boles & Hanney Ditch, Atchley Enlargement	William F. Atchley	Uncompahgre River	203		Nov. 30, 1932	5.00
134	East Fork Reeder Pipe Line	Town of Olathe, Colorado	East Fork of Dry Creek	204		Oct. 25, 1933	1.00

AND the RESERVOIRS in this proceeding are hereby numbered separately from ditches, and consecutively beginning with Reservoir No. 6, according to the date of their several respective appropriations; said number being the next number following the last reservoir to which a priority has been awarded heretofore. And the numbers and names of said reservoirs; the names of the claimants; the source from which water is taken; the priority numbers, and historic dates of appropriation and decreed dates of appropriation thereof, and amount of cubic feet of water appropriated thereby for storage capacity for beneficial purposes, are as follows:

RESERVOIR

A P P R O P R I A T I O N .

No.	Priority No.	Name	Claimant	Source	Date Historic	Date Decreed	Amount Cu. Ft. Storage Capacity
6	191	Ottizena' Reservoir	Town of Olathe, Colorado	West Fork of Dry Creek, and Gooseberry Creek	Sept. 1, 1912	July 2, 1925	5,154,668

AND IT IS MORE PARTICULARLY ORDERED, ADJUDGED
AND DECREED, with reference to the several individual
ditches, their enlargements, and extensions, hereto-
fore mentioned, for which statements of claim were
filed in this proceeding, and proof entered thereon,
as follows, to-wit:

THE MOFFIT SPRING PIPE LINE

Ditch No. 127

Priority No. 192.

THE COURT FINDS:

That the District Number of said Pipe Line is 127, and it is entitled to Priority No. 192. ✓

That the Claimant thereof is the Town of Olathe, Colorado.

That it diverts its supply of water from Moffit Spring, in Water District No. 41.

That its headgate is at a point whence the East quarter corner of Sec. 24, Twp. 45 N., R. 12 W., N.M.P.M., bears North 81° 30' West for a distance of 5925 feet, and the general course of said pipe line is northeasterly. Page 20
7-20-12
T.M.

That said pipe line is about 1009 feet long and has a diameter of 8 inches on a grade of 5 feet per 1000 feet and has a carrying capacity in excess of .30 of a cubic foot of water per second of time.

That it has never been presented for decree at any previous adjudication proceeding.

And from the Findings and Report of the Referee in relation to said pipe line, which are hereby approved and confirmed, -it appears that work on said pipe line was begun by survey on October 1, 1912, and that same was diligently completed and water diverted therethrough and used continuously ever since as a part of the irrigation, domestic and commercial water supply of the Town of Olathe, Colorado, and was and is necessary for that purpose.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that, subject to all of the several limitations in the general decree expressed, there be allowed to flow in said ditch from

said Moffit Spring, for the uses aforesaid, and for the benefit of the parties lawfully entitled thereto, under and by virtue of appropriation by original construction and beneficial use, and Priority No. 192, so much water as will flow therein as now constructed, not to exceed .30 of a cubic foot of water per second of time, as of Historic Date October 1, 1912, and Decreed Date July 2, 1925.

Priority No. 203
with Prior 177
page 223.

THE EAST FORK FEEDER PIPE LINE

Ditch No. 134

Priority No. 204.

THE COURT FINDS:

That the District Number of said ditch is 134, and it is entitled to Priority No. 204.

That the claimant thereof is the Town of Olathe, Colorado.

That it diverts its water from the East Fork of Dry Creek, a tributary of the Uncompahgre River, in Water District No. 41.

That its headgate is located on the west bank of said East Fork of Dry Creek, at a point whence the $\frac{W}{4}$ corner of Section 27, Twp. 48 N., R. 11 W., N.M.P.M., bears South 75° 30' West, a distance of 2360 feet.

That the ditch and pipeline is 3245 feet long, and the diameter of the pipe is 6 inches, with a minimum grade of 5 feet per 1000 feet, and that both ditch and pipeline have a carrying capacity in excess of 1.00 cubic foot of water per second of time.

That said ditch and pipeline has never been presented for decree at any previous adjudication proceeding.

And from the Findings and Report of the Referee in relation to said ditch and pipe line, - which are hereby approved and confirmed, - it appears that work was commenced thereon by survey on October 25, 1933, and finished in 1934; That ever since completion same has diverted and still diverts, approximately 1.00 cubic foot of water per second of time from the East Fork of Dry Creek, and carries same to, and discharges it into the original pipe line for the Town of Olathe leading from the West Fork of Dry Creek, where it supplements the supply therein for domestic, irrigation and commercial purposes in the Town of Olathe, Colorado, and is necessary for such purposes. That it

has been so used continuously since 1934.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that, subject to all of the several limitations in the general decree expressed, there be allowed to flow in said ditch and pipe line, from the East Fork of Dry Creek, for the uses aforesaid, and for the benefit of the parties lawfully entitled thereto, under and by virtue of appropriation by original construction and beneficial use, and Priority No. 204, so much water as will flow therein as now constructed, not to exceed 1.00 cubic foot of water per second of time, as of date October 25, 1933.

THE CITIZENS' RESERVOIR

Reservoir No. 6

Priority No. 191

THE COURT FINDS:

That the District Number of said Reservoir is 6, and it is entitled to Priority No. 191.

That the Claimant thereof is the Town of Olathe, Colorado.

That it is located in Montrose County, Colorado in the SW $\frac{1}{4}$ of Sec. 20, Twp. 48 N., R. 11 W., N.M.P.M., and it derives its supply of water from the West Fork of Dry Creek and Gooseberry Creek.

That its initial point of survey is at a point whence the S $\frac{1}{4}$ corner of Sec. 20, Twp. 48 N., R. 11 W., N.M.P.M., bears South 40° 10' East a distance of 2030 feet.

That the total height of the dam to said reservoir is 23 feet; depth of water stored is 20 feet, and the capacity at the 20 foot level is 5,154,668 cubic feet of water. = 118AF.

That the water impounded in said reservoir is later diverted through the pipe line of claimant, and is a part of the domestic, commercial and irrigation supply of the Town of Olathe, Colorado.

That said reservoir has never been presented for decree at any previous adjudication proceeding.

And from the Findings and Report of the Referee in relation to said Reservoir, -which are hereby approved and confirmed, - it appears that the work of construction on said reservoir was commenced on or about September 1, 1912, and completed diligently to the aforesaid capacity of 5,154,668 cubic feet of water, and ever since it has been filled to capacity practically every year, and has been necessary for, and used as, a reserve and supplemental water supply for said Town of Olathe;

That in connection with other direct flow supply of water for claimant, it serves as an equalizing factor and maintains a constant and adequate source of water for the inhabitants of said town of Olathe, for all necessary and beneficial uses in connection with the business and welfare of said town.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that, subject to all of the general limitations in said General Decree expressed, said reservoir is entitled to, and there should be allowed to flow therein, from said West Fork of Dry Creek and Gooseberry Creek, for the purposes aforesaid, and for the benefit of the parties lawfully entitled thereto, under and by virtue of appropriation by construction and beneficial use, and Priority No. 191, 5,154,668 cubic feet of water, as of Historic Date September 1, 1912, and Decreed Date July 2, 1925.

DONE IN OPEN COURT this 4th day of _____
December, A. D. 1941.

George W. Bruce.

Judge.

The total amount of water awarded and decreed to the several ditches herein, for irrigation purposes, is 70.41 cubic feet of water per second of time.

The total amount of water decreed to reservoirs for storage purposes, is 6,181,600 cubic feet.

The total amount of water awarded and decreed to the several ditches, for manufacturing and power purposes, is 150 cubic feet of water per second of time.

