## An Appraisal of

## Portions of Hokestra Pit and Associated Water Storage Structures

## Weld County, Colorado



Prepared for:

Weld County Public Works 1111 H Street Greeley, CO 80632

Date of Value: June 24, 2015 Date of Report: July 2, 2015

Prepared by:

Eric McCarty McCarty Land & Water Valuation, Inc. 1401 S. Taft Ave. Suite 205 Loveland, CO 80537



1401 S. Taft Ave, Suite 205 Loveland, CO 80537 970-635-0900

July 2, 2015

Weld County Public Works c/o Clay Kimmi 1111 H Street Greeley, CO 80632

#### Re: Appraisal of portions of the Hokestra Pit and associated water storage structures in Weld County, Colorado

Dear Clients:

Per your request, I have appraised portions of the Hokestra Pit and associated water storage structures located north of Firestone and east of Longmont in Weld County, Colorado. The property is legally described as a portion of the North Half of Section 2 in Township 2 North, Range 68 West of the 6<sup>th</sup> PM, Weld County, Colorado. Details about the appraised structures are as follows:

- Hokestra Pit Cell 2: 59.71 acres +/-, 453 acre feet of storage capacity, has a clay liner
- Cells 3, SE-1 and SE-2: Lined with slurry wall, 69.55 acres +/-, 254 acre feet of storage capacity currently exist, 455 acre feet +/- once completed

Both the clay liner and slurry wall are approved by the state.

The appraisal includes all water storage structures, ditches and easements relevant to the value of the subject. A portion of the land surrounding the water storage reservoir has been included in this assignment. The water storage quantities in this report have been provided by Weld County Public Works. This report is done under the extraordinary assumption that all necessary access and crossing easements will be granted. This report is also based on the hypothetical condition that the subject parcels have been reconfigured and the water storage vessels have been fully mined and reclaimed.

Remaining gravel reserves on the South Slurry Wall property have not been included in the appraisal; however, the report does consider increased storage capacity and timeframe for mining of the property. The appraiser makes no representations as to the condition of the clay liner, slurry wall or other structures pertaining to the operation of the reservoir.

This appraisal has been conducted according to the Uniform Standards of Professional Appraisal Practice and supplemental standards of the American Society of Farm Managers and Rural Appraisers.

The property rights appraised are the water storage rights and surface rights subject to all easements and encumbrances of record. The subject was inspected on June 24, 2015. This will be considered the date of value.

I submit, herewith, a digital copy of the report, which describes the methods used, and which shows an analysis of the data and reasoning involved in arriving at my conclusions. I estimate as of June 24, 2015, the market value of the subject property is:

Cell 2:

#### ONE MILLION NINE HUNDRED THOUSAND DOLLARS (\$1,900,000)

Cell 3, SE-1 & SE-2:

ONE MILLION SIX HUNDRED THOUSAND DOLLARS (\$1,600,000)

Sincerely,

Eric McCarty Certified General Appraiser, No. CG100014839

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# Aerial Photograph – Cell 2

# Summary of Salient Facts and Conclusions – Cell 2

Owner of Record:	Weld County
Location:	North of Firestone and east of Longmont, on the east side of I-25 Frontage Road and south of the St. Vrain River
Legal Description:	A portion of the North Half of Section 2 in Township 2 North, Range 68 West of the 6 <sup>th</sup> PM, Weld County, Colorado
Access:	Access is via a private gravel access road to WCR 24 <sup>1</sup> / <sub>2</sub> . This appraisal assumes a permanent easement along this road would be granted.
Property Size:	59.71 acres +/- (approximately 35 lake surface acres)
Water Storage:	453 acre feet +/- (Weld Co. Public Works estimate)
Lining:	Clay lining approved by state in 2014
Remaining Gravel:	The cell has been fully mined, but about a week's worth of materials need to be removed to complete the storage vessel.
Depth of Vessel:	The depth ranges from approximately 12 feet in the southwest portion to 25 feet in the northeast portion.
Water Rights:	None included
Zoning:	A-Agriculture by Weld County and a Use by Special Review approval for gravel mining
Reclamation:	Remaining reclamation includes final grading and seeding.
<b>Recreation Rights:</b>	Included
Inlet/Outlet Structures:	A return flow ditch from the Last Chance Ditch along the west side of the property is capable of gravity flowing water into the cell, but no inlet structure is in place. A wet well is at the northeast corner of the property. A pump is needed to convey water from the well back to a slough that feeds into the river.
Other Infrastructure in Place:	The storage vessel has been rip-rapped around the perimeter to meet state requirements. A spillway and sub-drain are also in place.
Highest and Best Use:	Water storage
Valuation Date:	June 24, 2015



## Aerial Photograph – Cells 3, SE-1 & SE-2

Summary of Salient Facts and Conclusions – Cells 3, SE-1 & SE-2				
Owner of Record:	Weld County			
Location:	North of Firestone and east of Longmont, on the west side of WCR 9 <sup>3</sup> / <sub>4</sub> and north of WCR 24 <sup>1</sup> / <sub>2</sub>			
Legal Description:	A portion of the North Half of Section 2 in Township 2 North, Range 68 West of the 6 <sup>th</sup> PM, Weld County, Colorado			
Access:	Access is good via gravel WCR 93/4 and WCR 241/2.			
Property Size:	69.55 acres +/- (approximately 40 surface acres once fully mined)			
Water Storage:	Cell 3: Estimated at 150-200 acre feet +/-, estimated at 175 for the report (mostly unmined) Cells SE-1 & SE-2: Estimated at 280 acre feet +/- (currently at 254 acre feet)			
Lining:	Slurry wall approved by the state in 2014			
Remaining Gravel:	Cells SE-1 and SE-2 are mostly mined. Cell 3 is mostly unmined and is currently scheduled to be completed in a 5- to 10-year time frame. Remaining gravel reserves are not being valued in this appraisal.			
Depth of Vessel:	The estimated depth for all three cells ranges from approximately 15 to 20 feet.			
Water Rights:	None			
Zoning:	A-Agriculture by Weld County and a Use by Special Review approval for gravel mining			
Reclamation:	Mining is not completed, so significant reclamation is still required on Cells 3, SE-1 and SE-2			
<b>Recreation Rights:</b>	Included			
Inlet/Outlet Structures:	A return flow ditch from the Rural Ditch runs between Cell 3 and Cell SE-1 and SE-2, which is capable of gravity flowing water into the cells. An inlet structure is in place from the ditch to Cell SE-1 and an interconnect to Cell SE-2. Cell 3 can be filled indirectly through seepage of water through unlined land. A pump is needed to convey water from the cells back to the ditch that feeds into the river.			
Inlet/Outlet Structures: Other Infrastructure in Place:	between Cell 3 and Cell SE-1 and SE-2, which is capable of gravity flowing water into the cells. An inlet structure is in place from the ditch to Cell SE-1 and an interconnect to Cell SE-2. Cell 3 can be filled indirectly through seepage of water through unlined land. A pump is needed to convey water from the			
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#### Abstract

The subject of this appraisal consists of two water storage reservoirs located along the St. Vrain River just north of Firestone. The reservoirs consist of a clay lined single cell reservoir and a slurry wall lined reservoir consisting of three cells. The clay lined reservoir is considered approximately 80% complete in regards to the amount of infrastructure that is already in place to make it a functioning water storage facility. There is a nearby return flow ditch, sub-drains, a wet well and perimeter rip rapping already in place. The slurry wall lined reservoir is considered to be 50% complete and has a delivery and return flow ditch, inlet structure and sub-drains in place. The slurry wall lined reservoir is only partially mined and is not planned to be competed for another 5 to 10 years based on Weld County's mining schedule.

Water storage reservoirs generally sell as reclaimed gravel pits that have been lined and approved by the state. There have only been a few sales of finished water storage facilities and they are several years old. Given the fact that the subject water storage reservoirs are partially finished the amount of infrastructure in place and remaining cost left to finish the facility will be considered when being compared to the sales selected for direct comparison. Actual costs to complete the facilities are not known so a percentage of completion has been estimated based on conversation with a Weld County Public Works official.

## Purpose, Intended Use and Intended Users of the Appraisal

The purpose of this appraisal is to estimate the market value of the subject water storage and associated land as of the date of value. Market value is defined on the following page.

The property rights appraised are the water storage rights and surface rights of surrounding lands, subject to easements and encumbrances of record.

Weld County Public Works is the client and intended user of this report. Associated county boards and departments are also intended users. The intended use is for the potential future sale of the subject assets.

## Scope of the Appraisal

The scope of this value estimate includes:

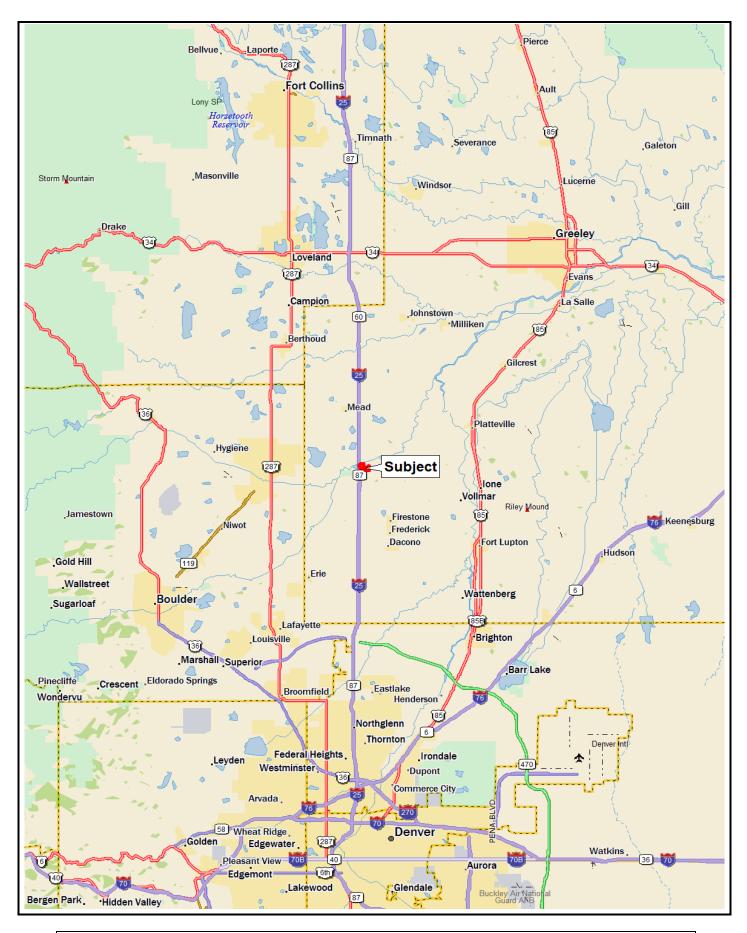
- Inspecting the ownership that is the subject of the valuation project.
- Analyzing the neighborhood through general market analysis as well as highest and best use, including studying the availability of properties of similar size and type currently on the market.
- Gathering, researching and confirming comparable sales. Sources of data include the Division of Reclamation, Mining and Safety, county assessor's offices, county clerk's records, real estate agents and appraisers and sales research services.
- Comparing and adjusting sales to provide an estimate of the value of the subject water storage.
- Conducting an appraisal.
- Preparing a narrative report.

