

Town of New Castle

450 W. Main Street PO Box 90 New Castle, CO 81647 **Administration Department Phone:** (970) 984-2311 **Fax:** (970) 984-2716

www.newcastlecolorado.org

## Agenda New Castle Town Council Work Session Tuesday, May 21, 2024, 6:00 PM

Virtual Meetings are subject to internet and technical capabilities.

To join by computer, smart phone or tablet: https://us02web.zoom.us/j/7096588400

If you prefer to telephone in: Please call: 1-346-248-7799 Meeting ID: 709 658 8400

Follow the prompts as directed. Be sure to set your phone to mute until called on

<u>a.</u> Discussion of Water Rights



Glenwood Springs – Main Office 201 14<sup>th</sup> Street, Suite 200

P. O. Drawer 2030 Glenwood Springs, CO 81602 Aspen
323 W. Main Street
Suite 301
Aspen, CO 81611

Montrose 1544 Oxbow Drive Suite 224 Montrose, CO 81402

Office: 970.945.2261 Fax: 970.945.7336

\*Direct Mail to Glenwood Springs

#### PRIVILEGED AND CONFIDENTIAL MEMORANDUM

DATE: May 16, 2024

TO: Mayor Art Riddle and Town Council

FROM: Michael J. Sawyer, Town of New Castle Water Attorney

RE: TOWN OF NEW CASTLE WATER RIGHTS

The Town of New Castle maintains a diversified water rights portfolio in order to provide water service to its current and future water service area. New Castle's raw water collection system has the legal capacity to divert water from three water sources: East Elk Creek, the Colorado River, and Canyon Creek. Together, the Town's water rights provide a legal and physical redundant water supply that will accommodate the Town's anticipated growth.

This letter discusses the Town's current water rights and facilities, the reliability of those rights and facilities, and recommendations to meet the Town's future legal and physical water supply needs. Specifically, this report provides the following information: (1) scope of evaluation and report limitations; (2) background information on Colorado water law; (3) description of the Town's water rights; (4) discussion of pertinent issues relating to the Town's water rights; and (5) recommendations for a water supply to satisfy the Town's current and future water supply needs.

### I. SCOPE OF EVALUATION AND REPORT LIMITATIONS

- A. This report does not constitute an opinion regarding title to the Town's water rights. Although we did not undertake a title review, we have no reason to believe the Town does not own the water rights identified in this report.
- **B.** In the preparation of this report, our office did not conduct a physical inspection of the properties and facilities at issue. We relied on several engineering reports prepared by various engineers (some of which were prepared for entities other than the Town), which address certain engineering aspects of the Town's water system and structures, including the availability of water for the Town's intended uses.
- C. We have not comprehensively investigated any issues relating to water quality or the potential impact of water quality laws and regulations, but we would be happy to do so at your direction.

Town of New Castle Water Rights Page 2

**D.** This report is intended for use by the Town of New Castle only, and not for the use or reliance of any third party.

#### II. BACKGROUND ON COLORADO WATER LAW

Colorado adheres to the "doctrine of prior appropriation." This means that in times of a water shortage, more senior water rights (those that have a prior appropriation) have the right to continue diverting while more junior water rights are curtailed ("called out"). This system is often referred to as "first in time, first in right." In order for a water right to be enforceable, it must be adjudicated. Colorado has a system of "water courts" that adjudicate water rights. The enforceable priority of a water right against other rights is based, first, upon the court "adjudication date" of the water right and, second, upon the appropriation date. The adjudication date generally is the calendar year in which the water right application was filed. For older decrees (prior to the 1969 Water Right Determination and Administration Act), the adjudication date is the date of the Court's decree.

The Water Courts decree rights as either "absolute" or "conditional." An absolute water right is a water right that has actually been applied to beneficial use, and no further court action is necessary to keep the water right viable so long it continues to be applied to beneficial use and is never abandoned. Absolute rights can be lost by abandonment, which arises from an unreasonable period of nonuse of the right coupled with an intent to abandon it (i.e., an intention not to use it). A conditional water right represents the legal right to implement a water diversion or storage project at some point in the future. This allows water users to acquire the legal right for a water project before investing in expensive infrastructure to implement the water right. For the conditional right to remain viable after it is decreed, the owner must apply to the Water Court periodically (every six years under current law) and demonstrate "diligence" – that is, continued actions and intent to apply the water to the decreed beneficial use within a reasonable period of time. Findings of diligence allow the conditional right to retain its original priority date until the water right (or some portion of it) is converted to an absolute right by use. If diligence is not established for any portion of the conditional water right, that portion will be cancelled by the Water Court.

In Colorado, most groundwater use is subject to the appropriation doctrine and is subject to administration by the State Division of Water Resources (DWR) under the authority of the Colorado State Engineer. While groundwater can be appropriated, and those rights can be decreed in the Water Court process, all wells must be permitted by DWR regardless of whether a water right is decreed for the well.

Groundwater is presumed to be hydraulically connected with the surface stream system, meaning that well pumping is assumed to affect (deplete) the stream flow and reduce the supply available to senior users of that flow. Therefore, wells are not allowed to operate if they will deprive senior rights of their legal entitlements. Because the Colorado River is over-appropriated at times and because of the delayed impact on the stream even after well pumping has been curtailed, wells that are not exempt require a plan for augmentation. "Exempt" wells are a special category of small capacity wells that

Town of New Castle Water Rights Page 3

are allowed to produce water for specific uses without regard to the appropriation doctrine (The Industrial Well discussed below is an example of an "exempt" well).

Because Colorado is a semi-arid state, most of the river basins in Colorado are "over-appropriated." This means that during some times of the year there is no water available for diversion by more junior water rights because the more senior rights command the entire stream flow. In such a circumstance, developing a new legally reliable water supply usually requires acquiring senior water rights for conversion to the new uses and diversions and/or acquiring reliable water storage to mitigate the effects of such new uses and diversions. The Colorado River and its tributaries, including the Elk Creek basin from which the Town derives much of its water, are over-appropriated during the irrigation season following spring runoff and during some winter periods.

The typical strategy of a junior water user to develop a legal water supply in this area is to obtain a Water Court decree approving changes of senior water rights and a "plan for augmentation." Such a plan provides a legal water supply by replacing depletions associated with out-of-priority water diversions. In simple terms, such a plan allows for continued diversions by replacing the quantity of water depleted by the junior use(s). Sources of replacement water include "consumptive use credits" associated with historically irrigated land removed from agricultural irrigation and/or water released from storage (e.g. Ruedi Reservoir).

The concepts of consumptive use, historical consumptive use, and stream depletion are important to understand, particularly in relation to augmentation plans. Consumptive use is the quantity of water that is consumed by the use of diverted water and therefore lost to the stream as a result of that use. For example, a typical single-family home will require water diversions between 300-350 gallons per day for in-house use, but only five to fifteen percent (5 to 15%) of that quantity is actually consumed and lost to the stream; the balance is returned to the stream through a central or individual sewer system. Similarly, water diverted for irrigation is partially consumed by the crops through the process of evapotranspiration, and the unconsumed amount returns to the stream as surface runoff or groundwater percolation. Water consumed by park, lawn, open space, and golf course irrigation and evaporation of water from lake and pond surfaces also can be other significant items of consumptive use for a municipality.