It is therefore ORDERED, ADJUDGED and DECREED by the court, that each appropriation of water made by each ditch, as aforesaid, shall entitle the owner or owners thereof to the use of the number of cubic feet of water per second of time heretofore designated and in the manner designated by this decree as the amount of said appropriation in the order that said appropriations are numbered and dated, beginning with Priority No. 168; and that no part of this decree shall be decreed to grant to any person, association or corporation any right to the use of water as against the right of any person, association or corporation holding a prior right to the use of water for irrigating purposes in said Water District No. 41, as evidenced by this decree or any decree of this court, said prior right to the use of water being determined in all cases by the Priority Number as fixed by this decree and former decrees of this court.

It is further Ordered by the court, that each and every person interested in or claiming any ditch as aforesaid, or any interest therein, or in the water appropriated as aforesaid, shall receive from the Clerk of this Court, upon payment of One Dollar and Fifty Cents (which sum is hereby adjudged to be a reasonable fee) a certificate, under seal of this court, showing the date or dates and the amount of such appropriation or appropriations hereby adjudged to have been made through or

by means of any such ditch under and by virtue of the construction, extension or enlargement thereof, severally, or under and by virtue of appropriation made through other ditches prior to the construction thereof, together with the Number of the ditch and the Priority Numbers of each to which the same may be entitled under and by virtue of this decree.

Done in open court, this 20th day of February

A. D. 1937.

By the Court:

George T. Bruce

Judge.

STATE OF COLORADO }
COUNTY OF MONTROSE. } 83

I, Ulide R. McOlean, Clerk of the District Court within and for the County of Montrose, State aforesaid, do hereby certify the above and foregoing to be a true, perfect and complete copy of Decree in Case No. 4573, in the Matter of the Priority of Water Rights in Water District Number Forty-One of the State of Colorado, J. F. Harter, et al Petitioners, as fully as the same now remains of record in the office of the Clerk of the District Court of Montrose County, Colorado.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Court, at Montrose, County and State aforesaid, this 26th day of February, A. D. 1937.

Ulide R. McOlean
Clerk of the District Court.

CA6466

Citizens Reservoir

STATE OF COLORADO, }
COUNTY OF MONTROSE. } ss

IN THE DISTRICT COURT.

CIVIL ACTION NO. 6466.

IN THE MATTER OF THE APPLICATION)
OF THE TOWN OF OLATHE FOR A SUPP)
PLEMENTAL GENERAL ADJUDICATION)
OF THE PRIORITY OF RIGHTS TO THE)
USE OF WATER IN WATER DISTRICT)
NO. 41, STATE OF COLORADO, FOR)
ALL BENEFICIAL PURPOSES.)

DECREE

Now, on this 17th day of Sept

A. D. 1952, this matter coming on for final hearing and adjudication upon the Report of Clide N. McClean, Referee, heretofore, and on February 2, 1950, appointed herein, and to whom this matter was, by said Order of Court, referred for the purposes therein mentioned, to-wit: to take and receive the evidence of this adjudication, and to report the same and make a suggested finding and decree thereon; all of said evidence and findings having been, and now are duly filed among the records of this court, and the Court having been fully advised in the premises, and being fully satisfied from the returns of notices, certificates of publication, affidavits and certificates of said referee that the said testimony returned was taken upon due and lawful notice in all respects according to the provisions of the statutes in such case made and provided, and the rules and orders of this Court in that behalf in this matter made and entered; and further that all parties interested have been notified of the time of the filing of the report and findings of said referee; and that the notices of the time set for filing exceptions in this matter, to said report and findings

and of the time set for final hearing thereof, have been duly served upon all the parties entitled to notice under the order of Court in that behalf heretofore entered; and, further, that all interested in this proceeding and entitled to notice in any stage of the proceedings therein have at all times been duly notified according to law and the orders of this Court; and the report of the said Referee, together with the evidence, findings, returns of service of notices, affidavits and notices, having been found to be in due form; and the Court having now here in open court heard all parties and their attorneys as far as they desire to be heard respectively touching the several matters herein, and being fully advised in the premises:

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Court that the several findings of the Referee, as reported to and filed in this Court, be in all things approved and confirmed, and that they be taken, deemed and held in all respects as the findings of the Court in this matter; and, further, that all and singular, the several ditches, canals, pipelines, and their enlargements and extensions; and reservoirs and their enlargements, hereinafter set forth, be ordered, adjudged and decreed to have the several rights, numbers, and priorities of the waters of the several streams and other sources respectively, in said Water District No. 41, as hereinafter more particularly set forth, subject, however, to the following next mentioned provisions, to-wit:

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FIRST: No part of this decree shall in any case be taken, deemed or held to confirm, impair or in any manner affect any claim of right or property held or claimed by any person, association, corporation or joint stock company in or to any ditch, canal, flume, pipeline, diversion structure, or reservoir, or any part thereof, or the land, or any part thereof, on which any such of the same may be situated, or the land held

or claimed as right of way of any or either of them; or any right, interest or claim of property whatever in or relating to any of them.

SECOND: No part of this decree shall be taken, deemed or held as affecting in any manner any question or claim of right between the owners or claimants of or under any such ditch, canal, flume, pipe-line, diversion structure or reservoir, as between each other; whether as part owners or shareholders therein, either as stockholders in any corporation or shareholders in any joint stock company, or as individuals claiming or to claim the use of the waters of any stream under or through the same or any part thereof; nor shall it affect the right, interests or claims of any consumer or consumers of water for irrigation, power, storage, domestic or other beneficial purposes, whether as part owner, lessee, shareholder or stockholder in any corporation, association or joint stock company owning, holding or controlling the same, or as purchaser therefrom, as against the rights, interests or claims of any other party or parties interested, or claiming right or interest in or to such ditch, canal, flume, pipeline, diversion structure or reservoir as owner, lessee or part owner thereof, or as shareholder or stockholder in any joint stock company, association or corporation claiming the same or any part thereof, or purchaser of water therefrom; neither shall it affect any claim of priority made or resisted as between parties using water for said purposes, or either of them from the same canal, ditch, flume pipeline, diversion structure or reservoir.

THIRD: No part of this decree shall affect in any way, any right, claim or interest now or hereafter held or claimed to any appropriation of water made after the closing of testimony touching the construction or enlargement of the ditch, canal,

canal, flume, pipeline, diversion structure or reservoir, by means of which such appropriation may be or shall have been made.

FOURTH: No part of this decree shall be taken, held or construed as giving or adjudging to any claimant, or present or future representative of any claimant, of any ditch, canal, flume, pipeline, diversion structure or reservoir, or the enlargement or extension thereof, or to any person or persons holding, using or controlling the same, any right to take and carry or hold by means of any such ditch, canal, flume, pipeline, diversion structure or reservoir, or the enlargements or extensions thereof, herein mentioned, or by virtue of any appropriation herein adjudged, any water from any natural stream, or other source, except to be applied to the use for which such appropriation has been made (or to which it may have been transferred according to law), nor to allow any diversion of water except for lawful and beneficial uses; nor to allow any excessive use or waste of water whatever.

FIFTH: No part of this decree shall be taken, deemed or held to award to any ditch, canal, flume, pipeline, diversion structure, or enlargement or extension thereof, or reservoir or enlargement thereof, a priority of right to a greater quantity of water than the actual carrying capacity of said ditch, canal, flume, diversion structure, pipeline, or enlargement or extension thereof, or reservoir as originally constructed or enlarged.

SIXTH: No part of this decree shall be taken, deemed or held as giving or adjudicating to any claimant, or present or future representative of any claimant, or any ditch, canal flume, pipe-line, diversion structure, or their enlargements or extensions, reservoir or its enlargement, or to the person or persons holding, using or controlling the same, any right to take and divert continuously the volume of water appropriated,

but only the right to divert the same at such times as the same may be reasonably and actually needed; nor any right to take and divert the full quantity of water appropriated, except when the same may be reasonably and actually needed; all for the purposes and uses for which the appropriation has been made.