## **Definition of Market Value**

Market value means the most probable price a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- 1. Buyer and seller are typically motivated;
- 2. Both parties are well informed or well advised and acting in what they consider their own best interest;
- 3. A reasonable time is allowed for exposure in the open market;
- 4. Payment is made in terms of cash and U.S. dollars or in terms of financial arrangements comparable thereto; and
- 5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

{OCC Final Rule, 12CFR Part 34 Sub-part C, Section 34.42(f), effective August 24, 1990}



Area Map

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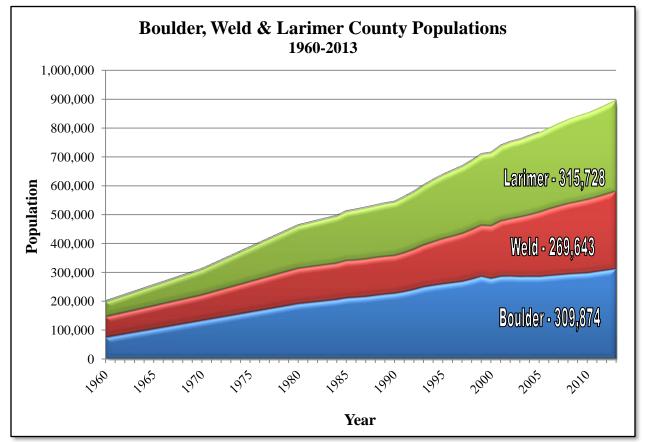
1533 Hokestra Pit

## **Area Description**

Most Colorado residents live along the Front Range at the base of the Rocky Mountains. The state experienced a population boom in the 1990s, with the number of residents increasing by 32% between 1990 and 2000, from about 3.3 million to 4.3 million. Colorado's population grew by about 21%, from 4.3 million to nearly 5.3 million, between 2000 and 2013. (*Source: Colorado State Demographer*)

An estimated 2.7 million people live in the Denver metropolitan area (defined by the U.S. Census as extending across 10 counties). The City of Denver, Colorado's capital city, has 648,937 residents, a 17% increase above the 2000 population of 556,738. (*Sources: Colorado State Demographer & U.S. Census*)

North of Denver lies the area often referred to as the Northern Front Range Corridor, made up of Boulder, Weld and Larimer Counties. This area had a combined 2013 population of 895,245, up about 26% from 712,419 in 2000. (*Source: Colorado State Demographer*)



Sources: Colorado State Demographer & U.S. Census

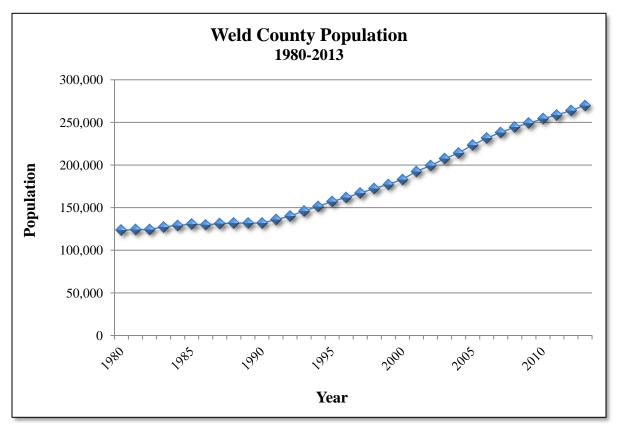
The Northern Front Range Corridor's largest cities are Fort Collins, Boulder, Greeley, Longmont and Loveland. The area has experienced a great deal of growth in recent years, especially because it is attractive to high-technology corporations, close to educational facilities, boasts a well-educated and skilled labor force and enjoys the aesthetics of the Rocky Mountains.

#### Weld County Overview

**Population and Growth:** During the past two decades, Weld County has grown rapidly and has been repeatedly ranked as one of the fastest growing areas in the nation. The population grew by about 39% between 1990 and 2000, from 131,821 to 183,076, and another 39% from 2000 to 2010 (254,230 residents). The county now has 269,643 residents. (*Source: Colorado State Demographer*) The population has grown not only in the larger cities but in small towns, many of which have experienced dramatic increases in the number of residents in the past 15 years.

Greeley, with a population of 96,306, is the county seat and trade center for Weld County. Many of the county's major employers operate in Greeley, including JBS (formerly Swift & Company), North Colorado Medical Center, Greeley's School District 6, State Farm Insurance and the University of Northern Colorado.

The adjoining City of Evans has 19,508 residents. Major employers there include the Greeley/Evans School District, State Farm Insurance, Andarko Petroleum and the Afni call center. (*Source: 2015 Book of Lists produced by BizWest and Upstate Colorado Economic Development*)

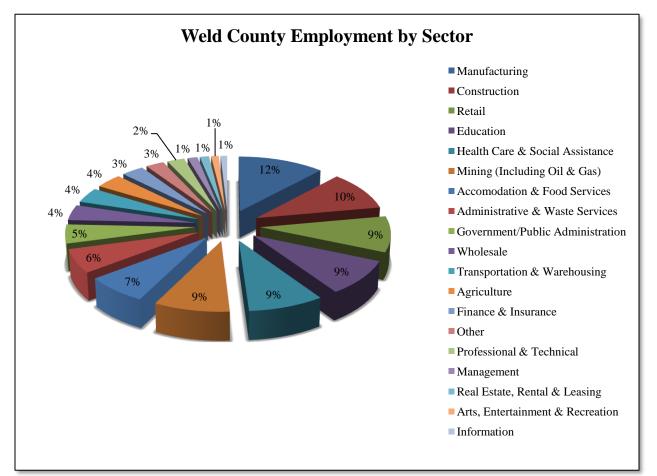


Source: Colorado State Demographer

*Topography:* Weld County elevations range from 4,400 to 6,000 feet. Topography is characterized by rolling plains with a gentle slope from west to east. Low hills cluster near the western border.

*Economy:* Agriculture and agribusinesses have historically driven Greeley's economy. However, diversification has occurred at a steady pace for the past four decades. Other sectors of the economy include oil and natural gas production, light and heavy manufacturing, retail and construction. The University of Northern Colorado and Aims Community College fuel research and development in science and technology, helping to attract clean, light manufacturing industries to the area to augment the economic base. Local manufacturers include Vestas (wind turbine blades), Carestream Health (medical and dental imaging products) and Advanced Forming Technologies (metal injection parts).

The Greeley area ranked 14<sup>th</sup> nationally in the Milken Institute's Best Performing Cities Index for 2014. The index ranks metropolitan areas based on a number of economic indicators, including job creation. In addition, Weld County is surrounded by several other Metro areas that placed in the top 20, including Denver, Boulder, Fort Collins-Loveland and Cheyenne, Wyoming. *(Source: Milken Institute's "Best Cities" Website)* 



Source: Quarterly Census of Employment and Wages, Colorado Department of Labor and Employment

The Wattenberg oil and gas field, stretching from south of Greeley to just north of Denver, covers most of southwest Weld County and ranks as one of the largest natural gas fields in the United States (*Source: Colorado Geological Survey*). With recent surges in production, Weld County now has more than 19,000 active oil and gas wells, more than any other county in Colorado. (*Source: Colorado Division of Property Taxation*) About 8,400 people work in oil/gas extraction, other mining or mining support activities (*Source: 2014 Census of Employment and Wages, Colorado Department of Labor and Employment*). Numerous petroleum-related businesses operate along Colorado Highway 85 from Greeley to Brighton. Industrial development in Fort Lupton and Platteville is predominately oil and gas-related, while Brighton, LaSalle, Evans and Greeley all have a substantial number of oil and gas businesses.

1533 Hokestra Pit

JBS (formerly Swift & Company), a major meat producer, is headquartered in Greeley, and State Farm Insurance Company serves policyholders in three states from its Greeley operations center. Other major employers include county and city governments and local school districts. North Colorado Medical Center in Greeley, a major regional hospital, and its parent company, Banner Health, employ 2,885 people locally. (Sources: 2015 Book of Lists by BizWest & Upstate Colorado Economic Development)

Leprino, the world's largest producer of mozzarella cheese, recently opened a large cheese plant in Greeley that has entered Phase 2 of its production schedule. The plant will employ more than 500 workers once it is fully operational. The plant now has about 350 employees and processes as much as 4.8 million pounds of milk daily. *(Sources: Greeley Tribune & Denver Business Journal)* 

Company	Description	Jobs	Location	
JBS (formerly Swift & Company)	Fresh and value-added beef processing	4,654	Greeley	
Banner Health/North Colorado Medical Center	Health care	2,885	Greeley	
Greeley School District 6	Public education	2,600	Greeley/Evans	
State Farm Insurance	Zone operations center	1,790	Greeley/ Evans	
	*		Evails	
University of Northern Colorado	Public university	1,489	Greeley	
Weld County	Government	1,400	Weld	
Halliburton Energy Services	Oil & gas development services	1,030	Fort Lupton	
City of Greeley	Government	812	Greeley	
Great Western Development	Land & build-to-suit development	800	Windsor	
Select Energy Services	Oil & gas development services	752	Greeley	
TeleTech	Financial services support center	700	Greeley	
Noble Energy	Oil & gas district field office	600	Greeley	
Good Samaritan Society	Senior housing, services & care	600	Greeley	
Anadarko Petroleum	Oil & gas district field office	590	Evans/ Platteville	
Vestas Blades	Wind-turbine blade manufacturer	510	Windsor	
A&W Water Services	Oil & gas development services	500	Fort Lupton	
Aims Community College	Two-year college	500	Greeley	
Afni, Inc.	Telecom services & support	500	Evans	
Leed Fabrication	Oil & gas development services	420	Greeley/ Brighton	
Carestream Health, Inc.	Medical imaging products	418	Windsor	
Baker Hughes Oilfield Operations	Oil & gas development services	415	Weld	
McLane Western	Grocery warehouse & distribution	415	Weld	

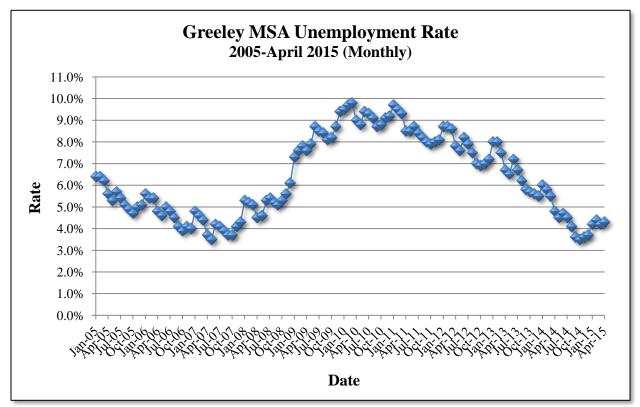
## Weld County Major Employers

Sources: 2015 Book of Lists (BizWest) & Upstate Colorado Economic Development

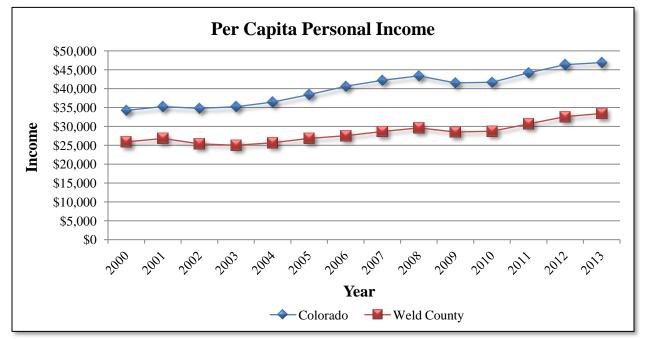
1533 Hokestra Pit

The Greeley area's unemployment rates have dropped dramatically since the recession. Oil and gas exploration and mining helped the local economy to recover quickly. In April 2015, the unemployment rate was at 4.3 percent.

The area's per-capita personal income (\$33,393 in 2013) continues to lag behind per-capita income levels for the state as a whole.



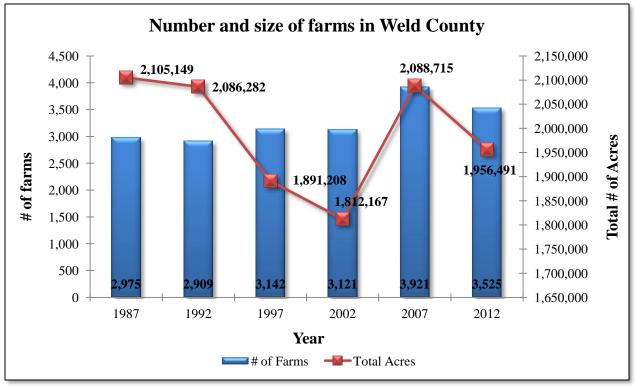
Source: Colorado Department of Labor and Employment



Source: Bureau of Economic Analysis, U.S. Department of Commerce 1533 Hokestra Pit

McCarty Land & Water Valuation, Inc.

*Agriculture:* Weld County continues to be an important agricultural county, despite continuing changes in the agricultural landscape during the past 20 years. Agricultural land continues to be developed at increasing rates, and smaller "hobby farms" have replaced large commercial operations. However, both the number of farms and planted acreages peaked in 2007 because of substantial increases in commodity prices. That trend had reversed itself somewhat by 2012, but the agricultural industry remains robust, as shown in the table below.



Source: USDA 2012 Census of Agriculture

In Weld County, abundant irrigation water, good soils, climate and proximity to markets combine to create the most diversified agricultural area on the High Plains. Weld County farmers grow corn, alfalfa, wheat, barley, sugar beets, potatoes, onions and carrots. Agribusinesses include feedlots, dairies, machinery manufacturers and dealers, seed and chemical dealers, crop elevators, vegetable packers and repair shops.

Weld County's 299,892 acres of irrigated land comprise one of the nation's most significant irrigated areas. Mountain runoff flows into the Cache la Poudre, Big Thompson, Little Thompson, Boulder and St. Vrain Rivers, which carry the water to farms. Local farms also receive water from the Western Slope through the Colorado-Big Thompson Project and other trans-mountain diversion projects (*Sources: USDA 2012 Census of Agriculture & Greeley Chamber of Commerce*).