"Historical consumptive use" refers to the quantity of water that has been historically consumed under a water right. For a senior irrigation water right, the "dry up" of area associated with irrigation will produce historical consumptive use credits during the irrigation season (May through October). The consumptive use credit can then be applied to offset depletions associated with new junior uses.

"Stream depletion" is a concept that is related to but is different from consumptive use. In general terms, the difference between the amount of water being diverted to use and returning to the stream system for use by others at any particular time is the "depletion." It is not the same as the gross consumptive use because return flows to the stream system (e.g. return flows from lawn irrigation) do not always occur at the same time or place as the initial diversion of water. This can impact the "real time" availability of water in the stream for more senior rights. When the junior water right for a given use is out-of-priority, the replacement water obligation to be met in order for the diversion to

Town of New Castle Water Rights Page 4

continue is the quantity of stream depletion which is reducing the calling right's entitlement for water. When the diversion for the senior calling right is located below the junior diversion but above the point of return flows from the junior use (as is the case for New Castle's impact to the Ware and Hinds Ditch), the entire quantity diverted out-of-priority by the junior user must be replaced above the calling right if it is needed by the senior user.

The U.S. Bureau of Reclamation's "Historical Users' Pool," or "HUP," is a portion of the 100,000 acre-foot "power pool," or "West Slope pool," which is stored in Green Mountain Reservoir pursuant to the terms of Senate Document No. 80. Green Mountain Reservoir is located on the Blue River, an upstream tributary of the Colorado River. The West Slope pool is a feature of the Federal Colorado-Big Thompson Project that benefits Western Colorado water users in exchange for the transmountain diversion of Colorado River water to Northeastern Colorado.

The HUP provides that West Slope domestic and irrigation use water rights that divert from the Colorado River and its tributaries are protected free-of-charge by releases from Green Mountain Reservoir in an amount up to 66,000 acre-feet of water in any year as necessary to allow their diversions to continue. For purposes of this report, you should know that certain of the Town's water rights benefit from this free augmentation supply. The HUP benefits the Rippy RV Ditch, the Rippy RV Pond, and the Buster Pump and Pipeline, which are discussed in more detail below. Therefore, those rights should provide a reliable irrigation supply for Town uses.

Another factor affecting the ability to divert water under junior rights is the "instream flow" rights held by the Colorado Water Conservation Board ("CWCB"), an executive agency of the State of Colorado. CWCB appropriates, and adjudicates in Water Court, rights for minimum stream flows to ensure that the "natural environment" is protected "to a reasonable degree." These rights mostly meet the needs of fisheries. These instream flow rights operate like other water rights to require a reduction of diversions by more junior upstream water rights when the amount decreed for the instream right is insufficient.

The CWCB has appropriated instream flows on Elk Creek, East Elk Creek and Canyon Creek. In Case No. 80CW294, the CWCB appropriated a 10 c.f.s. minimum stream flow from East Elk Creek for the period from May 1st through September 30th each year and a 6.0 c.f.s. minimum stream flow for the period from November 1st through April 30th of each year. In Case No. 80CW315, the CWCB appropriated on Elk Creek, between its confluences with East Elk Creek and the Colorado River, a 15.0 c.f.s. minimum stream flow from May 1st through September 30th and an 8.0 c.f.s. minimum stream flow from October 1st through April 30th of each year. Because the CWCB's instream flow rights must be protected according to their relative priorities, any future appropriations of water or changes of water rights in the stream system that the Town makes (e.g., appropriating new water rights and/or changing rights or exchanging water) cannot harm those minimum instream flows.



Town of New Castle Water Rights Page 5

#### III. TOWN'S WATER RIGHTS

The Town owns several valuable water rights and also some rights which have marginal, if any, value either as reliable sources of municipal supply or as economic assets. The Town's primary water rights are the senior New Castle Pump and Pipeline right associated with the Water Works System, the Coryell Ditch water right which is dedicated to the Town for the Castle Valley Ranch development, and Ruedi Reservoir water (400 acre-feet) available by contract from the U.S. Bureau of Reclamation,

The Town's water rights are summarized on Table 1. Comments about each of these water rights are presented following the Table.



Glenwood Springs – Main Office 201 14<sup>th</sup> Street, Suite 200 P. O. Drawer 2030 Glenwood Springs, CO 81602 Aspen 323 W. Main Street Suite 301 Aspen, CO 81611 Montrose 1544 Oxbow Drive Suite 224 Montrose, CO 81402

Office: 970.945.2261 Fax: 970.945.7336

\*Direct Mail to Glenwood Springs

### **TOWN OF NEW CASTLE WATER RIGHTS**

Structure	Tributary	Case Number	Diligence Decrees	Adj. Date	Appropriation Date	Amount	Use	Comments
New Castle Water Works System and Pipeline	East Elk Creek	C.A. No. 1058	n/a	3/29/1904	9/6/1889	2.67 c.f.s., absolute  1.0 c.f.s., absolute	Municipal and other purposes Emergency and fire protection purposes	This water right diverts in priority pursuant to the plan for augmentation decreed in 87CW373.
New Castle Water System First Enlargement	East Elk Creek	81CW477	86CW257 92CW222 99CW009 05CW232 12CW152 19CW3036	10/18/1982	12/23/1981	10.0 c.f.s., conditional	All municipal purposes including domestic, irrigation, fire protection, industrial and commercial.	This water right diverts in priority pursuant to the plan for augmentation decreed in 87CW373.  Diligence due August 2025.

Karp.Neu.Hanlon Carter Rights
Town of New Castle Water Rights
Page 7

Structure	Tributary	Case Number	Diligence Decrees	Adj. Date	Appropriation Date	Amount	Use	Comments
Buster Pump and Pipeline	Colorado River	C.A. 4914	n/a	11/10/1966	6/1/1959	3 c.f.s., absolute	Irrigation	In 83CW126, the uses were changed to irrigation, municipal, domestic, industrial, fire protection, commercial and recreation uses. In 87CW373, the Court approved a change in the point of diversion to the New Castle Augmentation Station.  In 2013CW3085, the Buster Pump and Pipeline was designated as an augmentation source for the Coal Ridge Park North Well, the Coal Ridge Park South Well, and the Grand River Park Well No. 1
Coal Ridge Park North Well	Colorado River	13CW3085	20CW3181	12/31/2013	7/23/2013	25 g.p.m, conditional (cumulative with Coal Ridge Park South Well)	Irrigation	Use of this water right is augmented under Case No. 13CW3085.  Diligence Due August 2027

Karp Neu Hanlon CATTORNEYS AT LAW
Town of New Castle Water Rights
Page 8

Structure	Tributary	Case Number	Diligence Decrees	Adj. Date	Appropriation Date	Amount	Use	Comments
Coal Ridge Park South Well	Colorado River	13CW3085	20CW3181	12/31/2013	7/23/2013	25 g.p.m, conditional (cumulative with Coal Ridge Park North Well)	Irrigation	Use of this water right is augmented under Case No. 13CW3085.  Diligence Due August 2027
Burning Mountain Well Nos. C-1 & C- 2	Colorado River	94CW325		02/28/2000		50 g.p.m., absolute, per well (96.49 acre- feet total between the two wells)		These wells are augmented pursuant to a West Divide Contract for 7.5 acre-feet of Ruedi Reservoir water.  Decree provides for 44.9 acre-feet of excess consumptive use credits from 96.49 total.  33.8 acre feet of the excess historic consumptive use is leased to Lakota Canyon Ranch for irrigation purposes.
Rippy RV Ditch	Colorado River	92CW256		1/29/1996	1932	0.5 c.f.s., absolute	Irrigation	Used to fill and refill the Rippy Pond
Rippy Pond	Colorado River	92CW256		1/29/1996	1932	2.0 acre-feet, absolute	Irrigation at Riverside Park	Note: The pond shall not store natural ground water.