SEVENTH: Water shall not in any case be diverted or held for mere purposes of speculation; and in all cases the right to flow and use of water, under the several priorities hereby found and adjudged, shall be limited in time as well as volume or quantity, to the reasonable and actual needs of the land, or other beneficial use, for which the same shall have been appropriated, whether the water be supplied by one or two or more ditches, canals and/or reservoirs or other diversion structures; and cumulative appropriation and use of water, from different ditches, canals and/or reservoirs or other diversion structures, for the same land, in excess of the actual amount necessary for the irrigation thereof, or for the same beneficial purpose, shall not be allowed.

EIGHTH: This decree shall be taken, deemed and held as determining and establishing the several priorities of right, involved herein, by actual appropriation of water from the streams and other sources in said Water District No. 41, for irrigation, domestic, municipal, mining, milling, power, and any and all other beneficial and lawful uses and purposes, by means of the several ditches, canals, flumes, pipelines, reservoirs and other diversion structures, and the enlargements and extensions thereof, in said district concerning which testimony has been offered in this matter, each according to the construction, enlargement or extension thereof, with the amount of water held to have been appropriated thereby.

NINTH: That in all cases in this decree the priority numbers fixed and awarded are determined upon the historic dates

of appropriation, but where two or more ditches, or diversion structures of any kind or nature, have identical priority dates, if any, the respective priority numbers shall govern and control, unless otherwise specifically found and decreed.

TENTH: The Court further finds that all of the ditches, canals, flumes, pipelines, diversion structures, and their enlargements and extensions, and the reservoirs and their enlargements, hereinafter awarded priorities, divert their water from the Uncompahgre River, or from the streams draining into said river in Water District No. 41, in the State of Colorado.

ELEVENTH: That concerning each and every ditch, canal, flume, pipeline, or other diversion structure, or the enlargement thereof, or reservoir or enlargement thereof, to which conditional decree is hereinafter awarded, that each such conditional decree is found and allowed upon the condition that the water shall be applied to the actual beneficial purpose for which awarded with due and reasonable diligence, and that same shall be limited to the accomplishment of the respective purpose or purposes found as the basis thereof, and to the total amount or quantity of water hereinafter found therefor, respectively, and shall not take effect as an adjudicated priority of water right (except so far as allowed by statute) until the same shall have been reported, proven, confirmed and decreed by this Court in appropriate proceedings for that purpose; and shall in every case be limited in and to the proportion in which such beneficial purpose has been accomplished with due and reasonable diligence.

TWELFTH: That while the relative priorities of the several ditches, canals, pipelines, flumes or diversion structures, or their enlargements and extensions, or reservoirs and

their enlargements, are herein determined by their respective historic dates, regardless of historic date said priorities, and each and all of them, are subject and subsequent in number and date to the last preceding priority awarded in the last preceding adjudication proceeding in said Water District No. 41. That as found by the referee, and shown by the records of this Court, the last previous adjudication proceeding in said Water District 41, was in Case No. 4573 resulting in decree dated December 4, 1941; that in said proceeding the last numbered diversion structure was 134, and the last numbered reservoir was 6; and the last numbered priority was 204.

THIRTEENTH: That in this proceeding the same consideration is given to domestic, stockwater and reservoir rights as to any and all other classes of water rights, and their order of priority determined in the same manner and by the same rules; that is, their historic date, or date of actual appropriation of water determines their relationship, or priority, as to all other claims submitted in this proceeding, but does not give precedence to any class of water rights over any other class decreed in this, or any proceeding for the adjudication of water rights in said Water District No. 41 prior to this action.

FOURTEENTH: That a variety of soil and water supply conditions exist in this water district making it inequitable to establish a fixed duty of water for the entire district. Therefore, each diversion is considered separately and the award thereto made in accordance with the circumstances shown by the evidence.

Subject to the several hereinbefore mentioned and set out special provisions, it is further, as to the said several ditches, canals, flumes, pipelines, or diversion

structures, (excepting reservoirs, or their enlargements, which bear a different series of structure numbers, but whose priority numbers are contained within the same series as ditches) originating in this proceeding, and the several appropriations of water by means of them respectively claimed, ORDERED, ADJUDGED AND DECREED in accordance with the findings of said referee, as follows:

That the numbers and names of said ditches, canals, flumes, pipelines, or diversion structures, and their enlargements and extensions; (other than reservoirs and their enlargements) the source from which water is taken; the name or names of the claimants; the priority numbers; dates of historic appropriation, and dates of decreed appropriation thereof; and the amount of cubic feet, or fraction thereof, of water per second of time appropriated thereby are:

(Beginning on next page)

Ditch No.	Name	Claimant	Source	A P P R O P R I A T I O N . Priority No. Date Historic	date Deeded	AMOUNT Qu. Ft.
135	E.L. Hayes Ditch	Lottie M. Reynolds Pinkstaff	Horsefly Creek	205	June 11, 1904	Oct. 26, 1933 1.25
136	Horsefly Ditch	Wilton Mitchell, Leona Mitchell and Security Loan and Investment Co.	Horsefly Creek	206	Apr. 21, 1910	Oct. 26, 1933 1.25
137	Silver Plume Spring Ditch	Emery S. Moore	Silver Plume Spring and Waste water tributary to Uncompahgre River	207	May 1, 1910	Oct. 26, 1933 .50 Irr.
138	Bell Ditch	O. C. Bell and Betty M. Bell	Draw tributary to Uncompahgre River	208	Apr. 1, 1930	Oct. 26, 1933 2.00
139	Sunrise Ditch from Roebuck Draw	Clarence Otto Stuart	Roebuck Draw, tributary to Uncompahgre River	209	May 1, 1930	Oct. 26, 1933 1.00
140	Kinklin Heights Ditch	Bureau of Land Management for Permittees	Unnamed wash tributary to Uncompahgre River.	212		Oct. 13, 1937 2.00 Stor. for Kinklin Heights Reservoir
102	Menke Ditch Enlargement	Frederick A. Bellgardt	McQuinniff Draw tributary to Uncompahgre River, but claimed as developed water, non-tributary	218		Mar. 1, 1947 1.40
102	Menke Ditch Enlargement	Frederick A. Bellgardt	McQuinniff Draw tributary to Uncompahgre River, but claimed as developed water, non-tributary.	218		Mar. 1, 1947 1.00 Conditional.
128	North Menke Ditch Enlargement	Frederick A. Bellgardt	3 unnamed draws tributary to Uncompahgre River, but claimed as developed water, non-tributary.	219		Mar. 1, 1947 .50
128	North Menke Ditch Enlargement	Frederick A. Bellgardt	3 unnamed draws tributary to Uncompahgre River. Claimed as developed water, non-tributary.	219		Mar. 1, 1947 .50 Conditional.

147	Dodd Seepage and Waste Ditch System	William J. Dodd	Waste and seepage from Blodgett place, <i>Blas Ver Plu</i> tributary to Uncompahgre River	220	April 1, 1947	2.50
137	Silver Plume Spring Ditch	Emery S. Moore	Silver Plume Spring and waste water tributary to Uncompahgre River	221	July 1, 1949 Fish Culture, year round use.	.50
136	Horsefly Ditch	Security Loan and Investment Co.	Horsefly Creek	222	July 1, 1952	1.00 condit- tional.