The Leprino cheese plant, which opened in 2011 in Greeley, has created an increased demand for milk. It now processes 4.8 million pounds of milk daily, which is expected to increase to 8 million daily once the plant is operating at full production. Leprino officials predicted the company would need an additional 50,000 to 70,000 head to meet demand. Several new dairies, most in Weld County, have opened to help meet that demand. (Sources: Northern Colorado Business Report & Greeley Tribune)

*Transportation:* The primary north/south road through Greeley is U.S. Highway 85. To the north of Greeley, it extends through Eaton and Ault, eventually reaching Cheyenne, Wyoming. It extends south from Greeley through Evans, LaSalle, Platteville, Fort Lupton and Brighton before reaching Commerce City on the northeast edge of metropolitan Denver. U.S. Highway 34 is the major east/west road, connecting with Interstate 25 to the west and Interstate 76 to the east. The Cities of Fort Collins, Loveland, Longmont, Boulder and north metropolitan Denver are all within an hour's drive via Highway 34 and Interstate 25. Union Pacific provides rail service, and the Greeley-Weld County Airport serves general aviation and charter pilots. Denver International Airport is a short distance from the southern end of the county.

*Education:* Twelve school districts serve Weld County, with the largest, Weld County School District 6 of Greeley and Evans, enrolling 21,103 students in the 2014-15 school year. Population growth in smaller communities, such as Johnstown, Milliken and Fort Lupton, has recently resulted in construction and expansion of schools there (Sources: Weld County School District 6 & Colorado Association of School Executives).

The University of Northern Colorado and Aims Community College, with its main campus in Greeley, serve about 17,000 students. Nearby colleges and universities include the University of Colorado at Boulder, Colorado State University in Fort Collins, the University of Denver and several others. The area has a plentiful supply of well-educated workers as well as researchers and facilities.

**Recreation and Other Activities:** The two-week Greeley Stampede bills itself as the nation's largest July 4th rodeo, attracting top riders and popular country and western singers. The nearby mountains, lakes and rivers provide additional recreational opportunities. Numerous parks, golf courses and houses of worship serve Weld County residents.

*Climate:* The area climate is characterized by warm summer days, cool evenings and low humidity. The generally favorable climate appeals to many residents and is advantageous for future population growth. It has historically been a favorable climate for many agricultural activities.

Winters are mostly mild. Average annual precipitation totals 14.20 inches in Greeley, including snowfall of 39.7 inches. Average low to high temperatures range from 36 degrees to 66 degrees (*Sources: Western Regional Climate Center*).

#### Southwest Weld County Growth

For about the last 20 years, increasing land prices in Boulder, Longmont, Lafayette and north metro Denver have caused residential development to spill over into a number of smaller Weld County towns. Many of these towns, which historically had cheaper land, saw little development for many years prior and suddenly had to cope with multiple annexation requests and to provide infrastructure such as water and sewer systems.

When development came to a near halt with the 2008 recession, a rapid increase in mineral values saved a number of developers from bankruptcy who were fortunate enough to own mineral rights. Technological changes in oil and gas drilling, specifically horizontal drilling and fracking, led to a surge in oil and gas development in southwest Weld County, which enabled some developers to emerge from the economic downturn in a reasonable financial condition. The development market has re-emerged in the past few years and begun to return to pre-2008 characteristics.

Town	1990 Population	2000 Population	2013 Population	2000-2013 Population	2000-2013 % Increase
Dacono	2,228	3,066	4,411	1,345	44%
Erie	1,244*	2,182*	11,081*	8,899	408%
Firestone	1,358	2,248	11,138	8,890	395%
Frederick	988	2,830	10,133	7,303	258%
Hudson	918	1,591	2,577	986	62%
Johnstown	1,579*	4,196*	11,387*	6,928	171%
Mead	456	1,997	3,771	1,774	89%
Milliken	1,605	3,040	5,879	2,839	93%
Platteville	1,515	2,381	2,582	201	8%

Sources: Colorado State Demography Office & U.S. Census

\*Portions of Erie and Johnstown are located in neighboring counties. The table uses numbers of residents in Weld County.

Del Camino (I-25 RUA), the Tri-Towns and Erie: Nearby areas that have seen significant development in the past decade include the Del Camino area (near the Interstate 25/Highway 119 interchange), the Tri-Towns (Dacono, Firestone and Frederick) and Erie.

These communities located east and southeast of Longmont near I-25 have undergone rapid urbanization. Growth initially was centered on Del Camino – located within Weld County's I-25 Regional Urbanization Area – because of limited utilities in other areas. Development included fast food franchises, motels and convenience stores, with a few other businesses located on both sides of the I-25 exchange. Weld County's commitment to provide up-zoning in the RUA played a major role in spurring development.

Despite the challenge of providing adequate utilities, Erie and the Tri-Towns pursued aggressive annexation policies, especially for land along I-25. The Tri-Towns also annexed large blocks of land in a fairly wide area west of I-25. All four towns have added thousands of acres in the past 15 years, with the bulk of annexations for residential developments, although many have also been for commercial/industrial developments.

With the towns competing for land and major builders and developers showing interest (such as U.S. Homes and Ryland Homes) land prices rose precipitously, nearly tripling from 2000 to 2005. Values dropped as a result of the 2008 recession but are increasing again as the market recovers.

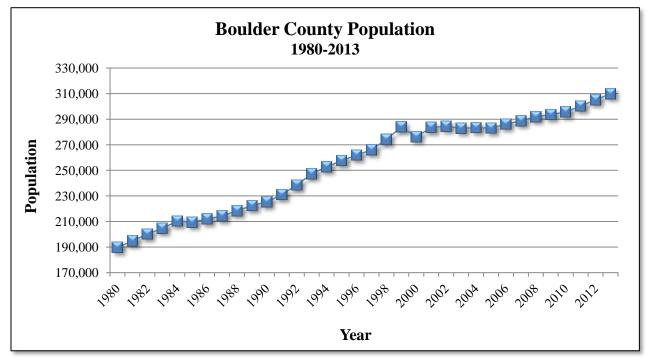
Significant developments planned or now in construction in the area include: Brookfield Residential's Barefoot Lakes, a recreation-oriented neighborhood near the St. Vrain River; the Waterfront at Foster Lake, a 1,700 lot neighborhood near Mead High School (which opened in 2009); and the Colliers Hill development in Erie (formerly known as Bridgewater and Daybreak), with plans for 2,880 homes and as many as 10,000 residents.

The Tri-Towns have historically relied solely on Northern Colorado Water Conservancy District water for development, and escalating NCWCD prices have recently begun to impact potential development lands without water that has been secured. As existing developments with water are completed, this issue threatens to slow future development in the Tri-Towns.

#### Longmont and Boulder County

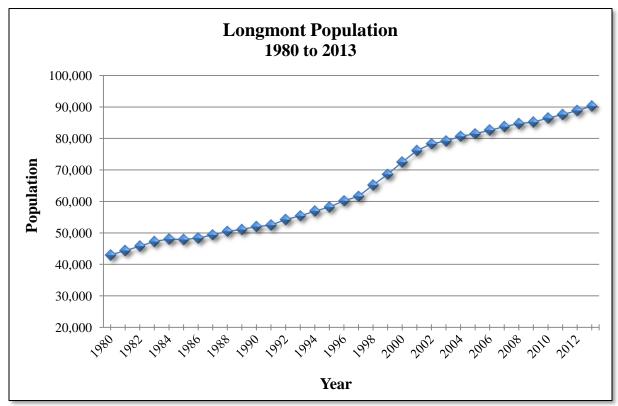
Boulder County is home to 309,874 residents, 102,760 of whom live in the City of Boulder, the county seat and largest city. (*Source: Colorado State Demography Office*) Longmont is the second largest city, with a total population of 90,227. Other large towns in Boulder County include Lafayette and Louisville.

The county covers 726 square miles on the eastern slope of the Rocky Mountains. Elevations in the county vary from about 5,000 feet on the plains to peaks of 14,000-plus feet on the Continental Divide.



Sources: Colorado State Demography Office & U.S. Census Note: Population decrease in 2000 was due to City of Broomfield forming its own county.

The City of Longmont has grown steadily and rapidly during the past four decades, with the population more than doubling from 42,942 residents in 1980. Located about 15 miles northeast of Boulder, Longmont appeals to people who want to live close to Boulder and the foothills. In recent years, Boulder's growth-restriction policies have pushed additional growth into the Longmont area. Home prices in Longmont are much lower than in Boulder, and the city has more room for residential development. (Sources: City of Longmont & BizWest's 2014 Economic Profile and Market Facts)



Sources: Colorado State Demography Office & U.S. Census

In the mid-90s, much of Longmont's growth occurred in the city's southwest quadrant along Airport Road. During the 2000s, growth shifted mainly to the northeast quadrant, although considerable retail development continued to take place near Hover Road and the Diagonal Highway (Colorado Highway 119) in the southwest quadrant. Much of the development in the northeast quadrant was residential, although some commercial development did take place.

Home construction slowed substantially between 2008 and 2011 with the economic downturn. As development projects have begun again, city officials are working on a number of initiatives to redevelop and renew parts of Longmont. These include renovation of the Twin Peaks Mall (scheduled to reopen in late 2015 as Village at the Peaks), the central Midtown/Main Street area (including redevelopment of the old Butterball plant site) and southeast Longmont between the old sugar factory and flour mill. (*Sources: City of Longmont & Longmont Times-Call*)

Longmont's 0.2 cent open-space tax has allowed the city to purchase considerable land for parks, trails and greenbelts.

*Economy & Employment:* Boulder County is well known for attracting high-tech firms, including biotech, aerospace, data storage and software companies. High-tech companies include IBM Corp., Ball Aerospace & Technologies, Lockheed Martin Corp. and Google Inc.

Longmont boasts a business climate more affordable than that offered in Boulder, which is enhanced by the city's incentives for new and expanding companies. Longmont allows companies to recover 30 percent of building permit fees and 50 percent of personal property taxes, and offers a number of other incentives on research, manufacturing and development equipment. (Sources: 2014 Advance Longmont Market Assessment and BizWest's 2014 Economic Profile and Market Facts)

Along with being one of the nation's key hubs for computer and data storage, Longmont's key industries include renewable energy, aerospace, biotech, software, information technology and semiconductor design. (Sources: Longmont Area Economic Council and 2014 Advance Longmont Market Assessment)

Company	Description	Employees
St. Vrain Valley Schools	School district	3,960
Seagate Technology	Computer disc drives	1,381
Longmont United Hospital	Regional hospital	1,276
DigitalGlobe	Satellite imagery	918
Intrado	911 database and mapping services	914
City of Longmont	City government	818
Federal Aviation Administration	Aviation control center	543
Circle Graphics	Digital billboards	500
McLane Western	Grocery distribution center	435
Crocs	Crocs shoes	370
Amgen	Pharmaceuticals	300
Longmont Clinic	Medical services	279
Micron Technology	Electronic microdisplays & enterprise drives	252
GE Oil & Gas	Power generation & energy technology	250
Dot Hill Systems	Fiber channel computer devices	247
ParMerica	Regional billing office	214
Xilinx	Programmable logic	200
Measured Progress	Standardized test grading firm	200

#### **Longmont Area Top Employers**

Source: Longmont Area Economic Council

Boulder County's largest employment sectors are professional and technical, with 25,603 employees in 2014, and education, with 20,562 workers. Other major employment sectors include health care and social assistance, manufacturing and retail.

Longmont has nearly recovered the number of jobs it lost during the 2008 recession. The city lost about 3,000 jobs between 2008 and 2010 but has created more than 2,500 jobs since then. (Source: 2014 Advance Longmont Market Assessment)

In addition, the unemployment rate has recently dropped in the Boulder/Longmont metropolitan area to levels not seen since before the recession. The unemployment rate was 3.5 percent in April 2015.

## **Real Estate Market Conditions and Trends**

### Weld County

*Land Ownership Patterns:* Most of the land in Weld County is privately owned, with scattered tracts under state ownership. The federal government owns some land in the north-central portion of the county.

*County Land Use Policies:* The minimum lot size in Weld County is 80 acres, and the most common form of land division is the use of the Recorded Exemption process. Through this process, each parcel is eligible for division into two parcels. A Recorded Exemption is an administrative process that can be approved through the Weld County Planning and Zoning Department without County Commissioner approval. There is a five-year waiting period between Recorded Exemptions.

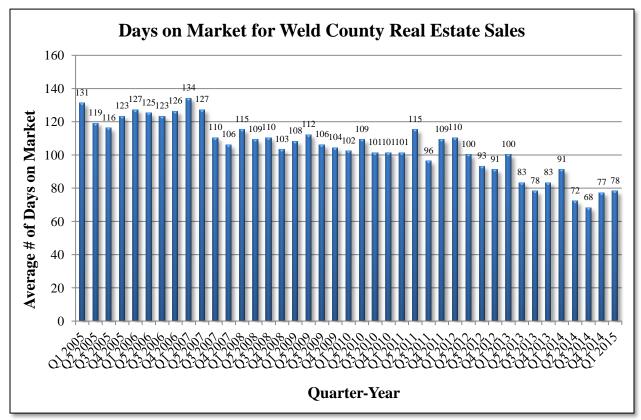
Further land division is possible through the Weld County subdivision process. The formal subdivision process is much more involved than the Recorded Exemption process and requires County Commissioner approval.