Karp.Neu.Hanlon CATTORNEYS AT LAW
Town of New Castle Water Rights
Page 9

Structure	Tributary	Case Number	Diligence Decrees	Adj. Date	Appropriation Date	Amount	Use	Comments
Grand River Park Well No. 1	Colorado River	13CW3085	20CW3181	2013	11/8/2006	50 g.p.m, absolute 20.6 acre feet of diversions, absolute 6.84 acre feet of diversions, conditional	Irrigation	Use of this water right is augmented under Case No. 13CW3085.  Diligence Due August 2027
Williams Canal New Castle Enlargement	Canyon Creek	03CW72	14CW3100 21CW3045		4/15/2003	6.0 c.f.s, conditional (limited to the non- irrigation season October 1 through April 30)	Municipal, commercial, domestic, irrigation, industrial, fire protection, recreation, and piscatorial	Diligence Due September 2027

Karp.Neu.Hanlon Carter Rights
Town of New Castle Water Rights
Page 10

Structure	Tributary	Case Number	Diligence Decrees	Adj. Date	Appropriation Date	Amount	Use	Comments
Ruedi Reservoir Contract with Bureau of Reclamation (BOR)						400 acre-feet	Municipal and industrial uses	Ruedi Reservoir, Round II, long term repayment contract with BOR, Contract No. 009E6C0129 for 400 acre-feet of water.
New Castle Augmentation Station	Colorado River	87CW373	97CW2010 04CW62 10CW279 18CW3083	8/22/1991	5/22/1984	5.0 c.f.s., conditional  1.0 c.f.s. absolute and 4 c.f.s., conditional.	Municipal, commercial, domestic, industrial, augment., replacement and exchange	Use of this water right is augmented under Case No. 87CW373.  Diligence due February 2025

Karp Neu Hanlon CATTORNEYS AT LAW
Town of New Castle Water Rights
Page 11

Structure	Tributary	Case Number	Diligence Decrees	Adj. Date	Appropriation Date	Amount	Use	Comments
New Castle Augmentation Station First Enlargement	Colorado River	02CW395	15CW3098 19CW3036	12/31/2002	12/13/2002	5.0 c.f.s., conditional	All municipal purposes including commercial, domestic, irrigation, industrial, and fire protection	Diligence Due August 2025
Coryell Ditch (1.6502 c.f.s. owned by Town) (1.0333) c.f.s. owned by developers)	East Elk Creek	C.A. 103	n/a	5/11/1889	6/1/1883	2.8 c.f.s., absolute	Irrigation	To be used within Castle Valley Ranch for augmentation of depletions from out-of- priority diversions from New Castle Water Works System & Pipeline
Coryell Ditch Third Enlargement	East Elk Creek	C.A. 3431	n/a	1/11/1943	3/4/1921	9.9 c.f.s. absolute*	Irrigation	To be used within Castle Valley Ranch for augmentation of depletions from out-of-priority diversions from New Castle Water Works System & Pipeline. *Only 4.9 c.f.s. is included in this plan for augmentation.

Karp.Neu.Hanlon Carter Rights
Town of New Castle Water Rights
Page 12

Structure	Tributary	Case Number	Diligence Decrees	Adj. Date	Appropriation Date	Amount	Use	Comments
Red Rock Ditch (owned by Williams)	East Elk Creek	C.A. 941	n/a	12/16/1901	5/1/1901	3.7 c.f.s., absolute	Irrigation	To be used within Castle Valley Ranch for augmentation of depletions from out-of- priority diversions from New Castle Water Works System & Pipeline.
Red Rock Ditch First Enlargement (owned by Williams)	East Elk Creek	C.A. 1690	n/a	2/26/1914	4/10/1903	0.3 c.f.s., absolute	Irrigation	To be used within Castle Valley Ranch for augmentation of depletions from out-of- priority diversions from New Castle Water Works System & Pipeline
Red Rock Ditch Second Enlargement (owned by Williams)	East Elk Creek	C.A. 3431	n/a	1/11/1943	3/4/1921	6.2 c.f.s., absolute	Irrigation	To be used for augmentation of depletions from out-of- priority diversions from New Castle Water Works System & Pipeline.



Glenwood Springs – Main Office 201 14<sup>th</sup> Street, Suite 200 P. O. Drawer 2030 Glenwood Springs, CO 81602 Aspen
323 W. Main Street
Suite 301
Aspen, CO 81611

Montrose
1544 Oxbow Drive
Suite 224
Montrose, CO 81402

Office: 970.945.2261 Fax: 970.945.7336

\*Direct Mail to Glenwood Springs

#### A. How New Castle's water rights operate to provide treated water

New Castle's water treatment plant (WTP) is located west of Town along Elk Creek. The Town operates a raw water diversion structure on East Elk Creek just up from the confluence with Main Elk Creek. At this point, water is taken out of East Elk Creek and piped to the WTP for treatment. At times when water supplies on East Elk are insufficient to meet the Town's water needs, the Town has three pumps on the Colorado River. These pumps (collectively referred to as the New Castle Augmentation Station) have the capacity to pump water to the WTP. Water quality issues with the Colorado River dictate that the Town use the East Elk Creek supply as much as possible. However, the Colorado River pumps provide both an additional physical supply and a redundant supply (in case a localized event (e.g. fire) creates a water quality issue on East Elk Creek). A diagram depicting the interrelationship of the Town's water rights is attached as **Exhibit A**.

### B. New Castle Water Works System and Pipeline

### 1. <u>Senior Right:</u>

The New Castle Water Works System and Pipeline (hereinafter "Water Works System") is the primary water right water supply structure for the Town of New Castle. It was adjudicated on March 29, 1904 in Civil Action No. 1058 and has an appropriation date of September 6, 1889. It is an absolute water right for 2.67 c.f.s. for municipal and other uses and an additional 1.0 c.f.s. for emergency and fire protection purposes.

The Water Works System diverts water from East Elk Creek, a tributary of Elk Creek and the Colorado River. This water right has an 1889 priority date and is the most senior domestic use right in the Elk Creek drainage; however, several irrigation rights that divert in the Elk Creek drainage are senior to the Water Works System, including some of the Ware and Hinds Ditch and the Coryell Ditch, among others. The priority of this water right is a significant issue for the Town and is discussed in more detail below.