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And the numbers and names of the reservoirs in this proceeding, and their enlargements; the source from which water is taken; the name or names of the claimants; the priority numbers; dates of historic appropriation, and dates of decreed appropriation thereof; and the amount of Acre Feet of water, or fraction thereof, appropriated thereby are as follows:

Reservoir No.	Name	Claimant	Source	Priority No.	Historic Date	Decreed Date	AMOUNT Ac. Ft.
6	Citizens Reservoir	Town of Olathe, Colorado	Gooseberry Draw and West Fork of Dry Creek	210	Apr. 1, 1931	Oct. 26, 1933	58.67
6	Citizens Reservoir	Town of Olathe, Colorado	Gooseberry Draw and West Fork of Dry Creek	210	Apr. 1, 1931	Oct. 26, 1933	64.00 condit- tional
7	Kinklin Heights Reservoir	Bureau of Land Management for Permittees	Unnamed Wash trib- utary to Uncompahgre River and Kinklin Heights Ditch from a second unnamed draw.	211		Oct. 13, 1937	3.20 Stock- water
8	Dry Creek Reservoir	Bureau of Land Management for Permittees.	Dry Wash tributary to Dry Creek	213		Oct. 13, 1937	1.20 Stock- water

9	Rostonp Reservoir	Bureau of Land Management for Permittees.	Dry wash tributary to Dry Creek	214	April 4, 1938	1.90 Stock water
10	Ben Lowe Reservoir	Bureau of Land Management for Permittees	Dry wash tributary to Dry Creek	215	June 1, 1941	1.50 Stock water
11	Torrey Reservoir	Bureau of Land Management for Permittees	Tributary to Dry Creek	216	June 1, 1942	1.20 Stock water
12	Transfer Reservoir	Bureau of Land Management for Permittees	Transfer Wash Tributary to Dry Creek	217	June 5, 1942	1.50 Stock water.

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AND IT IS MORE PARTICULARLY ORDERED, ADJUDGED AND DECREED, with reference to the several ditches and diversion structures of whatever nature, and their enlargements and extensions, heretofore mentioned, for which statements of claim were filed in this proceeding, and proof entered thereon, as follows, to-wit:

AND MORE PARTICULARLY with reference to
the RESERVOIRS heretofore mentioned and
described in the Schedule of Ditches and
Reservoirs decreed in this proceeding,
THE COURT DOTH ORDER, DECREE AND ADJUDGE
AS FOLLOWS:

THE CITIZENS RESERVOIR ENLARGEMENT

Reservoir No. 6

Priority No. 210
and
Priority No. 210 Con-
ditional

THE COURT FINDS:

That the District Number of said Reservoir is 6, and by reason of enlargement it is entitled to Priority No. 210, and Conditional Priority No. 210.

That the Claimant thereof is the Town of Olathe, Colorado, Post office address Olathe, Colorado.

That it is located in Montrose County, Colorado, in the SW $\frac{1}{4}$ of Sec. 20, Twp. 48 N., R. 11 W., N.M.P.M.

That it derives its supply of water from natural drainage, from Gooseberry Creek which flows directly into it, and from the West Fork of Dry Creek through the Olathe Pipe Line owned by claimant, with headgate located at a point on the east bank of said creek whence the E $\frac{1}{4}$ corner of Sec. 24, Twp. 48 N., R. 12 W., N.M.P.M. bears North 81° 30' West 5925 feet.

That the initial point of survey of the dam to said reservoir is at a point whence the S $\frac{1}{4}$ corner of Sec. 20, Twp. 48 N., R. 11 W., N.M.P.M. bears S. 40° 10' E. 2030 feet.

Height of dam at time of previous decree was 23 feet, at which time said reservoir was granted Priority No. 191 for 118.33 acre feet; That since said time the height of said dam has been increased to 30 feet, making the total storage capacity of said reservoir 177 acre feet, or an increase of 58.67 acre feet, which increased amount has been stored and used each season since the completion of said additional capacity, the work on which was begun on April 1, 1931; that said work of enlargement is not yet complete, and claimant is continuing same and proposes to proceed until it has increased the height of said dam to a total of 37 feet, which, with a freeboard of

5 feet, will have a total storage capacity of 241 acre feet, or an additional increase of 64.00 acre feet of water.

And from the Findings and Report of the referee in relation to said Reservoir, -which are hereby approved and confirmed, -it appears that claimant is a municipality of approximately 1000 people, and supplies water to many water users beyond the town limits; that the population thereof has increased about one-third in the past 10 years; and heretofore and now said municipality and the people therein are short of water for all necessary requirements, and have been and are restricted in their use of water, and need and require not only the water already stored and used, but the water proposed to be stored by the construction of additional capacity.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that, subject to the several limitations in the preamble to this decree expressed, said reservoir is entitled to, and there should be allowed to flow therein, from natural drainage, Gooseberry Creek, and the West Fork of Dry Creek, for the municipal purposes aforesaid, and for the benefit of the parties lawfully entitled thereto, under and by virtue of appropriation by enlarged construction and beneficial use, and Priority No. 210, not to exceed 58.67 acre feet of water, as of Historic date April 1, 1931, and Decreed date October 26, 1933.

AND IT IS FURTHER ORDERED, ADJUDGED AND DECREED that, subject to the several limitations in the preamble to this decree expressed, said reservoir is entitled to, and there should be allowed to flow therein, from natural drainage, Gooseberry Creek, and the West Fork of Dry Creek, for the municipal purposes aforesaid, and for the benefit of the parties lawfully entitled thereto, under and by virtue of ap-

appropriation by continuing enlarged construction and proposed beneficial use, and Conditional Priority No. 210, 64.00 acre feet of water, as of Historic date April 1, 1931, and decreed date October 26, 1933. CONDITIONED, HOWEVER, upon the completion of said proposed construction, the storage and beneficial use of said additional water, for the uses and purposes aforesaid, within the time and in the manner provided by law, and upon satisfactory proof thereof, said conditional portion of said decree shall be come absolute in whole, or in such part as shall be shown to have been completed, and shall attach to, and be identified with the absolute portion of said Priority No. 210, and be granted equal right and authority.

STATE OF COLORADO)
 ss.
COUNTY OF MONTROSE)

I, BERNICE E. SWEITZER, Clerk of the District Court in and for said County, in the State aforesaid, do hereby certify that the above and foregoing is a true, perfect and complete copy of DECREE entered in Case No. 6466 of said Court, on the 17th day of September, A. D. 1952, as the same remains on file and of record in my office.

WITNESS my hand and the seal of said Court hereto affixed this 23rd day of September, A. D. 1952.

Bernice E. Sweitzer
Clerk of the District Court

general character, and require at least 1.00 second foot of water for the proper irrigation of each 25 acres thereof; that the waters of Horsefly Creek are variable in quantity,, being of waste and spring flood origin, and probably 1.25 second feet thereof, when available, in addition to the water available, under Gunnison Tunnel Project subscription, will be required for best irrigation results on the 70 acres irrigated by said Fansher Horsefly Ditch No. 2.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that, subject to all of the several limitations in the preamble to this decree expressed, there by allowed to flow in said ditch from said Horsefly Creek, for the use aforesaid, and for the benefit of the parties lawfully entitled thereto, under and by virtue of appropriation by construction and beneficial use, and Priority No. 205, so much water as will flow therein as now constructed, not to exceed 1.75 cubic feet per second of time, as of Historic Date April 1, 1889, and Decreed Date October 26, 1933. PROVIDED, HOWEVER, That such diversion shall be shared in common with diversion by the E. L. Hayes Ditch, The Horsefly Ditch and the Fansher Horsefly Ditch No. 1, to which ditches awards are also made herein under said Priority No. 205, in proportion to the irrigated acreages thereunder.

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DONE in Open Court at Montrose, Colorado on the 29th day of January, A. D. 1954.

BY THE COURT:

DAN H. HUGHES
Judge.

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A TRUE COPY, TESTE:
May 23, 1956.

Bernice E. Sweitzer
Clerk of the District Court

85CW110

Citizens Reservoir

APR 25 1986

DATE OF MAILING

4-25-86

Key PD# 1000000000

DISTRICT COURT, WATER DIVISION NO. 4, COLORADO

CASE NO. 85CW-110

Ref. W-2822

WD 41

FINDINGS AND RULING OF THE REFEREE AND DECREE

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS
OF:

Town of Olathe, Montrose County, Uncompahgre River
Drainage.

Applicant Town of Olathe, by and through its attorney,
John R. Kappa, P. O. Box 790, Montrose, CO 81402, by
Application filed April 17, 1985, requests a change of water
right.