Weld County has cluster development options that allow a certain number of units to be associated with different acreage levels. The most common option is a nine-lot subdivision on 160 acres.

Weld County also has approved a number of smaller developments with higher densities and less open space than the normal cluster development.

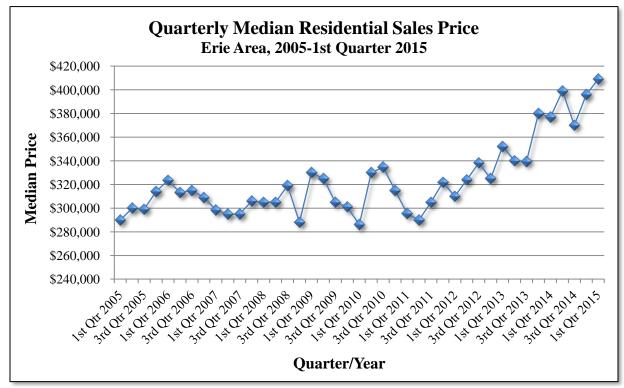
#### Trends in the Real Estate Market:

*Marketing Time:* The local real-estate market has shown definite signs of recovery after the 2008 crash, with the average days on the market falling below 100 in several recent quarters. The market was for some time saturated with foreclosures and short sales. Tight credit also was an issue, particularly for development projects.

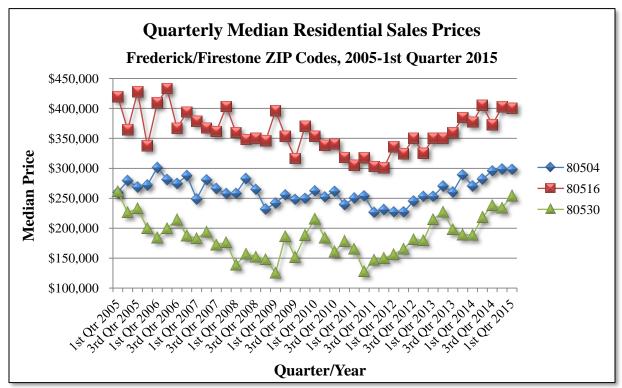


Source: Information and Real Estate Services (IRES)

Charts in this section show single-family home price trends in nearby cities and towns for the past decade, including Erie and the Tri-Towns. The charts generally show prices dropping between 2008 and 2010 before starting to recover, although the Erie and Tri-Towns charts display fluctuations because of a smaller number of sales and influence from specific subdivisions.



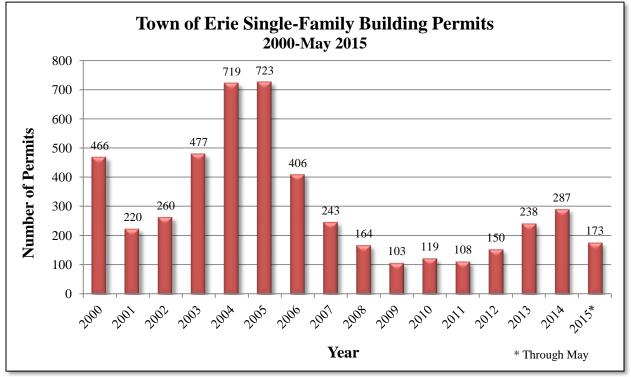
Source: Information and Real Estate Services (IRES)



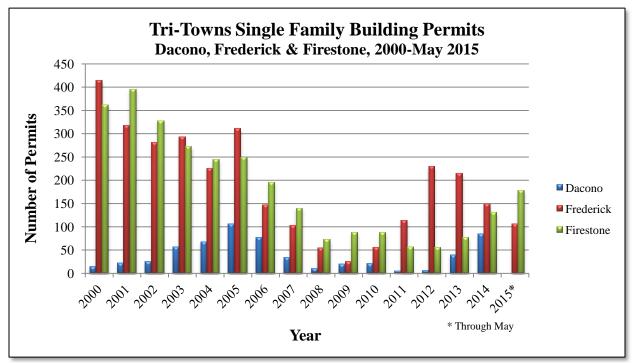
Source: Information and Real Estate Services (IRES) 1533 Hokestra Pit

#### New Construction

The following charts illustrate building permit trends in Erie and the Tri-Towns. They show when development peaked in each town in the years before the recession and how much annual permit numbers have recovered since.

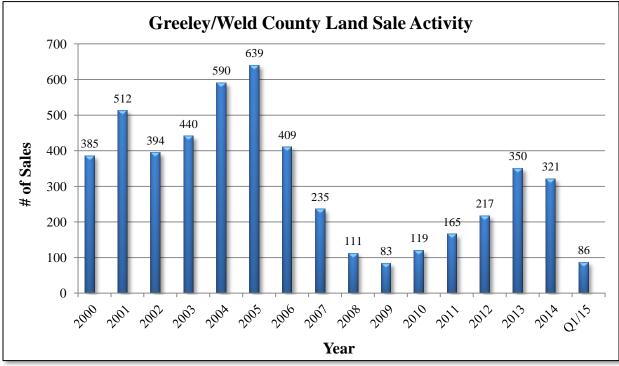


Source: U.S. Census Building Permit Estimates



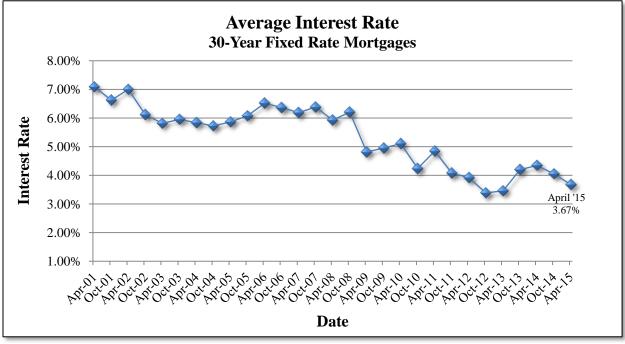
Source: U.S. Census Building Permit Estimates

*Volume of Land Sales:* The number of land sales increased significantly in 2004 and 2005 above prior years but dropped in 2006 to pre-2004 levels and dropped further in 2007 through 2009. The number of sales began to rise again after 2009. Please note that land sales reflected in the following chart include both urban and rural vacant land sales.



Source: Information and Real Estate Services (IRES)

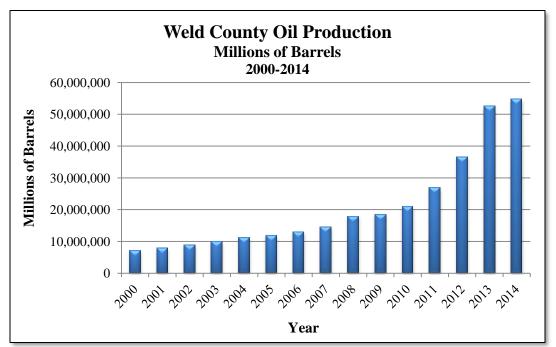
*Interest Rates:* Interest rates remain favorable for home buyers. In fact, interest rates have been at lower levels during the real estate slowdown of the past four years. The interest rate for new home loans averaged 3.67% in April 2015 (*Source: Freddie Mac*).



Source: Freddie Mac 1533 Hokestra Pit

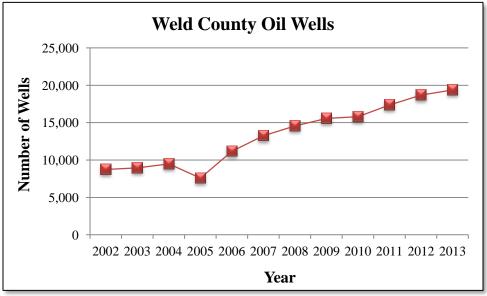
*Oil and Gas Production:* Production of oil and gas in Weld County has increased significantly in recent years due to technological changes in the oil and gas industry. Specifically, horizontal drilling and fracking have led to considerable leasing activity and increased production. Bonus payments on leases have risen from a few hundred to a few thousand dollars per acre. Royalty payments have also pumped a considerable amount of money into the Weld County economy.

In 2014, oil production statewide reached almost 66 million barrels, according to the Colorado Oil and Gas Conservation Commission. Weld County wells produced 83 percent of that total – about 55 million barrels of oil. Most of the giant Wattenberg Field in the Denver Basin is located in Weld County, and most of the growth in oil production came from that formation.



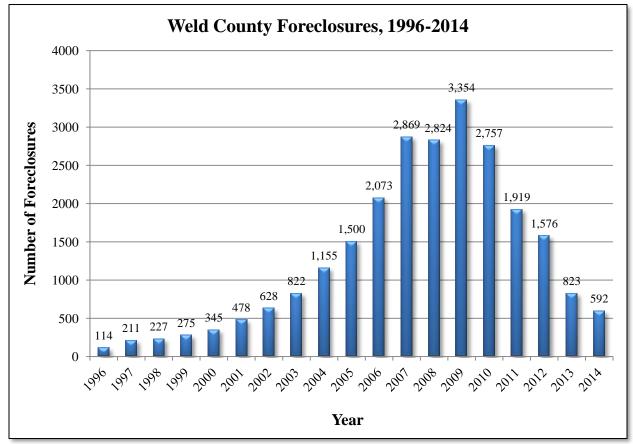
Source: Colorado Oil and Gas Conservation Commission

The chart below shows how the number of oil wells in Weld County has increased in recent years, although lower oil prices in the past two years have reduced well starts dramatically.



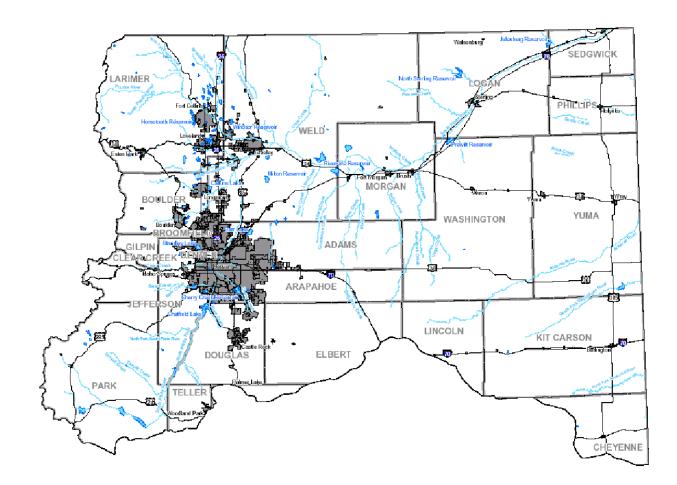
Source: Colorado Division of Property Taxation Note: 2014 numbers not yet available

*Foreclosures:* Weld County's annual number of foreclosures peaked in 2009 with a record number of 3,354 filings. Since then, the number of foreclosures has dropped sharply, with a total of 1,576 in 2012, 823 in 2013 and 592 in 2014.



Source: Weld County Public Trustee

*Summary of Real Estate Market Conditions:* The real estate market in Weld County, like the rest of the country, experienced a very difficult period from 2007 through 2010. The foreclosure market underscores how widespread these conditions became. Lower interest rates and better availability of credit had begun to turn the national real estate economy around in 2012 and 2013. However, Weld County began its resurgence a bit earlier than most areas due to the important economic stimulus provided by the oil and gas industry. As a result, the improving conditions in the real estate economy are bit ahead of other places in the state or nation, which did not have the benefit of the economic impetus from oil and gas.



## **South Platte River Basin**

## **Colorado Water Law/Water Rights Administration**

#### **Colorado Water Law**

Like other western states, Colorado utilizes the prior appropriation system for allocation of surface water, and Colorado also applies this doctrine to tributary groundwater. This system is based on "first in time, first in right." Under Colorado water law, senior water rights are entitled to "call" for their decreed quantity of water and to prevent junior water rights from diverting water needed to fully satisfy the senior water right.

Colorado classifies groundwater as *tributary*, *nontributary* or *designated groundwater*. Generally speaking, tributary groundwater is hydrologically connected to surface streams and falls under the prior appropriation system. The withdrawal of tributary groundwater depletes surface streams and could deprive senior surface water rights of water they are entitled to receive. The bulk of the tributary groundwater used for irrigation in Colorado was appropriated after surface water rights for irrigation, and is therefore "junior" to those rights. As a result, the wells withdrawing tributary groundwater must be replaced by out-of-priority stream depletions in order not to injure senior surface water rights.