### 2. <u>Enlargement Right:</u>

The Town has a junior conditional right for municipal diversions from East Elk Creek. The Water Works System First Enlargement was decreed in 1982 in Case No. 81CW477 and has a December 31, 1982 adjudication date and an appropriation date of December 23, 1981 (the water right has a later adjudication date because the application, although filed in 1981, was amended in 1982.) It is a conditional water right for 10.0 c.f.s. for municipal and other uses. The 10 c.f.s. Enlargement Right is likely larger than what the Town will ever need to divert off of East Elk Creek (and as a physical supply matter what East Elk

## Karp Neu Hanlon Restriction Neuron Ne

Town of New Castle Water Rights Page 14

Creek is likely to be able to supply). At some point in the future the amount of this water right may become an issue and require a partial abandonment thereof.

The Enlargement Right is junior to the CWCB minimum stream flows on East Elk Creek and Main Elk Creek. Further, the Enlargement Right is not protected by HUP deliveries both because it was appropriated after October 15, 1977, and it has not been placed to beneficial use. This water right has very little value in the summer because it is subject to a call once the runoff ends, has never been augmented and would be difficult, if not impossible, to augment.

#### C. Case No. 87CW373: Plan for Augmentation and New Castle Augmentation Station

#### 1. Plan for Augmentation – Castle Valley Ranch:

In Case No. 87CW373, the Town obtained a decree for a plan for augmentation to augment diversions through the Water Works System. The plan for augmentation was developed due to increased water needs resulting from the Castle Valley Ranch development (hereinafter "CVR"). Under the decree, most of the water used to augment diversions at the Water Works System is made available pursuant to the Town's Agreement with CVR regarding the acquisition of water rights. Most critical to the CVR plan for augmentation is the dedication of the Coryell Ditch senior water right (which is senior to most every other water right on Elk Creek).

As decreed, the plan to augment diversions at the Water Works System calls for the dryup of land historically irrigated within the CVR property with water from the Coryell Ditch and the Red Rock Ditch rights. However, subsequent arrangements between the Town and CVR have eliminated the Red Rock Ditch water rights as a source of augmentation supply. The Coryell Ditch rights were estimated to provide a legal water supply for up to 1,400 EQR of development. Under the new agreement, if CVR exceeds 1,400 EQR, the Developer will pay a water rights dedication fee to the Town instead of dedicating Red Rock Ditch rights.

The Coryell Ditch rights will be used to support the development in CVR in three ways: (1) dry-up of irrigated land and dedication of Coryell Ditch rights to the Town so that the consumptive use credits may be applied to augment diversions at the Water Works System point of diversion; (2) dedication of Coryell Ditch rights for continued irrigation uses for open space, parks, and other "public" raw water irrigation uses, on an acre-per-acre basis (i.e., a portion of the ditch rights would continue to irrigate the same amount of acreage that has historically been irrigated); and/or (3) dedication of Coryell Ditch rights to a homeowners' association for "private" raw water irrigation. The agreement provides that the full 2.8 c.f.s. of the senior Coryell water right will be used for these three purposes, and only for those purposes. To the extent that the developer provides for raw water irrigation under options (2) or (3), this will reduce the demand for treated water for irrigation and will thus reduce CVR's impact on the need for diversions at the Water Works System.

Town of New Castle Water Rights Page 15

Under the plan for augmentation, the developer must dedicate 0.02 c.f.s. of the senior Coryell Ditch rights and 0.035 of the junior Coryell Ditch rights for each acre of land that is dried up to support development by relying on the historic consumptive use credits. One acre must be dried up for each 10 EQRs of development.

The 2.8 c.f.s. Coryell Ditch water right was adjudicated in 1889 in Civil Action No. 103 and has an appropriation date of June 1, 1883. This water right enjoys the number three priority in the East Elk Creek drainage and is a valuable water right. It was never called out during the 2002, 2012, or 2018 droughts and East Elk Creek had water physically available to satisfy this priority; there should always be sufficient water to satisfy the 2.8 c.f.s. water right.

The Coryell Ditch Third Enlargement was adjudicated in 1943 in Civil Action No. 3431. It is an absolute water right for 9.9 c.f.s. (of which the Town is entitled to 4.9 c.f.s.) and has an appropriation date of March 4, 1921. The Coryell Ditch Third Enlargement has a much lower priority in the Elk Creek drainage, which makes this a less reliable and less valuable augmentation source for the Town. This water right is junior to the Town's right and subject to Elk Creek calls after the runoff ends.

#### 2. New Castle Augmentation Station:

In Case No. 87CW373, the Town obtained a decree for a conditional water right for the New Castle Augmentation Station (hereinafter "Augmentation Station"). The decree confirms a 5.0 c.f.s. conditional water right to be used for municipal, commercial, domestic, irrigation, industrial, augmentation, replacement and exchange purposes. The water right was decreed in 1991 and has a December 31, 1987 adjudication date and an appropriation date of May 22, 1984. As a result of diversions from the Augmentation Station for raw water irrigation purposes, 1.0 c.f.s. was previously made absolute. In Case No. 18CW3083, 4.53 c.f.s. was made absolute for municipal, commercial, domestic and industrial uses and an additional 3.53 c.f.s. was made absolute for irrigation. To that end, 0.47 c.f.s. remains conditional for all decreed uses (municipal, commercial, domestic, industrial, and irrigation).

In Case No. 02CW395 the Town obtained an enlargement of the Augmentation Station water right so that it could be used to provide water service to all of New Castle's service area. Under this decree, in times of water supply shortage/disruption on East Elk Creek, water may be pumped from the Colorado River to the WTP. Further, water may be pumped from the Colorado River pumps to the raw water holding pond in Castle Valley Ranch. From this location, water is pumped to various HOAs and Lakota Canyon for raw water irrigation of landscaping. The Colorado River pumps were constructed after the 2002 draught using funds provided by Lakota Canyon Ranch in partial fulfillment of that development's water dedication obligations.

## Karp Neu Hanlon Restriction Neuron Ne

Town of New Castle Water Rights Page 16

We recommend operating the Augmentation Station for 30 days in the next 2 years. This exercise will identify the level of treatment necessary to bring the water up to drinking standards so the Town is informed should a localized event on Elk Creek require dependence on the Colorado River water. This will also assist with diligence cases in Water Court.

#### D. Ruedi Reservoir

The Town has a Ruedi Reservoir, Round II, long-term repayment contract with the U.S. Department of the Interior, Bureau of Reclamation, Contract No. 009E6C0129, for up to 400 acre-feet of water to be released from Ruedi Reservoir annually. Pursuant to the Contract, the water may be used for municipal and industrial purposes through augmentation. The Contract has a term of 25 years and is subject to renewal at the end of 2025. Under the Contract, the Town has the right to renew the arrangement for its contracted amount subject to the provisions of Federal law in effect at the time of renewal (2025).

The Contract water released from Ruedi Reservoir can be used to augment diversions from the Colorado River. Because use of Ruedi water to augment diversions at the Water Works System on East Elk Creek would require an "exchange" of water from the Colorado River mainstem up to the Water Works System's intake, the Town's Ruedi Contract likely cannot be used to protect out-of-priority diversions at the Water Works System due to the CWCB's instream flow rights. Case No. 02CW395 incorporates the Town's Ruedi Reservoir Contract water as a source of augmentation supply for the New Castle Augmentation Station (Colorado River Pumps).

To date, the Town has only used its Ruedi Reservoir Contract water in conjunction with parkland irrigation at the Grand River Park and the Coal Ridge Park.