FINDINGS OF FACT

1. All notices required by law of the filing of this application have been given.
2. The Referee has jurisdiction of this case.
3. The time for filing of statements of opposition has expired and no such statements have been filed.
4. The Applicant in this case wishes to have a change of use for hydropower, in addition to domestic and municipal purposes.
5. The Court finds the uses compatible. There are no intervening rights and no adverse affect to the system that can be seen. However, the Court has made its best efforts to protect the stream from injury, but may always be in error, and therefore the Court will reserve jurisdiction of this case for three years to allow any changes to be made.

RULING

Applicant is hereby granted a change in use
of CITIZENS RESERVOIR to include hydro-electric power
production and domestic and municipal uses, with an
appropriation date of April 17, 1985, adjudication date of

December 31, 1985. The Court will reserve jurisdiction of this case until May, 1989, to coincide with the conditional water rights granted in Case No. 85-CW-140, for the citizens Reservoir, to allow any party injured by said change of place of use to request relief.

Dated this 25th day of April, 1986.

Aaron R. Clay
Aaron R. Clay, Water Referee
Division No. 4

No protest was filed in this matter.
The foregoing ruling is confirmed
and approved, and is made the
Judgment and Decree of this court.

Dated: 5-22-86
Robert A. Brown
Water Judge

Mailed-A Copy of this Document to
all parties in this case.

Dated 5-23-86
K.P.
Kay Phillips, Water Clerk

Appendix B

Instream Flow Right Decrees

DISTRICT COURT, WATER DIVISION 4 COLORADO 1200 N. Grand Ave., Bin A Montrose, CO 81401-3146	<p style="text-align: center;">RECEIVED</p> <p style="text-align: center;">MAY 25 2006</p> <p style="text-align: center;">WATER RESOURCES STATE ENGINEER COLO.</p> <p style="text-align: center;">▲ COURT USE ONLY ▲</p>
Concerning The Application For Water Rights Of: COLORADO WATER CONSERVATION BOARD, IN DRY CREEK, A NATURAL STREAM, IN THE WATERSHED OF UNCOMPAHGRE, IN MONTROSE COUNTY, COLORADO.	
JOHN W. SUTHERS, Attorney General VIRGINIA BRANNON*, Assistant Attorney General 1525 Sherman Street, 5 th Floor Denver, CO 80203 (303) 866-5118 Registration Number: 30346 *Counsel of Record	Case No.: 05CW150 Div.: 4
FINDINGS AND RULING OF REFEREE AND DECREE OF THE WATER COURT	

This Application was filed on September 29, 2005, and was referred to the Water Referee for Water Division No. 4, in accordance with C.R.S. § § 37-92-101, et seq.

All notices required by law of the filing of this Application have been fulfilled and the Referee has jurisdiction of this Application. A Statement of Opposition was filed by Trout Unlimited and the time for filing Statements of Opposition has passed.

On December 9, 2005, the Division Engineer submitted a Summary of Consultation and the Referee has given it due consideration.

Having made such investigations as are necessary to determine whether the statements in the Application are true and being fully advised with respect to the subject matter of the Application;

THE WATER REFEREE FINDS AS FOLLOWS:

1. The name and address of the applicant is:
 Colorado Water Conservation Board
 1313 Sherman Street, Suite 721
 Denver, Colorado 80203
 (303) 866-3441
2. The name of stream involved: Dry Creek

3. The source of the water is: Dry Creek
4. Legal description of the stream segment through which an instream flow is claimed:
 - a. The natural stream channel from the confluence of the East and West Forks at latitude 38° 26' 13" N and longitude 108° 05' 01" W as the upstream terminus and extending to the Uncompahgre Valley Project Canal and Siphon at latitude 38° 32' 48" N and longitude 108° 02' 59" W as the downstream terminus, being a distance of approximately 10.3 miles. This segment can be located on the Dry Creek Basin and Hoovers Corner U.S.G.S. quadrangles.
 - b. For administrative purposes only:
Upper Terminus = NW NE S9 T48N R11W NMPM
2170' East of West Section Line 350' South of North Section Line
UTM 4258788 N 230861 E Zone 13
Lower Terminus = NW NE S1 T49N R11W NMPM
2630' West of East Section Line 440' South of North Section Line
UTM 4270867 N 234214 E Zone 13
5. Use of the water:
Instream flow to preserve the natural environment to a reasonable degree.
6. Date of initiation of appropriation:
January 25, 2005.
7. The water was first applied to the above beneficial use on January 25, 2005, by the action of the Colorado Water Conservation Board under the provisions of C.R.S. § § 37-92-102(3) and 37-92-103(3), (4) and (10).
8. Amount of water claimed (ABSOLUTE): Instream flow of 3.0 cfs (Mar. 1 – Mar. 31), 7.3 cfs (Apr. 1 - June 14), 3.0 cfs (June 15 - July 31), and 1.2 cfs (Aug. 1 – Feb. 28).

THE WATER REFEREE RULES:

The application is granted and a decree (ABSOLUTE) in the amount of 3.0 cfs (Mar. 1 – Mar. 31), 7.3 cfs (Apr. 1 - June 14), 3.0 cfs (June 15 - July 31), and 1.2 cfs (Aug. 1 – Feb. 28) is hereby entered to preserve the natural environment to a reasonable degree through the stream segment described in paragraph 4 above. The appropriation date for this water right is January 25, 2005.

The priority herein awarded was filed in the water court in the year of 2005 and shall be junior to all priorities filed in previous years. As between all rights filed in the same calendar year, priorities shall be determined by historical date of appropriation and not affected by the date of entry of ruling. The Applicant shall install and maintain such

measuring devices and keep such records as the Division Engineer may require for administration of this right.

It is accordingly **ORDERED** that this Ruling shall be filed with the water clerk subject to judicial review.

It is further **ORDERED** that a copy of this Ruling shall be filed with the Division Engineer and the State Engineer.

Dated this 24 day of April, 2006.

BY THE REFEREE:

/s/ Aaron Clay

Aaron Clay
Water Referee
Water Division No. 4
State of Colorado

No protest was filed in this matter. The foregoing Ruling is confirmed and approved, and is made the Judgment and Decree of this Court.

DATED this 19 day of May, 2006

BY THE COURT

/s/ J. Steven Patrick

J. Steven Patrick
Water Judge
Water Division No. 4
State of Colorado

DISTRICT COURT, WATER DIVISION 4 COLORADO 1200 N. Grand Ave., Bin A Montrose, CO 81401-3146	<p style="text-align: center;">RECEIVED</p> <p style="text-align: center;">MAY 25 2006</p> <p style="text-align: center;">WATER RESOURCES STATE ENGINEER COLO.</p> <p style="text-align: center;">▲ COURT USE ONLY ▲</p>
<p>Concerning The Application For Water Rights Of:</p> <p>COLORADO WATER CONSERVATION BOARD, IN EAST FORK DRY CREEK, A NATURAL STREAM, IN THE WATERSHED OF UNCOMPAHGRE, IN OURAY AND MONTROSE COUNTIES, COLORADO.</p>	
JOHN W. SUTHERS, Attorney General VIRGINIA BRANNON*, Assistant Attorney General 1525 Sherman Street, 5 th Floor Denver, CO 80203 (303) 866-5118 Registration Number: 30346 *Counsel of Record	Case No.: 05CW151 Div.: 4
<p style="text-align: center;">FINDINGS AND RULING OF REFEREE AND DECREE OF THE WATER COURT</p>	

This Application was filed on September 29, 2005, and was referred to the Water Referee for Water Division No. 4, in accordance with C.R.S. § § 37-92-101, et seq.

All notices required by law of the filing of this Application have been fulfilled and the Referee has jurisdiction of this Application. A Statement of Opposition was filed by Trout Unlimited and the time for filing Statements of Opposition has passed.

On December 9, 2005, the Division Engineer submitted a Summary of Consultation and the Referee has given it due consideration.