Groundwater is classified as *non-tributary* if the withdrawal of it will not, within 100 years, deplete the flow of a natural stream at an annual rate greater than 0.1% of the annual rate of withdrawal. It is allocated based upon land ownership. In the so-called Denver Basin aquifer, there is an additional category of groundwater known as "*not non-tributary*" groundwater. This classification is limited to groundwater in the Denver Basin aquifers and applies to the groundwater in those aquifers that does not meet the definition for nontributary groundwater. This groundwater is also allocated based upon land ownership.

Designated groundwater is groundwater within an aquifer in a so-called designated groundwater basin. It is allocated by a modified doctrine of prior appropriation. In Colorado, the designated groundwater basins are primarily in the eastern part of the state.

#### Water Rights Administration

The Colorado State Engineer is responsible for administering water rights in the State of Colorado. The Division of Water Resources has seven regional offices corresponding to seven major river basins. Each regional office is headed by a division engineer. Water commissioners work under each division engineer, and it is the commissioners who manage the distribution of water under the priority system. The State Engineer and Division Engineers are responsible for enforcing water rights decrees and Colorado's water laws.

Colorado began adjudication of water rights under the Adjudications Acts of 1879 and 1881. Each successive adjudication act has added to and refined the adjudication process. In determining the relative priority of water rights between various adjudications, Colorado applies what is known as the "postponement doctrine." Under that doctrine, a water right that was adjudicated in a later adjudication proceeding in the same water district cannot get a priority date senior to the most junior water rights adjudicated in the previous adjudication proceeding in that water district. The purpose of this doctrine is to encourage the early adjudications, and to protect the investments made by water right owners who have adjudicated their water rights. The relative priority of water rights on the same stream systems is currently determined by "administration number" assigned to the water rights by the State Engineer. This number accounts for the relative priority of the water rights, considering their differing adjudication dates.

The 1969 Water Right Determination and Administration Act created a system of seven water divisions based on drainage basins. The 1969 Act also established Colorado's system of water courts, established the position of water judge for each water division, and created the position of the division engineer for each water division. The seven water divisions consist of : Division No. 1 – the South Platte and Republican River Basins; Division No. 2 – The Arkansas River and its tributaries; Division No. 3 – the Rio Grande and its tributaries; Division No. 4 – the Gunnison River and its tributaries, the San Miguel and portions of the Dolores River; Division No. 5 – the Colorado River main stem and its tributaries exclusive of the Gunnison River; Division No. 6 – the White, Yampa, and North Platte Rivers and their tributaries; and Division No. 7 – the San Juan, Animas, and Dolores Rivers and their tributaries division was historically divided into water districts based on sub-basins. While the water districts are no longer legislatively established, they remain important subdivisions for administrative purposes.

## South Platte Basin Water Market

The South Platte Basin water market has many facets due to a diverse supply of water and the diverse needs of water users. A good way to look at South Platte Basin water users is to consider the southern Denver Metro water users relying on nonrenewable Denver Basin Aquifers water in one category. The Denver Water Board and other northern Denver Metro water providers fit into another category, while northern Front Range users are in yet another category.

Douglas County and southern Metro Denver water providers currently rely on nonrenewable Denver Basin groundwater, and they represent an important part of the South Platte market. Not only do these water providers need to acquire water for future growth, they also are trying to transition from dwindling groundwater supplies to renewable surface water supplies. Parker's development of Reuter Hess Reservoir has been a major recent project in the effort of local water providers to develop alternatives to Denver Basin water.

In the past several years, southern Denver Metro water providers have looked to South Platte Basin water rights, most notably agricultural rights along the main stem of the South Platte between Brighton to Sterling, to meet their needs. In fact, serious discussions are ongoing about developing pipelines to bring water from Morgan County to southern Metro Denver.

Not only is the southern Denver Metro area competing for agricultural water in the South Platte, the Denver Water Board and other northern Denver Metro entities (who have historically relied primarily on surface water) are also competing for these agricultural water rights. Northern Front Range water providers have long had the luxury of using Northern Colorado Water Conservancy District water. However, as that becomes less available in upcoming years, they too will be putting more pressure on agricultural water rights.

While a substantial amount of agricultural water is presently available in the South Platte Basin, the rate of conversion has been steadily increasing. As prices climb for these water rights, the Arkansas Basin may become a more economically attractive alternative, particularly for some of the more southern water providers. Therefore, while the South Platte market currently functions relatively separately from the Arkansas Basin water market, there may be more connections between the markets in the future, as South Platte agricultural water rights become scarcer and more expensive.

#### **Northern Front Range**

Northern Front Range municipalities have historically had a decided advantage in the availability of water rights. The growth of cities such as Fort Collins, Loveland, Greeley, Longmont and Boulder, along with smaller communities, has occurred on formerly irrigated lands. Water dedication policies have allowed the water used on this land to be available to these cities as annexations have occurred. In addition, all of these communities are in the Northern Colorado Water Conservancy District. NCWCD water (a.k.a. Colorado/Big Thompson Project Units or NCWCD Units) is available for use by municipal providers. As a result, the combination of native water dedications and NCWCD water acquisitions has led to a relative abundance of water in this part of the northern Front Range and has, in general, kept prices down.

Unlike many of the Denver Metro area water providers that directly purchase water and then charge developers, most northern Front Range water providers require the developer to acquire water to meet water dedication requirements. These policies began to put significant upward pressure on water values between 1999 and 2007. NCWCD water saw a major increase in value from \$2,500 per NCWCD Unit in 1998 to more than \$14,000 per NCWCD Unit by 2000. Prices then dropped slightly, stabilizing between \$9,000 and \$12,000 per unit between 2001 and 2007. Prices eventually dropped below \$7,000 per unit in 2010 before starting to increase. That increase went from \$8,000 per unit at mid-year 2011 to \$11,000 per unit at the end of 2012. After the end of 2012 prices sharply increase to \$18,000 to \$19,000 per unit by September 2013, where they remained steady through February of 2014. Prices once again spiked in March of 2013 up to \$23,000 and have since been mostly ranging from \$22,000 to \$28,000 per unit. Almost all sales in 2015 have been at or above \$25,000 per unit.

## South Platte Basin Water Market - Continued

Other municipally influenced water rights have also been trending upwards in value but not as the same pace as NCWCD units. There has historically always been a trend of these water rights trending in a similar fashion but with a slight lag in time. This is partially due to the fact that water providers have historically based their cashin-lieu values on the NCWCD market. However, the significant increase in NCWCD values has caused some water providers to reassess how they determine their cash-in-lieu values. If cash-in-lieu values are kept well below NCWCD values, they will likely taper value increases in other water rights.

#### Future of the South Platte Basin Water Market

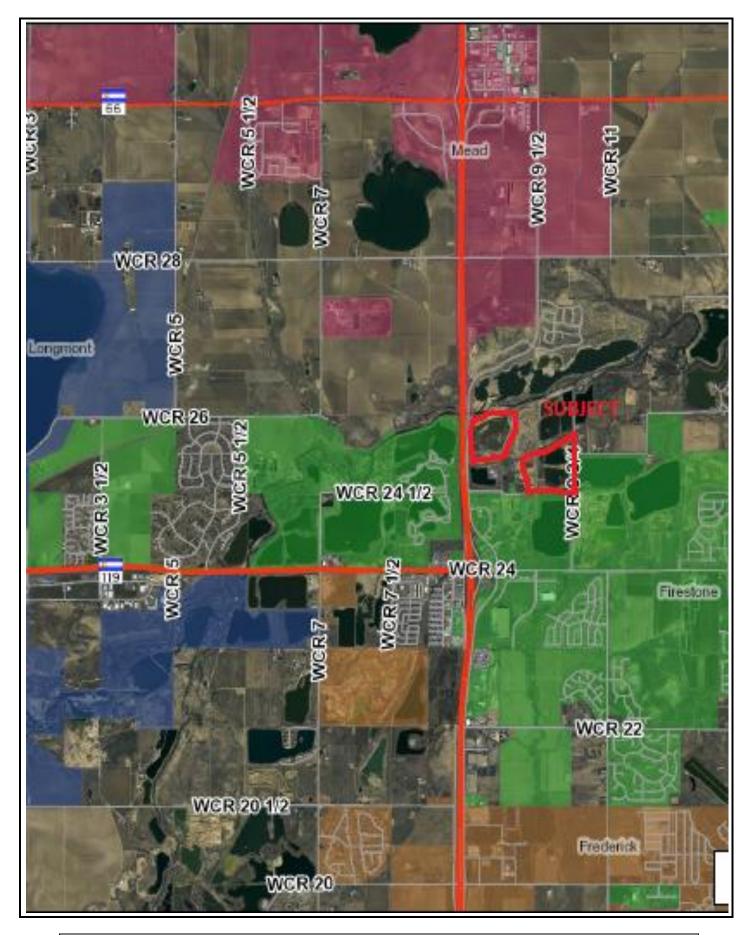
Demand for water continues to be strong in the South Platte Basin. Prices for many water rights dipped starting in 2008 with the downturn in the real estate market but most of risen to new highs or near historic highs in 2013. Continued need to replace Denver Basin Aquifers groundwater and water dedication policies has kept mainstem water values stable. Water dedication policies on the Northern Front Range have led to the decline of several water rights through mid 2011 until prices sharply increased from 2012 to 2013 for units of NCWCD. Several other water rights remained lower through 2012 but have begun to follow suit with substantial increases in 2014.

A substantial amount of agricultural water remains in the South Platte Basin, and the rate of conversion to municipal use has increased in the past decade. This pace of conversion appears poised to continue or even increase, particularly if pipelines are constructed that allow water to be moved upstream from the Greeley to Sterling stretch of the South Platte.

A tremendous quantity of agricultural water is potentially available along the main stem and tributaries of the South Platte. Large systems, such as the Larimer and Weld Canal, New Cache La Poudre Canal and Highland Ditch, have yet to see any changes of use. In addition, numerous eastern Weld, Morgan and Logan County rights, such as Riverside Reservoir, Jackson Reservoir, Empire Reservoir (Fort Morgan) and Morgan Prewitt are prime candidates for municipal use once a delivery system is in place. There are currently Denver Metro influences on water rights near Fort Morgan. Specific ditch systems have been targeted and seen significant increase in value due to these influences. Less accessible systems that remain mainly agriculturally influenced have seen much less change in value in recent years. However, there are future plans for pipelines to convey the water back to the front range, which once in place could have a tremendous impact on water values in the Fort Morgan area and even further downstream.

The volume of water that will be politically acceptable to be transferred will be one factor in future value trends. Alternative small water projects, such as lining of gravel pits, or larger water projects, such as the Northern Integrated Supply Project, may help to slow the pace of agricultural conversions and the resulting upward pressures on water values. However, big water projects are fraught with legal, political and economic hurdles, and the most likely future for the expansion of municipal water supplies in the South Platte Basin will be the conversion of agricultural water rights.

While the momentum of water rights changes will continue to place pressures on many water rights, those pressures are not universal. Main stem water rights downstream from Denver have the greatest pressures for the time being. Water rights on the tributaries, including Boulder Creek, St. Vrain, Big Thompson and Cache la Poudre all have varying degrees of pressure, primarily associated with local water users. However, as the easiest water rights are converted closest to Denver, metropolitan water providers will undoubtedly begin to reach further into the tributaries to find water rights suitable to pursue. The specific water rights which will be under future municipal pressures will depend on a number of factors including total water quantities, seniority, associated storage and location. The timing of new water plays will involve a complex set of economic, engineering and political issues. As of December 2014, the State Water Plan has been approved by the Colorado Water Conservation Board and has a goal of final approval by the end of 2015. Some of the ramifications of this plan include a movement towards Alternative Transfer Methods (ATM's) and more efficient management of water resources.



## **Neighborhood Map**

#### **Neighborhood Description**

The St. Vrain River is the dominant topographic feature in the subject neighborhood as it meanders southwest to northeast through the neighborhood. A considerable amount of land along the river is devoted to gravel mining. A number of properties already have been mined and reclaimed, leaving both lined and unlined lakes.