#### E. Miscellaneous Rights

#### 1. Buster Pump and Pipeline:

By Quit Claim Deed dated December 30, 1986, the Town also received from Brinkley B. Brown an absolute water right for diversion of 3 c.f.s. of Colorado River water using the Buster Pump and Pipeline. This right was decreed in 1966 in Civil Action No. 4914 and has an appropriation date of June 1, 1959. The water right was originally decreed for irrigation use, and it is a Green Mountain Reservoir "HUP" beneficiary right.

Pursuant to the change in water right decree issued in Case No. 83CW126, use of the Buster Pump and Pipeline was changed to irrigation, municipal, domestic, industrial, fire protection, commercial and recreation purposes. Because the water was historically used for irrigation purposes, however, water was only available for the new uses during the irrigation season, between April 15th and October 15th of each year. A subsequent change



Town of New Castle Water Rights Page 17

in water right decree issued in Case No. 87CW373 changed the point of diversion for the Buster Pump and Pipeline to the New Castle Augmentation Station. Under that decree, the water right now may be used for augmentation and exchange purposes, in addition to the uses listed above; however, the period of use is limited to between May and October of each year. Similarly, in Case No. 13CW3085, the Town obtained approval to use the Buster Pump and Pipeline water right to augment depletions associated with irrigation of Grand River Park and Coal Ridge Park.

This water right has value for Colorado River diversions during the irrigation season.

#### 2. Spion Kopp Ditch Rights and Burning Mountain Wells No. C-1 and No. C-2:

By Quit Claim Deed dated April 17, 1996, Burning Mountain Associates transferred the title to Burning Mountain Wells No. C-1 and No. C-2 to the Town. Following that transfer of title, the Town completed a Water Court proceeding (Case No. 94CW325) to decree a plan for augmentation for the wells.

In Case No. 90CW48, Burning Mountain Well Nos. C-1 and C-2 were made alternate points of diversion for up to 0.11 c.f.s. (50 g.p.m.) of the 830 c.f.s. originally decreed to the Avalanche Canal and Siphon in Civil Action No. 4613. In Case No. 94CW325, a plan for augmentation was decreed to augment depletions from the Burning Mountain Wells.

Under the plan for augmentation, irrigation season depletions are augmented by bypassing diversions at the Williams Canal, which is the point of diversion for the Town's water right decreed to the Spion Kopp Ditch. The Town received the title to the water rights in the Spion Kopp Ditch via Quit Claim Deed dated December 1, 1994. The Ditch was originally decreed in Civil Action Nos. 3104 and 4004, and the Town's interest in the Ditch totals 1.0 c.f.s. The Town received a total of 67.33 acre-feet of consumptive use credits from the dry-up of lands historically irrigated using its interest in the Spion Kopp Ditch. The plan for augmentation allows for diversions of 96.5 acre-feet per year based upon use of 22.43 acre-feet per year consumptive use credits of the 67.33 acre-feet per year that is available. This leaves the Town with 44.9 acre-feet per year of excess consumptive use credits from the Spion Kopp Ditch water right. Those excess consumptive use credits have since been leased to Lakota Canyon Ranch.

To date, the Burning Mountain Wells have never been drilled, and the Town has no need to implement the 94CW325 augmentation plan. The Town should consider moving the 22.43 acre-feet of historic consumptive use credits to the New Castle Augmentation Station in a future water court case.

#### 3. Williams Canal New Castle Enlargement:

The Town currently does not divert water from Canyon Creek. However, if the Town annexes lands to the east for growth, the water rights that will be dedicated to the Town

Town of New Castle Water Rights Page 18

associated with those lands largely will be Canyon Creek water rights. The primary ditch on Canyon Creek is the Williams Canal. Because most ditches are not decreed for diversions during the non-irrigation season, in March 2015, the Town appropriated a junior enlargement in the Williams Canal. This will give the Town the water rights flexibility to implement a Canyon Creek water supply in the future if growth warrants such an expansion.

#### F. Raw Water irrigation water rights

#### 1. Rippy RV Ditch and Rippy Pond:

In 1996 the Rippy RV Ditch and the Rippy Pond (located in the Riverside PUD) were decreed in Case No. 92CW256, each with a 1932 appropriation date. Because of the adjudication date of the rights, these are very junior water rights notwithstanding their appropriation date. However, the rights are entitled to HUP benefits which would protect them from calls by downstream senior water rights, so they should be reliable for irrigation of the Park and to keep the Pond full.

The Rippy RV Ditch is an absolute water right in the amount of 5 c.f.s. from the Colorado River and is decreed for irrigation use and to fill and refill the Rippy Pond. Because of the latter right (fill and refill), augmentation of evaporative losses is not required. The Rippy Pond is an absolute water right in the amount of 2.0 acre-feet and is decreed for irrigation use.

The water rights were transferred to the Town via General Warranty Deed on November 15, 2001. The Rippy RV Ditch and the Rippy Pond are used as water amenities at the Grand River Park. Also, a pump installed in the Rippy Pond allows adjoining park areas to be irrigated with raw water (using augmentation from the Buster Pump and Pipeline water right).

### 2. Grand River Park Well

An alternative supply of irrigation water for the Grand River Park can be obtained from the Grand River Park Well No. 1 which was decreed in Case No. 13CW3085. This well has been constructed and can be shared with the adjoining property owners association for irrigation of lawn areas. An agreement exists allocating the operation and maintenance charges associated with this well. The Town's usage of the well for irrigation purpose is augmented using the Buster Pump and Pipeline water right and a small amount of the Town's Ruedi Reservoir contract water.

#### 3. <u>Coal Ridge Park North and South Wells</u>

In Case No. 13CW3085, the Town decreed two wells to irrigate the Coal Ridge Park. These wells historically existed but were not decreed. In Case No. 13CW3085, the wells

Town of New Castle Water Rights Page 19

were decreed for 25 g.p.m. each and the irrigation depletions associated with the wells are augmented using the Buster Pump and Pipeline and a portion of the Town's Ruedi Reservoir contract water. After the decree was obtained in 13CW3085, the Town applied to receive well permits from DWR. To our surprise, DWR took the position that because the wells had been constructed without a permit originally, and did not technically meet the well construction requirements, the State would not issue permits. After contesting this issue with the State for some time, the Town agreed to drill a new well (which has since been permitted). However, that well is only valid for 25 g.p.m. and park irrigation demands likely require a higher pumping rate. In the future the pumping rate for both the North and South Wells could be combined so that a total of 50 g.p.m. can be used for park irrigation purpose.

#### 4. Red Rocks Ditch

As previously noted, there are certain areas in Castle Valley Ranch and Lakota Canyon Ranch that are irrigated with raw water. This water is generally diverted from East Elk Creek through the Red Rocks Ditch. Red Rocks Ditch water is then temporarily stored in a pond located in a park. From there, water can be pumped to different locations for irrigation use. The Red Rocks Ditch water right is fairly junior on East Elk Creek. The Coryell Ditch senior water enjoys the legal right to also divert at the Red Rocks Ditch headgate. As such, after calls come on East Elk Creek, most of the water diverted to the raw water irrigation pond occurs under the Coryell Ditch water right. In dry years, however, all of the Coryell Ditch water right must be taken at the New Castle Pump and Pipeline. In those situations, water can be pumped from the Colorado River (Augmentation Station) into the raw water irrigation pond. Of course, pumping water for such a distance is expensive. These costs are passed on to the raw water users.