Having made such investigations as are necessary to determine whether the statements in the Application are true and being fully advised with respect to the subject matter of the Application;

THE WATER REFEREE FINDS AS FOLLOWS:

1. The name and address of the applicant is:
 Colorado Water Conservation Board
 1313 Sherman Street, Suite 721
 Denver, Colorado 80203
 (303) 866-3441

2. The name of stream involved: East Fork Dry Creek
3. The source of the water is: East Fork Dry Creek
4. Legal description of the stream segment through which an instream flow is claimed:
 - a. The natural stream channel from the confluence of the Beaver Dams Creek at latitude $38^{\circ} 19' 41''$ N and longitude $108^{\circ} 05' 28''$ W as the upstream terminus and extending to the confluence of the West Fork of Dry Creek at latitude $38^{\circ} 26' 13''$ N and longitude $108^{\circ} 05' 00''$ W as the downstream terminus, being a distance of approximately 10.0 miles. This segment can be located on the Dry Creek Basin U.S.G.S. quadrangles.
 - b. For administrative purposes only:
Upper Terminus = NE SW S16 T47N R11W NMPM
1396' East of West Section Line 2480' South of North Section Line
UTM 4246747 N 229785 E Zone 13 Zone 13
Lower Terminus = NW NE S9 T48N R11W NMPM
2170' East of West Section Line 350' South of North Section Line
UTM 4258788 N 230861 E Zone 13
5. Use of the water:
Instream flow to preserve the natural environment to a reasonable degree.
6. Date of initiation of appropriation:
January 25, 2005.
7. The water was first applied to the above beneficial use on January 25, 2005, by the action of the Colorado Water Conservation Board under the provisions of C.R.S. § § 37-92-102(3) and 37-92-103(3), (4) and (10).
8. Amount of water claimed (ABSOLUTE): Instream flow of 1.6 cfs (Mar. 1 – Mar. 31), 3.6 cfs (Apr. 1 - June 14), 1.6 cfs (June 15 - July 31), and 0.6 cfs (Aug. 1 – Feb. 28).

THE WATER REFEREE RULES:

The application is granted and a decree (ABSOLUTE) in the amount of 1.6 cfs (Mar. 1 – Mar. 31), 3.6 cfs (Apr. 1 - June 14), 1.6 cfs (June 15 - July 31), and 0.6 cfs (Aug. 1 – Feb. 28) is hereby entered to preserve the natural environment to a reasonable degree through the stream segment described in paragraph 4 above. The appropriation date for this water right is January 25, 2005.

The priority herein awarded was filed in the water court in the year of 2005 and shall be junior to all priorities filed in previous years. As between all rights filed in the

same calendar year, priorities shall be determined by historical date of appropriation and not affected by the date of entry of ruling. The Applicant shall install and maintain such measuring devices and keep such records as the Division Engineer may require for administration of this right.

It is accordingly **ORDERED** that this Ruling shall be filed with the water clerk subject to judicial review.

It is further **ORDERED** that a copy of this Ruling shall be filed with the Division Engineer and the State Engineer.

Dated this 24 day of April, 2006.

BY THE REFEREE:

/s/ Aaron Clay

Aaron Clay
Water Referee
Water Division No. 4
State of Colorado

No protest was filed in this matter. The foregoing Ruling is confirmed and approved, and is made the Judgment and Decree of this Court.

DATED this 19 day of May, 2006

BY THE COURT

/s/ J. Steven Patrick

J. Steven Patrick
Water Judge
Water Division No. 4
State of Colorado

DISTRICT COURT, WATER DIVISION 4 COLORADO 1200 N. Grand Ave., Bin A Montrose, CO 81401-3146	<div style="text-align: center;"> RECEIVED MAY 25 2006 WATER RESOURCES STATE ENGINEER COLO. </div> <div style="text-align: center;"> ▲ COURT USE ONLY ▲ </div>
Concerning The Application For Water Rights Of: COLORADO WATER CONSERVATION BOARD, IN WEST FORK DRY CREEK, A NATURAL STREAM, IN THE WATERSHED OF THE UNCOMPAHGRE, IN MONTROSE COUNTY, COLORADO.	
JOHN W. SUTHERS, Attorney General VIRGINIA BRANNON*, Assistant Attorney General 1525 Sherman Street, 5 th Floor Denver, CO 80203 (303) 866-5118 Registration Number: 30346 *Counsel of Record	Case No.: 05CW155 Div.: 4
FINDINGS AND RULING OF REFEREE AND DECREE OF THE WATER COURT	

This Application was filed on September 29, 2005, and was referred to the Water Referee for Water Division No. 4, in accordance with C.R.S. § § 37-92-101, et seq.

All notices required by law of the filing of this Application have been fulfilled and the Referee has jurisdiction of this Application. A Statement of Opposition was filed by Trout Unlimited and the time for filing Statements of Opposition has passed.

On December 20, 2005, the Division Engineer submitted a Summary of Consultation and the Referee has given it due consideration.

Having made such investigations as are necessary to determine whether the statements in the Application are true and being fully advised with respect to the subject matter of the Application;

THE WATER REFEREE FINDS AS FOLLOWS:

1. The name and address of the applicant is:
 Colorado Water Conservation Board
 1313 Sherman Street, Suite 721
 Denver, Colorado 80203
 (303) 866-3441
2. The name of stream involved: West Fork Dry Creek

3. The source of the water is: West Fork Dry Creek
4. Legal description of the stream segment through which an instream flow is claimed
 - a. The natural stream channel from the confluence of Gray's Creek at latitude 38° 22' 37" N and longitude 108° 08' 47" W as the upstream terminus and extending to the confluence of East Fork Dry Creek at latitude 38° 26' 13" N and longitude 108° 05' 01" W as the downstream terminus, being a distance of approximately 5.9 miles. This segment can be located on the Dry Creek Basin U.S.G.S. quadrangles.
 - b. For administrative purposes only:
Upper Terminus = NW NW S36 T48N R12W NMPM
1100' East of West Section Line 910' South of North Section Line
UTM 4252316 N 225155 E Zone 13
Lower Terminus = NW NE S9 T48N R11W NMPM
2170' East of West Section Line 350' South of North Section Line
UTM 4258788 N 230861 E Zone 13
5. Use of the water:
Instream flow to preserve the natural environment to a reasonable degree.
6. Date of initiation of appropriation:
January 25, 2005.
7. The water was first applied to the above beneficial use on January 25, 2005, by the action of the Colorado Water Conservation Board under the provisions of C.R.S. § § 37-92-102(3) and 37-92-103(3), (4) and (10).
8. Amount of water claimed (ABSOLUTE): Instream flow of 0.85 cfs (Mar. 1 – Mar. 31), 3.4 cfs (Apr. 1 - June 14), 0.85 cfs (June 15 - July 31), and 0.3 cfs (Aug. 1 – Feb. 28).

THE WATER REFEREE RULES:

The application is granted and a decree (ABSOLUTE) in the amount of 0.85 cfs (Mar. 1 – Mar. 31), 3.4 cfs (Apr. 1 - June 14), 0.85 cfs (June 15 - July 31), and 0.3 cfs (Aug. 1 – Feb. 28) is hereby entered to preserve the natural environment to a reasonable degree through the stream segment described in paragraph 4 above. The appropriation date for this water right is January 25, 2005.

The priority herein awarded was filed in the water court in the year of 2005 and shall be junior to all priorities filed in previous years. As between all rights filed in the same calendar year, priorities shall be determined by historical date of appropriation and not affected by the date of entry of ruling. The Applicant shall install and maintain such

measuring devices and keep such records as the Division Engineer may require for administration of this right.

It is accordingly **ORDERED** that this Ruling shall be filed with the water clerk subject to judicial review.

It is further **ORDERED** that a copy of this Ruling shall be filed with the Division Engineer and the State Engineer.

Dated this 24 day of April, 2006

BY THE REFEREE:

/s/ Aaron Clay

Aaron Clay
Water Referee
Water Division No. 4
State of Colorado

No protest was filed in this matter. The foregoing Ruling is confirmed and approved, and is made the Judgment and Decree of this Court.