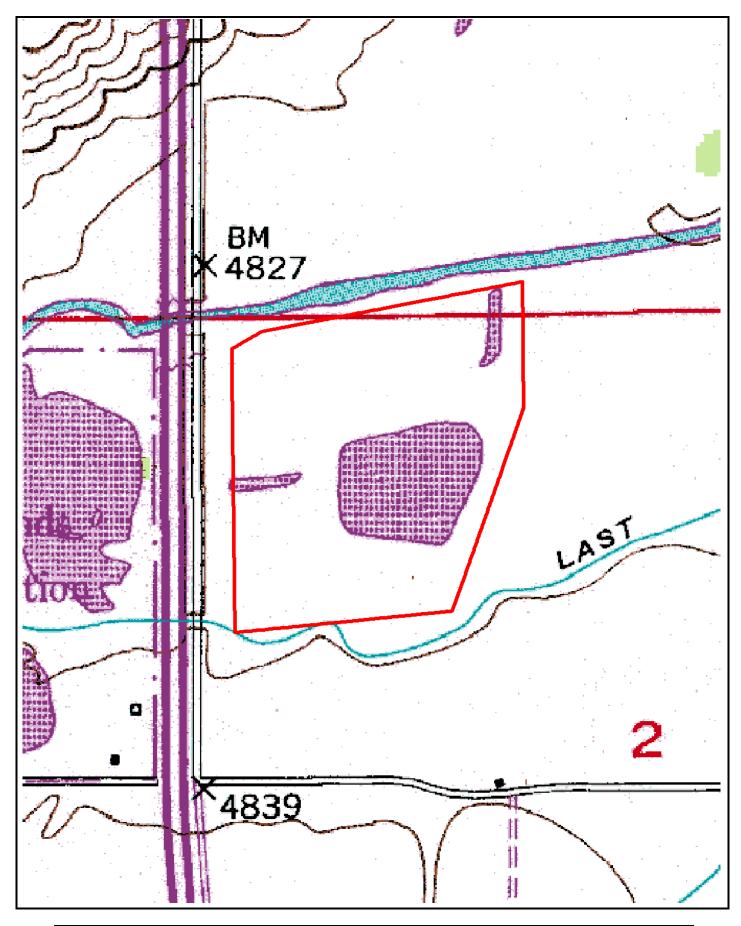
Interstate 25 runs north/south through the neighborhood and is the primary hub for transportation in the Northern Front Range. Major towns and cities in the neighborhood include Longmont to the west, Frederick and Firestone to the south, Mead to the north and Platteville to the east. The Boulder Creek and St. Vrain River confluence is located in the western portion of the neighborhood west of I-25 and south of Highway 119. Boulder Creek also has considerable gravel and water storage development along the river corridor.

Most of the land near the river corridor remains undeveloped, with the exception of scattered residential developments and a few commercial and industrial developments, mostly in the I-25 corridor. Agricultural and rural residential uses are intermixed with the aforementioned gravel, residential and business uses. To the south is the northern boundary of Firestone's residential areas. Firestone is currently in the process of annexing 1,300 acres on the north side of the St. Vrain, which is planned for 3,500 homes.

The neighborhood boundaries are best defined as the St. Vrain and Boulder Creek river corridors located east of the Boulder/Weld County line and west of Weld County Road 15. This area incorporates most of the mined gravel pits that would be considered similar to the subject. A broader definition would be all lands north of Highway 52, south of Highway 56, east of the Boulder/Weld County line and west of Weld County Road 19. This area encompasses the land influenced by Frederick, Firestone and Dacono, also known as the Tri-Cities.

Aside from the municipalities in the neighborhood, there are also multiple large water and sewer districts. Little Thompson Water District serves some of the western and northern portion of the neighborhood, and Central Weld County Water District serves a larger portion of the eastern portion. Left Hand Water District serves the southwest portion of the neighborhood. St. Vrain Sanitation District is the major sewer service provider in the neighborhood, including all of the Tri-Towns.

Since the subject consists of water storage reservoirs, the immediate river corridor is considered the most relevant definition of the neighborhood. A large portion of the river corridor in this area has either been mined and reclaimed already, is in the process of being mined or is planned to be mined in the near future. This leaves a dwindling number of water storage reservoirs that have not already been claimed for future use. Given this, and the fact that the surrounding area has been growing at a high rate in recent years, it is likely demand for water storage vessels will only continue to increase in the coming years.



## Subject Topographic Map – Cell 2

## **Property Description – Cell 2**

## **Property Owner**

Weld County

## **Property History**

The property has been owned by Weld County since the early 1990s when it was purchased from Siegrist Companies, who originally mined the property. The permitting process for gravel mining started in the late 70s with permits issued in 1980. There have been no other known transactions or leases involving the subject in recent years.

## **Legal Description**

A portion of the North Half of Section 2 in Township 2 North, Range 68 West of the 6<sup>th</sup> PM, Weld County, Colorado

## Size

59.71 acres +/- (approximately 35 surface acres)

## Water Storage

453 acre feet +/-

## Lining

Clay lining approved by the state in 2014

## **Depth of Storage Vessel**

The depth ranges from approximately 12 feet in the southwest portion to 25 feet in the northeast portion.

#### **Inlet/Outlet Structures**

There is a return flow ditch from the Last Chance Ditch along the west side of the property that is capable of gravity flowing water into the cell, but there is no inlet structure in place. There is a wet well at the northeast corner of the property. A pump is needed to convey water from the well back to a slough that feeds into the river.

#### **Other Infrastructure in Place**

The storage vessel has been rip-rapped around the perimeter to meet state requirements. There are also a spillway and sub-drain in place

#### **Site Description**

The subject is a water storage reservoir with a clay liner that is located on the south side of the St. Vrain River on the east side of I-25. The reservoir has a surface size of close to 35 acres with approximately 25 acres of surrounding land. The entire north side of the reservoir has been rip-rapped, as well as the top few feet along the rest of the reservoir, to meet state requirements. There is also a sub-drain along part of the north and south sides and the entire west side to mitigate groundwater mounding outside of the reservoir. On the northeast side of the reservoir, there is a spillway and a wet well in place. There is also a slough from the St. Vrain River that extends on to the northeast corner of the property. Water can be pumped from the wet well to the slough to return water to the river.

The largest area of unmined land is in the southeast corner of the property, where oil and gas structures inhibit mining in the area. There is a concrete public bike trail that runs along the east and north side of the reservoir. No access will be allowed until mining is complete. The Last Chance Ditch runs along the south side of the subject and has a concrete return flow ditch that runs along the west side. Water could be gravity fed from the return flow ditch, but there is currently no inlet in place.

## **Property Description – Cell 2 – Continued**

## Location

North of Firestone and east of Longmont, on the east side of I-25 Frontage Road and south of the St. Vrain River

#### Access

Access is good via gravel WCR 9<sup>3</sup>/<sub>4</sub> and WCR 24<sup>1</sup>/<sub>2</sub>. This appraisal assumes a permanent easement along this road would be granted.

### Water Rights

None

## Recreation

Recreation rights are included in the appraisal. Potential recreational uses of the finished water storage include boating, fishing and swimming as well as other passive uses. Waterfowl hunting is another potential use, although the location near I-25 could impact this use. The subject water storage cells are likely too small for water skiing. Water levels for water storage reservoirs often fluctuate, which could also impact recreational uses.

#### **Remaining Gravel Reserves**

The cell has been fully mined, but about a week's worth of materials need to be removed to complete the storage vessel.

### Reclamation

Remaining reclamation includes final grading and seeding. The warranty bond on the subject is outstanding, although this appraisal values the subject as if mining and reclamation are complete and the bond is no longer in place, since that would be the delivered product to a buyer.

#### Augmentation Liability

The water storage is appraised as lined water storage, so no augmentation liability is present.

## Zoning

Industrial Use by Special Review (USR) with a specific allowed use of gravel mining

A-Agricultural by Weld County

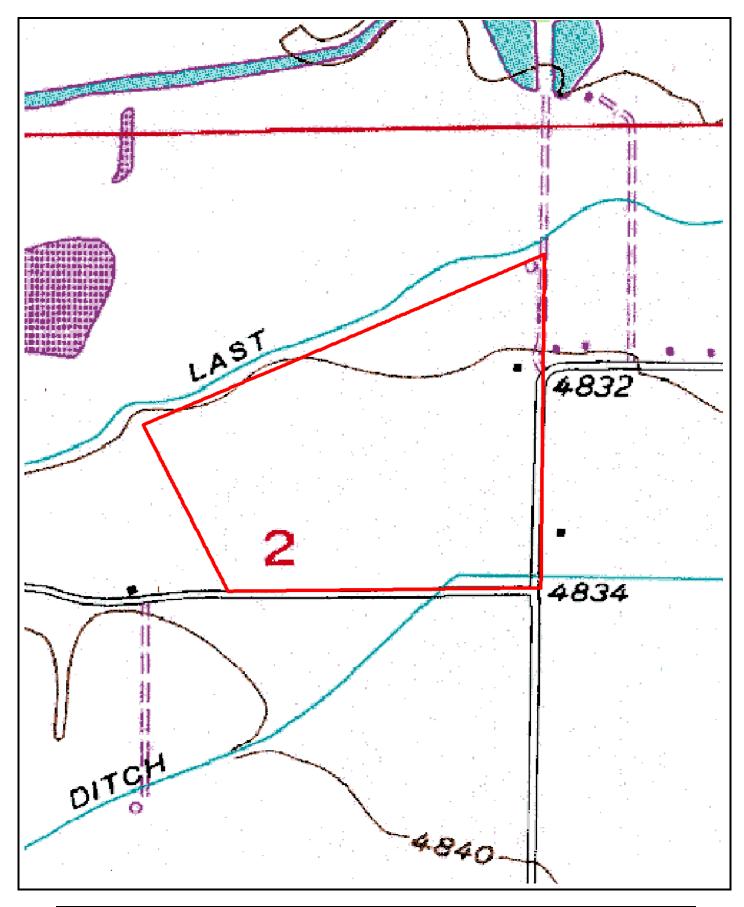
See Exhibit B in the Addenda for permitted uses.

*Zoning/Mining Permit:* The subject is currently being utilized as a gravel mine under USR (Use by Special Review). This is the second amendment to USR-999.

#### **Assessment Information**

	Parcel #	Owner	Acres	Actual Value	Assessed Value	Mill Levy	Taxes
1.	31302400006*	Weld County	128.121	\$977,331	\$283,430	86.356	Exempt

\*Subject is 59.71 acres within the parcel



## Subject Topographic Map - Cells 3, SE-1 and SE-2

## **Property Description – Cells 3, SE-1 and SE-2**

## **Property Owner**

Weld County

## **Property History**

The property has been owned by Weld County since the early 1990s. The permitting process for gravel mining started in the late 70s with permits issued in 1980. Weld County has mined and reclaimed the property to its current state. There have been no other known transactions or leases involving the subject in recent years.

## Legal Description

A portion of the North Half of Section 2 in Township 2 North, Range 68 West of the 6<sup>th</sup> PM, Weld County, Colorado

## Size

69.55 acres +/- (approximately 40 surface acres once fully mined)

## Water Storage

Cell 3: Estimated at 150-200 acre feet +/- (mostly unmined) Cells SE-1 & SE-2: Estimated at 280 acre feet +/- (currently at 254 acre feet)

## Lining

Slurry wall approved by the state in 2014

## **Depth of Storage Vessel**

The estimated depth for all 3 cells range from approximately 15 to 20 feet.

## **Inlet/Outlet Structures**

There is a return flow ditch from the Rural Ditch that runs between Cell 3 and Cell SE-1 and SE-2 that is capable of gravity flowing water into the cells. There is an inlet structure in place from the ditch to Cell SE-2 and an interconnect to Cell SE-1. Cell 3 can be filled indirectly through seepage of water through unlined land. A pump is needed to convey water from the cells back to the ditch that feeds into the river.

## **Other Infrastructure in Place**

Measurement structures and sub-drains are in place on the Rural Ditch return flow ditch.

## **Site Description**

The subject is a water storage reservoir consisting of three cells that are perimeter lined by a single slurry wall. The two east reservoirs, SE-1 and SE-2, are mostly mined out and are currently being used for water storage by CCWCD. Cell 3 is located on the west side of the property and is mostly unmined. The concrete Rural Ditch return flow ditch runs from south to north between Cell 3 and the eastern cells. There is currently an inlet from the ditch to SE-2 and an interconnect with SE-1 that fills the reservoirs. The land surrounding the reservoirs will require final grading and seeding to complete reclamation. There a sub-drain along part of the south side and east side of the return flow ditch to mitigate ground water mounding outside of the reservoirs. There is currently a floating pump in the northwest portion of Cell SE-1 that pumps water back to the return flow ditch that can deliver water to the river. The largest area of unmined land is in the northeast corner of the property, where oil and gas structures inhibit mining in this area.

## Property Description - Cells 3, SE-1 and SE-2 - Continued

## Location

North of Firestone and east of Longmont, on the west side of WCR 93/4 and north of WCR 241/2

#### Access

Access is good via gravel WCR 9<sup>3</sup>/<sub>4</sub> and WCR 24

## Water Rights

None

## Recreation

Recreation rights are included in the appraisal. Potential recreational uses of the finished water storage include boating, fishing and swimming as well as other passive uses. Waterfowl hunting is another potential use, although the location near I-25 could impact this use. The subject water storage cells are likely too small for waterskiing. Water levels for water storage reservoirs often fluctuate, which could also impact recreational uses.