# IV. ISSUES RELATING TO TOWN'S WATER RIGHTS AND POTENTIAL GROWTH

#### A. Relative Priority of the New Castle Water Works System and Pipeline

As discussed above, the New Castle Water Works System and Pipeline is the primary municipal water diversion structure for the Town. Therefore, a major issue concerning the integrity and reliability of the Town's municipal diversions from East Elk Creek is the priority of the Water Works System right in relation to other water rights that divert from East Elk Creek and Main Elk Creek. A line diagram showing major water rights in the Elk Creek basin and their relative priorities is attached as **Exhibit B**.

Historically, the New Castle Water Works System and Pipeline was administered as the first priority water right on Elk Creek. This was due to language in the Town's historic decree stating:

It is therefore Considered, Ordered, Adjudged and Decreed by the Court, that the said New Castle Water Works System be and the same is hereby numbered 1, with

Town of New Castle Water Rights Page 20

Domestic Priority Number 1, in said Water District No. 39, as of the 6th day of September, A.D. 1889 . . . .

It is further Ordered by the Court that the said appropriation and these findings and this decree are hereby made absolute and are not subject to any priority rights heretofore decreed to be as of any date subsequent to the said 6th day of September, A.D. 1889.

Civil Action No. 1058.

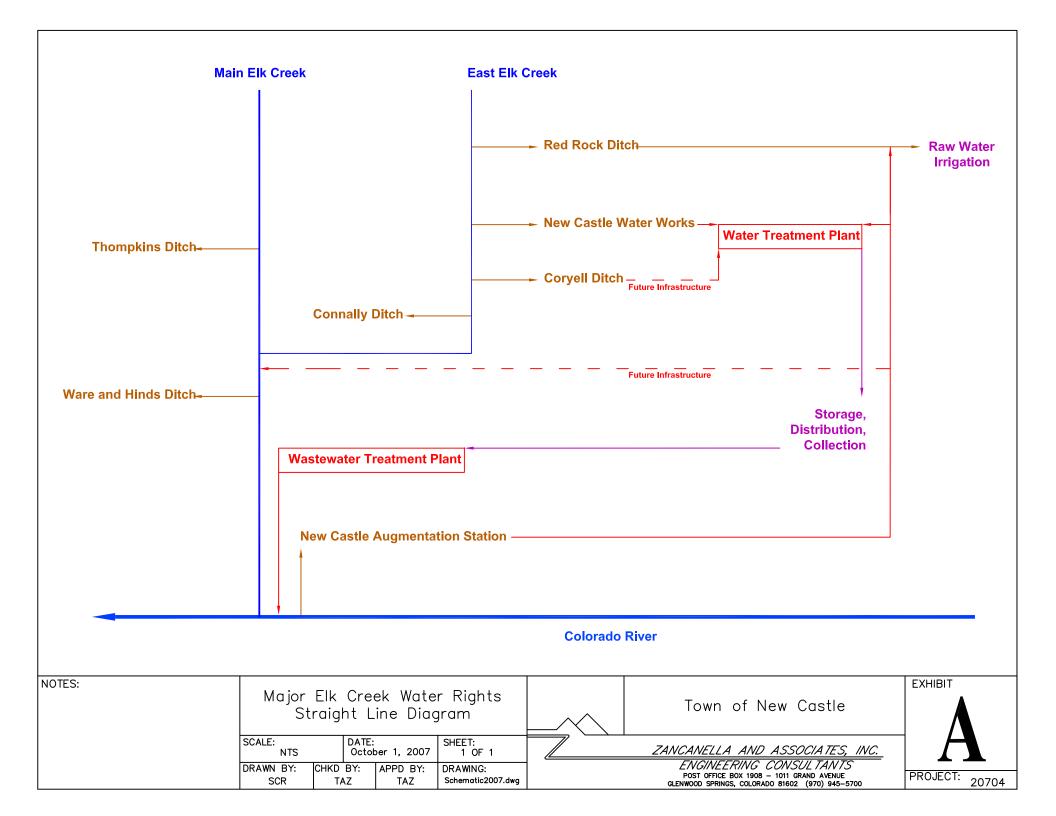
In 2002, however, DWR retabulated the Town's priority. Under the statutory provisions, the Water Works System right, which was decreed in 1904, has a priority date relating back to its appropriation date in 1889. That date places the Water Works System junior in priority to all irrigation rights that were decreed in the 1889 original irrigation adjudication because those water rights all have appropriation dates preceding September 6, 1889. This means that in extreme drought years the Town's water right is subject to call and curtailment.

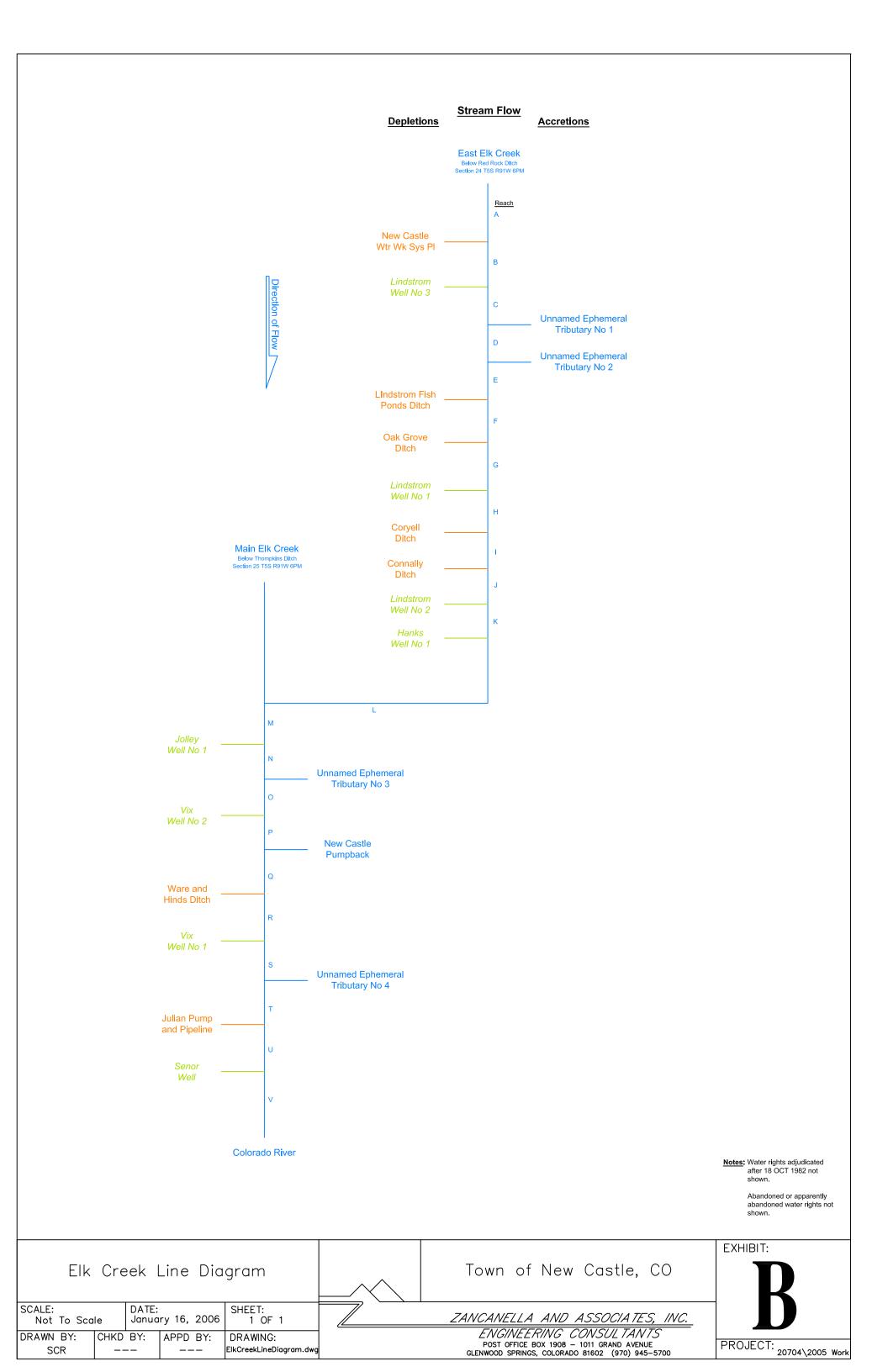
Luckily, the Town is the owner of a substantial interest in the senior Coryell Ditch water right. This allows the Town to continue to divert the amount of its Coryell Ditch ownership even if the New Castle Water Works Pipeline is deemed out of priority. The Coryell Ditch water right can be stretched quite a ways in conjunction with water conservation to meet the Town's needs in dry years. Further, in order to prevent Town's diversions at the Water Works System from being curtailed, the Town entered into a temporary lease agreement with developer owners of the Coryell senior water right. Finally, the Town has the ability to divert water from the Colorado River and pump it direct to the WTP to make up for any deficiency.