DATED this 19 day of May, 2006

BY THE COURT

/s/ J. Steven Patrick

J. Steven Patrick
Water Judge
Water Division No. 4
State of Colorado

Appendix C

USGS Streamstats Output

EAST

**Colorado StreamStats****Streamstats Ungaged Site Report**

Date: Mon Jun 8 2015 08:28:02 Mountain Daylight Time

Site Location: Colorado

NAD27 Latitude: 38.3897 (38 23 23)

NAD27 Longitude: -108.0677 (-108 04 04)

NAD83 Latitude: 38.3897 (38 23 23)

NAD83 Longitude: -108.0683 (-108 04 06)

Drainage Area: 24.6 mi²**Peak-Flows Basin Characteristics****100% Southwest Region Peak Flow (24.6 mi²)**

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	24.6	1	4390
Percent above 7500 ft (percent)	100 (above max value 99)	0	99

*Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.***Low-Flows Basin Characteristics****100% Southwest Region Min Flow (24.6 mi²)**

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	24.6	4	4390
Mean Annual Precipitation (inches)	24.63	10	51
Mean Basin Elevation (feet)	8840	792	9310

Flow-Duration Basin Characteristics**100% Southwest Region Flow Duration (24.6 mi²)**

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	24.6	1	4390
Mean Annual Precipitation (inches)	24.63	10	51

Maximum-Flows Basin Characteristics**100% Southwest Region Max Flow (24.6 mi²)**

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	24.6	4	4390
Mean Annual Precipitation (inches)	24.63	10	51

Mean-Flows Basin Characteristics**100% Southwest Region Mean Flow (24.6 mi²)**

Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	24.6	1	4390
Mean Annual Precipitation (inches)	24.63	10	51

Peak-Flows Streamflow Statistics

Statistic Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
			Minimum	Maximum
PK2	229			
PK5	409			

PK10	559			
PK25	801			
PK50	976			
PK100	1170			
PK200	1330			
PK500	1720			

Low-Flows Streamflow Statistics

Statistic Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval Minimum	90-Percent Prediction Interval Maximum
M7D2Y	0.67	230		
M7D10Y	0.63	250		
M7D50Y	1	350		

Flow-Duration Streamflow Statistics

Statistic Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval Minimum	90-Percent Prediction Interval Maximum
D10	17.9	79		
D25	7.11	96		
D50	2.96	98		
D75	1.31	100		
D90	0.67	150		

Maximum-Flows Streamflow Statistics

Statistic Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval Minimum	90-Percent Prediction Interval Maximum
V7D2Y	41.7	64		
V7D10Y	102	43		
V7D50Y	159	33		

Mean-Flows Streamflow Statistics

Statistic Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval Minimum	90-Percent Prediction Interval Maximum
Q1	2.4	77		
Q2	2.67	58		
Q3	3.56	47		
Q4	8.04	50		
Q5	19.8	62		
Q6	20.6	120		
Q7	11.4	180		
Q8	6.49	120		
Q9	1.74	120		
QA	11	60		
Q10	4.1	110		
Q11	3.5	80		
Q12	2.85	75		

WEST

**Colorado StreamStats****Streamstats Ungaged Site Report**

Date: Mon Jun 8 2015 08:37:49 Mountain Daylight Time

Site Location: Colorado

NAD27 Latitude: 38.3931 (38 23 35)

NAD27 Longitude: -108.1429 (-108 08 34)

NAD83 Latitude: 38.3931 (38 23 35)

NAD83 Longitude: -108.1435 (-108 08 37)

Drainage Area: 11.3 mi2

Peak-Flows Basin Characteristics			
100% Southwest Region Peak Flow (11.3 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	11.3	1	4390
Percent above 7500 ft (percent)	100 (above max value 99)	0	99

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Low-Flows Basin Characteristics			
100% Southwest Region Min Flow (11.3 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	11.3	4	4390
Mean Annual Precipitation (inches)	26.37	10	51
Mean Basin Elevation (feet)	9070	792	9310

Flow-Duration Basin Characteristics			
100% Southwest Region Flow Duration (11.3 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	11.3	1	4390
Mean Annual Precipitation (inches)	26.37	10	51

Maximum-Flows Basin Characteristics			
100% Southwest Region Max Flow (11.3 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	11.3	4	4390
Mean Annual Precipitation (inches)	26.37	10	51

Mean-Flows Basin Characteristics			
100% Southwest Region Mean Flow (11.3 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	11.3	1	4390
Mean Annual Precipitation (inches)	26.37	10	51

Peak-Flows Streamflow Statistics			
Statistic Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval
			Minimum Maximum
PK2	139		
PK5	252		

PK10	348			
PK25	502			
PK50	617			
PK100	741			
PK200	850			
PK500	1090			

Low-Flows Streamflow Statistics

Statistic Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval Minimum	90-Percent Prediction Interval Maximum
M7D2Y	0.34	230		
M7D10Y	0.36	250		
M7D50Y	0.81	350		

Flow-Duration Streamflow Statistics

Statistic Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval Minimum	90-Percent Prediction Interval Maximum
D10	10.5	79		
D25	4.12	96		
D50	1.7	98		
D75	0.75	100		
D90	0.4	150		

Maximum-Flows Streamflow Statistics

Statistic Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval Minimum	90-Percent Prediction Interval Maximum
V7D2Y	23.9	64		
V7D10Y	58.5	43		
V7D50Y	91.6	33		

Mean-Flows Streamflow Statistics

Statistic Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval Minimum	90-Percent Prediction Interval Maximum
Q1	1.34	77		
Q2	1.45	58		
Q3	1.89	47		
Q4	4.16	50		
Q5	11.5	62		
Q6	12.2	120		
Q7	7.18	180		
Q8	3.82	120		
Q9	1.18	120		
QA	6.66	60		
Q10	2.29	110		
Q11	2.08	80		
Q12	1.66	75		

Appendix D

Senate Bill 19

An Act

SENATE BILL 13-019

BY SENATOR(S) Schwartz, Aguilar, Carroll, Crowder, Heath, Jones, Kefalas, Kerr, King, Newell, Tochtrop, Todd;
also REPRESENTATIVE(S) Fischer, Duran, Exum, Fields, Ginal, Hamner, Hullinghorst, Kraft-Tharp, Labuda, Lebsock, Lee, Mitsch Bush, Pabon, Pettersen, Rosenthal, Schafer, Stephens, Young.

CONCERNING THE PROMOTION OF WATER CONSERVATION MEASURES.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. Legislative declaration. (1) The general assembly hereby:

(a) Finds that some water appropriators may wish to reduce their water consumption, in part to ameliorate the effects of drought on low stream flows, but there is a disincentive in current law that penalizes appropriators who decrease their consumptive use of water;

(b) Determines that, at a time when Colorado can expect drought conditions to increase in frequency and severity, the general assembly should give appropriators a safe harbor when they decrease their consumptive use of water by participating in a variety of government-sponsored water conservation programs; and

(c) Declares that this act promotes the maximum utilization of Colorado's water resources, can help alleviate the effects of drought on river flows, and is in the public interest.