## **Remaining Gravel Reserves**

Cells SE-1 and SE-2 are mostly mined but do require some material be removed prior to reclamation being complete. Cell 3 is mostly unmined and is currently scheduled to be completed in a five- to 10-year timeframe. Remaining gravel reserves are not being valued in this appraisal.

### Reclamation

Mining is not completed, so significant reclamation is still required on Cells 3, SE-1 and SE-2.

## Augmentation Liability

The water storage is appraised as lined water storage, so no augmentation liability is present.

#### Zoning

Industrial Use by Special Review (USR) with a specific allowed use of gravel mining

A-Agricultural by Weld County

See Exhibit B in the Addenda for permitted uses.

*Zoning/Mining Permit:* The subject is currently being utilized as a gravel mine under USR (Use by Special Review). This is the second amendment to USR-999.

#### **Assessment Information**

Parcel #	Owner	Acres	Actual Value	Assessed Value	Mill Levy	Taxes
131302400006*	Weld County	128.121	\$977,331	\$283,430	86.356	Exempt
131302100077*	Weld County	49.212	\$6,851	\$1,990	86.356	Exempt

\*Subject is a portion of the two parcels totaling 69.55 acres

## Valuation Methods

The appraiser has three methods of estimating value, and each is considered in every appraisal:

The *Sales Comparison Approach* is a comparison process between the subject water storage and similar water storage vessels that have recently sold. Considerable judgment is involved when analyzing each sale with respect to value factors such as time of sale, location, conditions of sale and physical characteristics. The sales prices are then adjusted to account for these differences, and the net result from each sale is a value indication for the subject.

The *Cost Approach* has not been utilized because the subject is being appraised as vacant. However, the cost of infrastructure for a water storage reservoir will be discussed in the Sales Comparison Approach. A cost analysis could be completed but due to the impact that the size of the water storage vessel has on the indicated value per acre foot, it has been determined it would not deliver reliable results and thus will not be utilized.

The *Income Approach* utilizes an investment analysis of the property. The income streams of similar properties that have sold are analyzed to determine the rate of return to these investments. This rate is then applied to the subject's estimated net income and thereby capitalized into a value indication.

Because the subject's market value is unrelated to income associated with the land and lake, this approach is not applicable. There would be some potential for a recreational lease of the property or water storage lease, but this would not be the driving force of value if put on the market.

A form of the Income Approach known as *Discounted Cash Flow Analysis* is used to convert a future income stream into present worth. Revenue and cost projections are discounted at an appropriate rate based on market evidence to determine a value from this approach. Water storage vessels are typically purchased by end users and do not rely on income production. This makes this approach unreliable, and it will not be utilized in this report.

## **Highest and Best Use**

The concept of highest and best use is fundamental to the analysis and valuation of any real property. As used here for purposes of this appraisal report, it is defined as:

"That reasonable and probable use that will support the highest present value, as defined, as of the effective date of this appraisal."

"Alternatively, that use, from among reasonably probable and legal alternative uses, found to be physically possible, appropriately supported, financially feasible, and that results in the highest land value."

An opinion of the highest and best or most probable use is premised upon, among other things, the site being vacant and ready for development, as well as its compatibility with the environment.

Criteria for judging highest and best use include those uses that are physically possible, legally permissible, financially feasible and maximally productive. This analysis must consider the type of use that will produce the maximum future benefits to the owner and that will be reasonably achievable.

#### **Physically Possible**

Water storage vessels have a limited number of uses, since they are specifically constructed to store water. Thus, the physically possible uses for the subject are water storage and recreation. There is some surrounding land around the water storage cells that could physically be developed as residential, industrial or commercial, but there could be some limitations due to the floodplain on Cell 2.

## **Highest and Best Use – Continued**

#### Legally Permissible

The subject water storage cells are either lined with a clay liner (Cell 2) or slurry wall (Cell 3, SE-1 & SE-2) and have been approved by the State of Colorado Department of Natural Resources/Division of Water Resources (Office of the State Engineer). The cells will also have to be decreed to store the planned water rights unless the water is water captured under free river conditions or considered "foreign water". Foreign water is considered as all water stored in a reservoir that is not priority storage water or water stored under a free river. This includes historical consumptive use credits from changed water rights, transbasin water, nontributary water and recaptured return flows from fully consumable water sources. Water can physically be delivered from the Rural Ditch or Last Chance Ditch or laterals associated with these ditches. Carriage agreements will be needed to deliver water to the subject cells that is not within the ditch systems.

There is some limited development potential for the land surrounding the subject cells once the properties are fully reclaimed. The properties are currently zoned A-Agriculture by Weld County and exist as two separate parcels. Cells 2 and 3 are currently part of the same parcel, and SE-1 and SE-2 are part of a separate parcel. Weld County plans to repartition the properties so that Cell 2 will be part of its own 59.71-acre parcel, and Cells 3, SE-1 and SE-2 will be on a 69.55-acre parcel. This appraisal is being conducted "as if" this change is already in place. Under this reconfiguration, each parcel would have a single development right. Given the size of the parcels, there would be few development options other than a single development right through the county. Cell 2 is also located within the 100-year floodplain and would have to meet county floodplain regulations.

The two parcels are located within the Town of Firestone planning area. They are designated as R-L lowdensity residential, with a portion of Cell 2 being designated as open space. This could allow for some potential for development on the property, but the lack of developable land on the two cells will likely limit most development opportunities.

#### **Financially Feasible/Maximally Productive**

At this point, Cell 2 is nearly completed and ready for water storage with most of the infrastructure in place. Cells SE-1 and SE-2 are being used for 254 acre feet of water storage but still need to have some materials removed and have reclamation finished. Cell 3 has only had limited mining and is not planned to be finished for another 5 to 10 years. There are few available interim uses for these properties until reclamation is complete, since the mining operation limits most surface uses. Even though Cell 3 will not be available for several years and SE-1 and SE-2 are not complete, it is not uncommon for water storage buyers to purchase unfinished water storage properties contingent on a lined vessel being delivered by a future date.

Given the fact the properties are already being developed as water storage vessels, water storage is the only financially feasible option for the properties. All other options would be too limited due to the existence of the water storage vessels. A limited amount of development with associated lake recreation could also be financially feasible, but it is uncertain how much development is even physically possible at this point. There is also a certain amount of liability associated with opening up recreation on the lakes, which could offset any added value in a water storage buyer's mind. Given these considerations, the maximally productive use of the subject parcels is as water storage vessels, with some potential for limited future residential development.

The subject consists of two parcels that have a highest and best use of water storage. The two parcels are at different stages of water storage development. They will also have different levels of infrastructure in place when they are considered finished. Given this, they will be analyzed separately to determine their individual values.

A total of 35 sales have been used for this analysis of water storage values on the Northern Front Range. A tabulation of the sales can be found on the following pages. Full write-ups of the sales considered to be most relevant can be found in Exhibit F of the Addenda. Six sales have been deemed most comparable to the subject and will be used as direct comparisons. Sale SV4 is one of the most recent and closest sales to the subject, but due to the distressed conditions of the sale, it is not considered a reliable comparison and will not be included.

An important component to water storage values is location relative to available users. This factor creates different markets based on location. For this reason, the tabulation of water storage sales has been organized by the river basin in which the water storage is located. The following discussion will address the various elements of comparison for water storage facilities to indicate general value trends based on locations of facilities.

Water storage is typically compared by quantity on a per-acre-foot basis. Since water storage has been determined to be the highest and best use, the subject and sales will be compared on this basis.

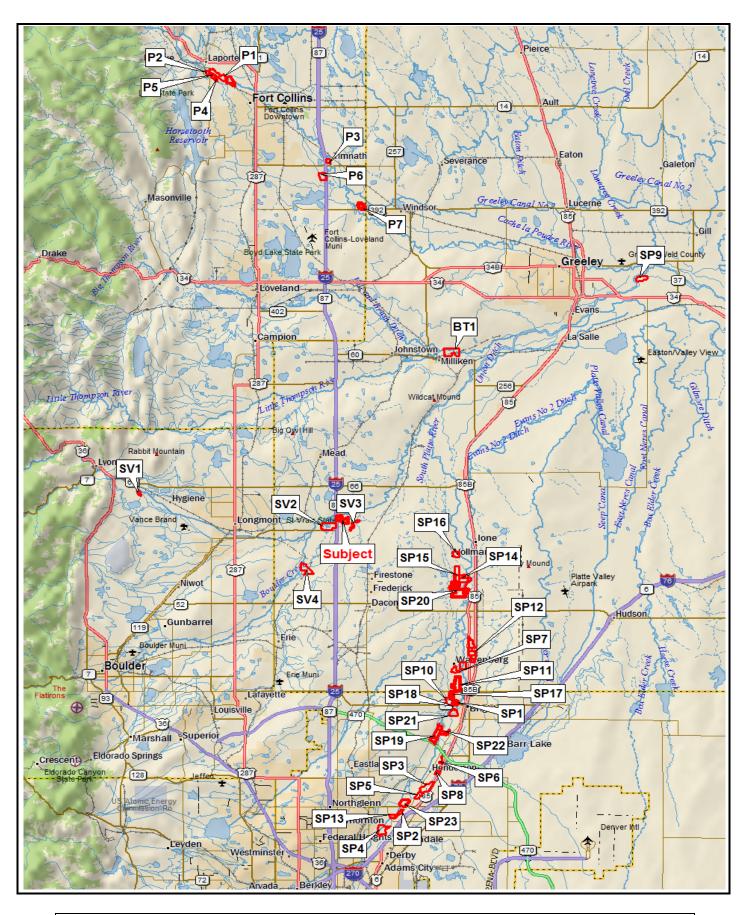
#### **Elements of Comparison**

**Property Rights:** All sales involved full interest in the water storage, either in the form of an easement or fee-simple title. Recreation rights are also often included in many of the sales, but in most cases where municipal buyers were involved, they had little impact on value. Recreation rights also tend to carry less value if surrounding land cannot support development or give adequate access. While there may be value associated with the recreation rights on some of the sales in the future, buyers did not indicate there was any additional value for them when the purchases took place. The recreation rights are being included in the subject water storage rights, as is the case on most of the sales. If recreational rights were not included on any of the sales used for direct comparison, they will be adjusted upwards qualitatively to indicate they are inferior in this regard.

*Financing/Payment Schedule:* Financing/payment schedules for water storage facilities are variable, particularly due to timing. Many of the sales have different payment schedules, with some having down payments and some having payment on delivery. Historically, in sales where payment was to take place on future delivery of water storage, an escalator was attached to the price to account for increases in the market. Sales without escalators tended to estimate value increases and set prices based on estimated delivery schedules. Some of these estimates tended to be relatively accurate, such as Thornton's projected 2016 purchase of the East Cooley pit, which was contracted in 2000 at \$3,405 per acre foot, which coincides with current market transactions. However, they also contracted the Tuscon/Rogers and Brighton-Hammar pits in 2000 at \$2,400 and \$2,600, which was below market in 2010 and 2011 when they were actually purchased.

Purchase contracts with escalators became less popular with the downturn in the gravel market beginning in 2007/2008. Gravel mining substantially decreased, making delivery timelines for water storage uncertain. This led several water storage buyers to revise their water storage contracts with gravel operators. The new contracts tend to have more upfront payments and fixed or capped rates for the future purchases of the delivered water storage. The previously mentioned Tuscon/Rogers and Brighton-Hammar pits that were based on older purchase contracts sold below market by about 30% due to payment schedule. No other sales appear to have been significantly impacted by financing or payment schedule. None of the sales used for direct comparison were impacted by financing or payment schedule, thus no adjustments are necessary.

*Conditions of Sale:* Conditions of sale can require adjustments if a sale is considered distressed or possibly above market due to extenuating circumstances such as abnormal competition for the property. Typically, these sales will not be used in analysis since it is difficult to determine an accurate adjustment for these conditions. There are no conditions of sale that impact the sales price of any of the sales used for direct comparison. No adjustments are necessary.