### B. Town's ability to serve future growth.

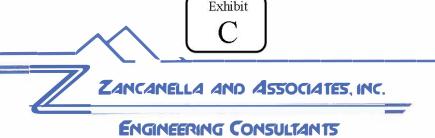
The Town has water rights to accommodate future growth. Attached as **Exhibit C** is a 2008 report from Zancanella and Associates analyzing the Town's capacity to accommodate future growth. As noted in the report, as of 2008 the Town had committed to serve 3318 EQRs. This number included the two largest subdivisions in Town – Castle Valley Ranch and Lakota Canyon Ranch. As noted by Zancanella, with the Town's existing water rights portfolio, approximately 4350 EQRs can be served. As such, the Town has the ability to grow beyond existing approved development by approximately 1000 EQRs.

If future annexations are approved by the Town, a requirement of approval should include a dedication of water rights. For properties to the east of town, this likely would include water rights decreed to the Williams Canal and the Spion Kop Ditch. Both water rights have value and usefulness to the Town to extend its water service abilities. For properties to the west this likely would include additional Coryell Ditch water rights and possibly Ware and Hinds Ditch rights. For in-fill development or the occasional parcel to be annexed that lacks historic water rights, the Town should obtain payment of a fee in lieu of water rights dedication. This money should be sequestered and used to purchase water rights on East Elk Creek – as they may come available.









September 11, 2008

Michael J. Sawyer, Esq. Leavenworth & Karp, P.C. P.O. Drawer 2030 Glenwood Springs, CO 81602 Via email to: mjs@lklawfirm.com

Re: New Castle Water Supply

Dear Mike:

This letter is intended to address the questions you posed regarding available water rights to serve potable demand in the Town of New Castle, Colorado. Zancanella & Associates, Inc. developed much of the information relied upon in this letter during a water supply planning effort undertaken in 2006. Some new information has also been developed by Zancanella & Associates, Inc. subsequent to your recent request, and some information developed by Schmueser Gordon Meyer has also been considered.

#### Water Rights

The Town of New Castle controls interests in as many as 10 or more decreed water rights. Of these, 3 are of the greatest utility under present circumstances, namely, the Town's interest in the Coryell Ditch, the New Castle Water Works System & Pipeline original right, and the New Castle Augmentation Station. The first two draw from East Elk Creek, while the remaining right draws from the Colorado River. The water available for diversion in acre-feet under each of these rights is tabulated by month in the attached Table 1, which assumes average hydrologic conditions.

Under dry-year hydrologic conditions, like those experienced in 2002, less water is available due to both physical and legal considerations. In the dry-year scenario, Elk creek is under strict administration throughout the later portion of the irrigation season due to call by the Ware & Hinds Ditch and other senior irrigation rights. For this reason, the New Castle Water Works right is out of priority for a period which could possibly include the entirety of July, August, September, and October in a severe drought year. Downstream calls on the Colorado River have a similar effect on the Augmentation Station, however, the Augmentation Station may continue to divert by virtue of the Town's contract for release of water stored in priority by Ruedi Reservoir upstream. Table 2 reflects these considerations in its tabulation of available water in a dry year.

#### Potable Demand

Based on the Schmueser Gordon Meyer (SGM) estimate you provided us, the Town was serving 1,593 Equivalent Residential Units (EQRs) as of early 2007, with 1,725

additional EQRs approved but not yet connected. Adding the two numbers yields a total existing obligation to serve 3,318 EQRs. SGM estimated average growth over the 5 preceding years at about 78 EQRs per year, and projected that development would continue at either a moderate or rapid rate of 80 or 120 EQRs per year, respectively. Using those figures to project potable water demand 20 years into the future, results in a demand possibly ranging from 3,193 to 3,993 EQRs by the year 2027. These numbers are presented on the attached Table 3.

As a means of translating demand in EQRs into demand in acre-feet of water, the Town's water usage during the previous 5 years was reviewed. The monthly volumes used from 2002 to 2006 are tabulated in Table 4. The maximum used in each calendar month during the 5-year period was taken as a conservative baseline, and divided by 1,593 to yield usage per EQR. The results, also presented in the table, show a clear seasonal usage pattern resulting from summertime irrigation of lawns, gardens, and other landscaping. The gallon equivalence of the acre-feet values range from a low of about 250 gallons per EQR per day in February to a high of almost 780 gallons per EQR per day in July. The high July number likely indicates inclusion of park irrigation and other large green area water use. Although changes in treatment technology and water usage customs may result in future changes in the water usage per EQR per month, the conservative figures presented in the table form a baseline suitable for demand projection to ensure adequate supply. The monthly unit usage values were multiplied by various numbers of EQRs to develop a table of projected water demand in acre-feet, attached as Table 5.

#### Ability to Serve

Values from tables 1, 2, and 5 are also depicted by the attached Figures 1-4. By inspection of the figures it can be seen that limited dry-year water availability and high July demand combine to govern the Town's ability to serve potable water to its residents, resulting in a limit of 4,350 EQRs without implementing additional water conservation measures, curtailing deliveries to new standards, or expanding supplies. Even given a demand of 4,350 EQRs, surplus water is available in every month except July. In better water years, or given demands of less than 4,350 EQRs, surplus water is available in every month.