SECTION 2. In Colorado Revised Statutes, 37-92-305, **add** (3) (c) as follows:

37-92-305. Standards with respect to rulings of the referee and decisions of the water judge. (3) (c) IN DETERMINING THE AMOUNT OF HISTORICAL CONSUMPTIVE USE FOR A WATER RIGHT IN DIVISION 4, 5, OR 6, THE WATER JUDGE SHALL NOT CONSIDER ANY DECREASE IN USE RESULTING FROM THE FOLLOWING:

(I) THE LAND ON WHICH THE WATER FROM THE WATER RIGHT HAS BEEN HISTORICALLY APPLIED IS ENROLLED UNDER A FEDERAL LAND CONSERVATION PROGRAM; OR

(II) THE NONUSE OR DECREASE IN USE OF THE WATER FROM THE WATER RIGHT BY ITS OWNER FOR A MAXIMUM OF FIVE YEARS IN ANY CONSECUTIVE TEN-YEAR PERIOD AS A RESULT OF PARTICIPATION IN:

(A) A WATER CONSERVATION PROGRAM APPROVED BY A STATE AGENCY, WATER CONSERVATION DISTRICT, WATER DISTRICT, WATER AUTHORITY, OR WATER CONSERVANCY DISTRICT FOR LANDS THAT ARE WITHIN THE ENTITY'S JURISDICTIONAL BOUNDARIES;

(B) A WATER CONSERVATION PROGRAM ESTABLISHED THROUGH FORMAL WRITTEN ACTION OR ORDINANCE BY A WATER DISTRICT, WATER AUTHORITY, OR MUNICIPALITY OR ITS MUNICIPAL WATER SUPPLIER FOR LANDS THAT ARE WITHIN THE ENTITY'S JURISDICTIONAL BOUNDARIES;

(C) AN APPROVED LAND FALLOWING PROGRAM AS PROVIDED BY LAW IN ORDER TO CONSERVE WATER OR TO PROVIDE WATER FOR COMPACT COMPLIANCE; OR

(D) A WATER BANKING PROGRAM AS PROVIDED BY LAW.

SECTION 3. Applicability. This act applies to historical consumptive use determinations made on or after the effective date of this

act.

SECTION 4. Safety clause. The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

John P. Morse
PRESIDENT OF
THE SENATE

Mark Ferrandino
SPEAKER OF THE HOUSE
OF REPRESENTATIVES

Cindi L. Markwell
SECRETARY OF
THE SENATE

Marilyn Eddins
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

APPROVED _____

John W. Hickenlooper
GOVERNOR OF THE STATE OF COLORADO

Appendix E

Pilot Water Conservation Program Memo, May 8, 2015



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources

1313 Sherman Street, Room 721
Denver, CO 80203

TO: Interested Upper Basin Water Users

FROM: Upper Colorado River Commission/Colorado Water Conservation Board

DATE: May 8, 2015

SUBJECT: Request for Pre-proposals regarding a potential funding opportunity for voluntary participation in a Pilot System Water Conservation Program

Facing declining levels in Lakes Mead and Powell, the Upper Colorado River Commission (UCRC¹), the U.S. Bureau of Reclamation, and four water providers² that depend on Colorado River Basin supplies are working together to initiate pilot projects designed to develop and test tools that could potentially be used as part of a drought contingency plan. To this end, in July 2014, the four water providers and the U.S. Bureau of Reclamation (Reclamation) (collectively the Funding Partners) entered into an agreement to explore potential solutions.³ Through this agreement, the Funding Partners have established a Pilot Program to help State and Federal water officials manage the ongoing record drought conditions in the Colorado River Basin by testing on-the-ground water conservation opportunities. The purpose of this Pilot Program is to explore and learn about the effectiveness of voluntary measures that could be used, when needed, to help maintain water levels in Lake Powell and Lake Mead above the levels needed to maintain hydroelectric power production and protect Colorado River compact entitlements. The Funding Partners have committed \$11 million to test and demonstrate the effectiveness of temporary, compensated, and voluntary water demand management actions through pilot projects in both the Upper and Lower Basins in 2015 and 2016. Of the funds committed, at least \$2.75 million is intended for use in the Upper Colorado River Basin and the UCRC has agreed to facilitate the implementation of this Pilot Program.

The UCRC and the CWCB issue this Request For Pre-proposals (RFP) to invite users of Colorado River System water in the Upper Division States (Colorado, New Mexico, Utah and Wyoming) to submit Pre-proposals to participate in the Pilot Program.

You are invited to submit a Pre-proposal describing any conservation opportunity that can be implemented under this Pilot Program by you or your organization. Pre-proposals should include a

¹ The UCRC is an interstate, administrative agency established by the Upper Colorado River Basin Compact of 1948 (Upper Basin Compact). UCRC members consist of a Commissioner representing each of the four Upper Division States of Colorado, New Mexico, Utah and Wyoming (Upper Division States) and a Commissioner appointed by the President of the United States who serves as the Chair of the Commission. The Commission assists the Upper Division States in developing their apportionments of Colorado River water pursuant to the Colorado River Compact of 1922 and the Upper Basin Compact, and has specific responsibilities to assist in implementing the Upper Basin Compact consistent with laws of the Upper Division States.

² The four major water providers that have contributed funds for the System Conservation Agreement are the Southern Nevada Water Authority, Denver Water, the Central Arizona Water Conservation District, and the Metropolitan Water District of Southern California.

³ The Funding Agreement can be viewed on Reclamation's website at: <http://www.usbr.gov/newsroom/docs/2014-07-30-Executed-Pilot-SCP-Funding-Agreement.pdf>.



detailed project description, the estimated amount of conservation, the method for verifying the conservation activities employed, approximate time frame for startup, project duration, and amount of funding requested and additional information as shown in the attached application form.

Through the Pilot Program, water users in the Upper Basin (municipal, industrial, and agricultural) will be monetarily compensated for voluntary actions that temporarily reduce consumptive use of Colorado River Basin water. These pilot projects could include temporary fallowing or deficit irrigation of agricultural crops, upgrading to more efficient irrigation practices to reduce distribution system or on-farm losses, reuse of industrial water, recycling of municipal supplies to reduce consumptive use, reductions in municipal landscape irrigation or indoor use, and other methods that would result in additional water for the Colorado River System.

Pilot Program participants will be selected based on selection criteria developed by the Funding Partners (see link provided above in Footnote 3) as well as any additional considerations as deemed relevant by the Commission during review and consultation with the respective Upper Division State. Among others, the factors include: the schedule for implementing the conservation project, complexity or level of administration, cost per acre-foot of conserved water; identified environmental benefits, diversity in the geographic locations, diversity in the types of projects, diversity in the types of water uses, and the potential for any conserved water to benefit storage in the Colorado River system. The UCRC and Funding Partners will jointly review and approve project proposals. The UCRC will then facilitate implementation of the final approved projects in the Upper Basin with the selected participants.

Selected participants will be required to execute a System Conservation Implementation Agreement with the UCRC, which will provide the terms and conditions for design, implementation, monitoring and evaluation of the Pilot Program project and compensation to the participant. If your organization is interested in participating in the Program, please e-mail your pre-proposal to the UCRC's Executive Director and the representative of the State in which the project is located at the e-mail addresses listed below.

With due consideration of the late date of this RFP relative to the irrigation season and municipal planning, and given the ongoing drought conditions in the Basin, the UCRC hopes to see some projects proceed that can be quickly implemented and begin conservation actions during 2015. To this end, projects that are ready and that can begin conservation in 2015 should be received by June 17, 2015, to be considered for early funding. There will be another round of funding under this RFP (or as may be requested under a reissued RFP later this year) for pre-proposals that may take longer to prepare or that may save water in 2016. To be considered for funding under this later RFP, pre-proposals should be received by November 1, 2015. Pre-proposals received after this date may still be considered if funds remain. If you have any questions, please contact one of the individuals below:

For the UCRC: Don Ostler, dostler@ucrcommission.com, (801) 531-1150.

For Colorado: Michelle Garrison, michelle.garrison@state.co.us, (303) 866-3441, Extension 3213

For New Mexico: Kristin Green, KristinN.Green@state.nm.us, (505) 827-6145

For Utah: Robert King, Robertking@utah.gov, (801) 538-7259

For Wyoming: Steve Wolff, steve.wolff@wyo.gov, (307) 777-1942

Based on current estimates, the UCRC and the Funding Partners anticipate providing an initial response to project pre-proposals no later than July 1. For projects that have near-term potential, pre-proposals may be fast-tracked for implementation.

DENVER

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www.wrightwater.com



Wright Water Engineers, Inc.