It should be noted that the timing of administrative calls cannot always be accurately anticipated due to the number and complexity of matters triggering their issuance, and it is possible that in the future a critical period could arise in a month other than July. It should also be noted that this analysis is based on availability of water under adjudicated rights, and not on availability of water through existing infrastructure. As we have been handling the Town's water rights, and as it is our understanding that SGM has been handling the Town's infrastructure, we leave the infrastructure considerations to SGM.

In a dry year, the service of 4,350 EQRs requires the Augmentation Station pumps to deliver water diverted by virtue of the Town's Ruedi Reservoir augmentation releases to the Town's potable water treatment plant. One infrastructure limitation of which we are aware is the pump capacity of the Augmentation Station. The water right is for 5 cfs, of which we believe the Town is entitled to 4 cfs (due to an agreement with Lakota Canyon

Ranch). Because it wasn't anticipated that the entire right would be needed at the time of construction, pumps were only installed to move 3 cfs, leaving room for installation of additional pumps as the need arises. Taking 2 of the 3 cfs capacity currently in place, as opposed to 4 of 5 cfs decreed, the Town's ability to serve potable water diminishes from 4,350 EQRs to about 2,700 EQRs in a dry year. The Town could grow to as many as 2,700 EQRs by as early as the year 2016 under the rapid development scenario. Therefore additional pumps need to be installed during the next 8 years to fortify the Town's supply and optimize its capacity.

#### Conclusion

As of the baseline for this analysis, taken as early 2007, the Town of New Castle, Colorado serves 1,593 EQRs with another 1,725 EQRs approved, for a total existing commitment of 3,318. Under a rapid development scenario, there could be as many as 3,993 EQRs in the Town 20 years on, if additional development is approved. Although water availability cannot be forecast with perfect precision or reliability, the best information currently available indicates that with all infrastructure issues adequately addressed, the Town of New Castle could serve up to 4,350 EQRs, even in a dry year, based on water rights availability.

If you have any questions, please call our office at (970) 945-5700 x 15.

Very truly yours,

Zancanella & Associates, Inc.

Thomas A. Zancanella, P.E.

Collin Robinson, E.I.

Attachments

### <u>Table 1</u> Available Water by Right

Average Hydrologic Conditions [acre-feet, except as noted]

Water	Coryell	New Castle Water	New Castle	Total
Right	Ditch	Works System & Pipeline	Augmentation Station	Available
Rate [cfs]	2.8	2.7	4.0	9.5
Admin. No.	12205.00000	14494.00000	50038.49085	_
Jan	0.0	163.9	245.5	409.4
Feb	0.0	148.0	221.8	369.8
Mar	0.0	163.9	245.5	409.4
Apr	0.0	158.6	237.6	396.2
May	64.8	163.9	245.5	474.2
Jun	67.8	158.6	237.6	464.0
Jul	76.6	163.9	245.5	486.0
Aug	63.5	163.9	245.5	472.9
Sep	56.3	158.6	237.6	452.5
Oct	56.6	163.9	245.5	466.0
Nov	0.0	158.6	237.6	396.2
Dec	0.0	163.9	245.5	409.4

<u>Table 2</u> Available Water by Right

Dry-year Hydrologic Conditions [acre-feet, except as noted]

Water	Coryell	New Castle Water	New Castle	Total
Right	Ditch	Works System & Pipeline	Augmentation Station *	Available
Rate [cfs]	2.8	2.7	4.0	9.5
Admin. No.	12205.00000	14494.00000	50038.49085	-
Jan	0.0	163.9	245.5	409.4
Feb	0.0	148.0	221.8	369.8
Mar	0.0	163.9	245.5	409.4
Apr	0.0	158.6	237.6	396.2
May	64.8	163.9	245.5	474.2
Jun	67.8	158.6	237.6	464.0
Jul	76.6	0.0	244.9	321.5
Aug	63.5	0.0	242.4	305.9
Sep	56.3	0.0	214.0	270.3
Oct	56.6	0.0	216.6	273.1
Nov	0.0	158.6	237.6	396.2
Dec	0.0	163.9	245.5	409.4

<sup>\*</sup> Augmented with 400 ac-ft of releases from Ruedi Reservoir to replace depletions to the River including transit losses assessed at 10%. Augmentation release schedule [ac-ft] as follows:

Jul - 130

Aug - 120

Sep - 90

Oct - 60

Table 3 **Potable Water Demand** [EQR\*]

Served as of Analysis Start Date	9		1,593
Additional Approvals as of Same	e Date		1,725
Total Existing Obligations		3,318	
Average Growth per Year Over	5 Previous		78
Projected Growth per Year -	moderate development		80
	rapid development		120
Year of Demand Projection		<u>Moderate</u>	<u>Rapid</u>
2007		1,593	1,593
2012		1,993	2,193
2017		2,393	2,793
2022		2,793	3,393
2027		3,193	3,993

<sup>\*</sup> EQR = Equivalent Residential Units each representing the amount of water used to serve 350 gallons per day indoor and irrigation of 2,500 square feet of lawn.

Table 4 Monthly Potable Water Usage [acre-feet]

	2002	2003	2004	2005	2006	Max	Per EQR	% Depletion
Jan	41.5	34.6	32.4	42.4	30.1	42.4	0.027	5.0
Feb	27.7	31.0	31.0	34.3	32.0	34.3	0.022	5.0
Mar	32.7	32.8	39.5	39.1	39.2	39.5	0.025	5.0
Apr	49.4	39.7	50.4	55.2	56.5	56.5	0.035	31.0
May	79.8	63.0	67.4	66.7	92.0	92.0	0.058	40.0
Jun	95.8	71.7	80.5	79.4	112.6	112.6	0.071	47.1
Jul	93.4	93.5	85.5	113.0	117.7	117.7	0.074	47.8
Aug	79.9	78.7	94.7	89.5	94.0	94.7	0.059	44.6
Sep	54.9	54.1	71.9	73.5	71.9	73.5	0.046	37.8
Oct	39.2	54.2	45.6	42.8	46.7	54.2	0.034	24.9
Nov	33.9	34.9	40.6	34.3	39.0	40.6	0.025	5.0
Dec	32.6	32.2	48.0	35.5	42.7	48.0	0.030	5.0

Table 5 Estimated Monthly Potable Water Usage

[acre-feet]

				EQRs			
	1,593	2,393	2,793	3,193	3,318	3,993	4,350
Jan	42.4	63.6	74.3	84.9	88.2	106.2	115.7
Feb	34.3	51.5	60.1	68.7	71.4	85.9	93.6
Mar	39.5	59.3	69.2	79.1	82.2	99.0	107.8
Apr	56.5	84.9	99.1	113.3	117.8	141.7	154.4
May	92.0	138.1	161.2	184.3	191.5	230.5	251.1
Jun	112.6	169.1	197.4	225.7	234.5	282.2	307.4
Jul	117.7	176.8	206.4	236.0	245.2	295.1	321.5
Aug	94.7	142.2	166.0	189.8	197.2	237.3	258.6
Sep	73.5	110.4	128.9	147.3	153.1	184.2	200.7
Oct	54.2	81.5	95.1	108.7	113.0	136.0	148.1
Nov	40.6	60.9	71.1	81.3	84.5	101.7	110.8
Dec	48.0	72.1	84.2	96.2	100.0	120.3	131.1