## **Comparable Water Storage Sales Map**

Sale #	Reservoir Name	Grantor	Grantee	Sale Date	Sale Price	Water Storage Capacity (Acre Feet)	Water Surface (Acres)	Price/Acre Foot
SP1	Wattenberg Lake	CAMAS, Colorado, Inc.	City of Westminster	12/28/1999	\$25,000,000	10,000	300 acres +/-	\$2,500
SP2	Jaquez-Lien Pit	Aggregate Industries	City of Arvada	2/8/2000	\$3,600,000	1,200	?	\$3,000
SP3	Dunes Reservoir	Dunes Investment Partners, LLC	City and County of Denver (in partnership with South Adams Water & Sanitation)	7/10/2000	\$9,055,000	5,000	140 acres +/-	\$1,811
SP4	North Dahlia Pit	Aggregate Industries	City of Thornton	12/14/2000	\$6,241,500	2,190	140 acres +/-	\$2,850
SP5	Tanabe	Lafarge, Inc.	South Adams County Water and Sanitation District	12/29/2000	\$2,037,375	1,125	45 acres	\$1,811
SP6	Brannan Reservoir	Silver Peaks Metropolitan District #1	Farmers Reservoir and Irrigation Company	8/15/2001	\$1,500,000	517	19 acres	\$2,900
SP7	Wattenberg Reservoir	Asphalt Paving, Inc.	Consolidated Mutual Water Company	11/19/2001	\$2,842,500	1,500	50 acres +/-	\$1,895
SP8	124th Storage Pond	124th Estates Partners LLC	City of Brighton	8/5/2002	\$2,000,000	1,000	26 acres	\$2,000
SP9	Nissen	Hall-Irwin Corporation	Central Colorado Water Conservancy District	11/19/2002	\$7,500,000	3,000	87	\$2,500
SP10	Haake Site, et al	Aggregate Industries	City of Aurora	12/23/2003	\$9,000,000	3,000	?	\$3,000
SP11	Walker Pit	Central Colorado Water Conservancy District	City of Aurora	Mar-05	\$17,000,000	3,300	210 acres +/-	\$5,152
SP12	Lupton Lakes	SW Villaneaux, LLC to Bromley Mineral Holdings	Denver Water Board, et al	9/28/2006	\$25,685,806	11,400	220 ac. +/-	\$2,253
SP13	West Cooley	City of Arvada	City of Thornton	11/28/2006	\$5,000,000	1,226	40	\$4,078
SP14	Fort Lupton Reservoir	L.G. Everist	City of Aurora	2/9/2007	\$20,739,200	6,481	241	\$3,200
SP15	Zadel Pit	Zadel Family, LLLP	City of Thornton	8/1/2008	\$3,465,000	2,200	Undetermined	\$3,200
SP16	Heit	SW Chambers, LLC	City and County of Broomfield	7/14/2009	\$4,050,000	1,265	55	\$3,200
SP17	Challenger Pit	Apex Material Specialist, LLC	City of Aurora	2010	\$2,600,000	800	?	\$3,250
SP18	Tucson/Rogers	Aggregate Industries	City of Thornton	2010 (2000 Contract)	\$5,308,000	2,212	?	\$2,400
SP19	Brighton- Hammer	Aggregate Industries	City of Thornton	2011(2000 Contract)	\$5,330,000	2,050	?	\$2,600
SP20	Everist Complex	L.G. Everist	City of Aurora	2011	\$45,000,000	12,400	N/A	\$3,452
SP21	Ergers Pond	Aggregate Investments LLC (Ready Mixed Concrete)	City of Brighton	2012 (2008 Contract)	\$3,500,000	2,000	90	\$3,500*
SP22	Bromley Lakes Lot 1	Ready Mix Concrete Company	City of Brighton	8/8/2012	\$3,031,200	900	?	\$3,368
SP23	East Cooley	Aggregate Industries	City of Thornton	2016 (2000 Contract)	\$10,215,000	3,000	?	\$3,405

 Big Thompson River Water Storage Sales											
Sale #	Reservoir Name	Grantor	Grantee	Sale Date	Sale Price	Water Storage Capacity (Acre Feet)	Water Surface (Acres)	Price/Acre Foot			
BT1	Bernhardt Reservoir	Hall-Irwin Corporation	Central Colorado Water Conservancy District	11/19/2002	\$5,500,000	2,200	128 acres	\$2,500			

# St. Vrain River Water Storage Sales

Sale #	Reservoir Name	Grantor	Grantee	Sale Date	Sale Price	Water Storage Capacity (Acre Feet)	Water Surface (Acres)	Price/Acre Foot
SV1	Rock'n WP Ranch Lake 4	Lafarge, Inc.	St Vrain Left Hand Water District and Boulder County	11/29/2001	\$1,500,000	580	32 acres	\$2,586
SV2	Blue Heron	Rademacher Family Partnership, LLLP	Colorado State Parks	1/10/2003	\$8,500,000	1,200	126 acres +/-	\$2,600
SV3	Shores	Hall Irwin	Central Colorado Water Conservancy District	Oct-04	\$3,000,000	1,200	100	\$2,500
SV4	Stromquist	Stromquist Family	Dream Weaver Holdings	5/9/2014	\$2,000,000	556	70	\$2,400

			Cache La Poudre	e River Wate	er Storage Sal	es		
Sale #	Reservoir Name	Grantor	Grantee	Sale Date	Sale Price	Water Storage Capacity (Acre Feet)	Water Surface (Acres)	Price/Acre Foot
P1	Taft Hill Pits	Lafarge	City of Greeley, Fort Collins-Loveland WD, East Larimer County WD & North Weld County Water District	11/1/2005	\$2,750,250	2,895	193	\$950 (Unlined)
P2	Overland Trail Pond #1	Linder, Mark	City of Greeley / Tri- Districts	7/20/2007	\$1,524,000	508	?	\$3,000
P3	Flatiron/Timnath	Flatiron Companies, LLC	Lower Poudre Augmentation Company (Cache La Poudre Irrigation Company)	10/9/2007	\$1,577,352	657	55	\$2,400
P4	Overland Trail	Warson, James	City of Greeley / Tri- Districts	12/7/2009	\$585,750	213	12	\$2,750
P5	Overland Trail	Treiber, Alvin & Florence	City of Greeley / Tri- Districts	7/30/2009	\$1,489,000	541	?	\$2,750
P6	Grant Pit	Stoner and Company	City of Fort Collins	2009 (Failed Contract)	\$4,425,000	1,500	59	\$2,750
P7	Kyger Pit	River Bluff Ventures, LLC	Town of Windsor	3/10/2014	\$2,750,000	1,000	90 Acres	\$2,750

## 1533 Hokestra Pit

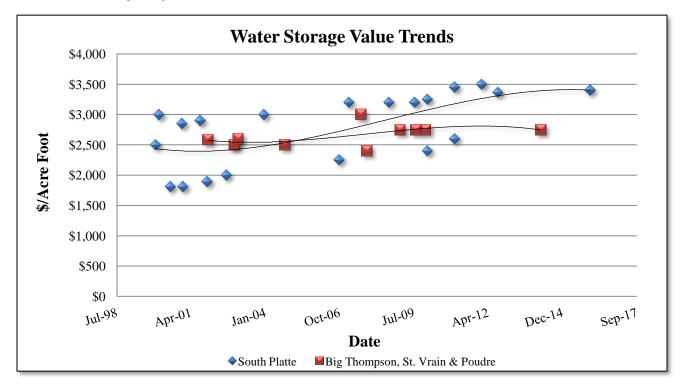
## Valuation of Water Storage – Continued

*Market Conditions:* The market for lined gravel pits has been steady to strong for a number of years. This has particularly been the case on the main stem of the South Platte in the Brighton area, where values increased from the \$2,000 to \$2,500 per-acre-foot range up to the \$2,500 to \$3,000 range from 1997 to 2002. Values during that time period had been increasing at roughly five percent per year. Below is a chart that shows these general value trends since 2000.

Water storage buyers have been less active and over the past few years, municipalities such as Aurora and Westminster have began to restructure their current water storage contracts for later delivery. Initial per-acre-foot values have stayed steady, with the new contracts providing more money up front to the gravel operators but having fixed or capped rates. For example, the Aurora and L.G. Everist contract had an initial value of \$3,200 per acre foot and escalates to \$3,781.51 with a completion of the water storage purchase of 2034. This shows a total escalation of 15.4% over a 23-year period, which equates to approximately .66% per year. However, the contract was reworked in 2011 and the price was fixed at \$3,452 per acre foot of delivered, lined storage.

Much of the lack of activity in the market is due to the poor development market from 2008 to 2012 along the Front Range. It led to less of a need for development water and a slowing in the creation of water storage. The market for lined gravel pits only spans the last two decades or so, and the market has gone through an evolutionary process during this time span. This indicates that the most recent sales are the most reflective of current market trends.

In the early to mid 2000s, the practice of incorporating CPI escalators into lined gravel pit contracts became more common. This helped ingrain a 2% +/- inflation rate into the market, although fewer CPIs are being attached to sales, and more money is being paid up front in recent transactions. This allows for more of the cost of lining to be covered to complete the project, instead of receiving the payment after delivery. In conclusion, values appear to have increased from 2000 to about 2005, where they have since been slightly higher to steady. There are a few deals currently in the works at prices above historic sales, but none of these have been finalized, so they are not yet considered to be reliable market indicators. This recent increase in market activity could be a sign of near-term increases in market values of water storage, but this is still uncertain. The most recent sales are considered the best indicators of value and would indicate current values are at or slightly above those benchmarks for comparable water storage facilities. Given the recent activity, the current market is considered slightly superior to the past few years, and the sales will be adjusted qualitatively to indicate they occurred in slightly inferior conditions. This will only be considered a small adjustment in terms of the final conclusion of value. SV3 is the oldest direct comparable and will have the largest adjustment, which will be discussed further in the conclusion of value.



## Valuation of Water Storage - Continued

Location: Location of water storage facilities is an important factor in determining value. Facilities located in areas where there is higher demand and direct use capabilities will have a much higher value that ones that have few potential users in the area and rely on augmentation uses or water exchanges. South Platte reservoirs have more competition than reservoirs on the tributaries and historically have sold for higher values. There are a dwindling number of undeveloped sites available in the Denver Metro area, so demand tends to be much higher than further downstream. Water storage sales along the South Platte up to the Fort Lupton area are considered part of the Denver Metro area due to its influence.

Pairings of water storage sales from different areas on the Northern Front Range have been tabulated below and will be compared to determine value differences based on location. These sales have been paired based on the time frame in which they occurred, so market conditions will not influence values. The sales that are considered to most reflective of market value at the time have been highlighted and will be used as indicators of value.

The other sales have conditions of sale such as prior contract dates that make them less reliable indictors.

Sale #	Reservoir Name	Grantor	Grantee	Sale Date	Sale Price	Water Storage Capacity (Acre Feet)	Water Surface (Acres)	Price/Acre Foot
SP6	Brannan Reservoir	Silver Peaks Metropolitan District #1	Farmers Reservoir and Irrigation Company	8/15/2001	\$1,500,000	517	19 acres	\$2,900
SP7	Wattenberg Reservoir	Asphalt Paving, Inc.	Consolidated Mutual Water Company	11/19/2001	\$2,842,500	1,500	50 acres +/-	\$1,895
SP8	124th Storage Pond	124th Estates Partners LLC	City of Brighton	8/5/2002	\$2,000,000	1,000	26 acres	\$2,000
SP9	Nissen	Hall-Irwin Corporation	Central Colorado Water Conservancy District	11/19/2002	\$7,500,000	3,000	87	\$2,500
SP10	Haake Site, et al	Aggregate Industries	City of Aurora	12/23/2003	\$9,000,000	3,000	?	\$3,000
	SP9 is located east of Greeley past the confluence of the Poudre/South Platte and is considered a locational indicator similar to Poudre River sales						AVERAGE:	\$2,950

#### South Platte River Water Storage Sales

indicator similar to Poudre River sales

#### **Big Thompson River Water Storage Sales**

Sale #	Reservoir Name	Grantor	Grantee	Sale Date	Sale Price	Water Storage Capacity (Acre Feet)	Water Surface (Acres)	Price/Acre Foot
BT1	Bernhardt Reservoir	Hall-Irwin Corporation	Central Colorado Water Conservancy District	11/19/2002	\$5,500,000	2,200	128 acres	\$2,500
							AVERAGE:	\$2,500

St.	Vrain	River	Water	Storage	Sales
	<b>V I GIII</b>	INITEL	i i acci	Diorage	Duico

Sale #	Reservoir Name	Grantor	Grantee	Sale Date	Sale Price	Water Storage Capacity (Acre Feet)	Water Surface (Acres)	Price/Acre Foot
SV1	Rock'n WP Ranch Lake 4	Lafarge, Inc.	St Vrain Left Hand Water District and Boulder County	11/29/2001	\$1,500,000	580	32 acres	\$2,586
SV2	Blue Heron	Rademacher Family Partnership, LLLP	Colorado State Parks	1/10/2003	\$8,500,000	1,200	126 acres +/-	\$2,600
SV3	Shores	Hall Irwin	Central Colorado Water Conservancy District	Oct-04	\$3,000,000	1,200	100	\$2,500
							AVERAGE:	\$2,562

## Valuation of Water Storage - Continued

The sale pairings above indicate that in the early 2000s, water storage values on the Big Thompson, St. Vrain and Cache La Poudre Rivers were very similar, in the \$2,500 to \$2,600 per-acre-foot range. Water storage values on the South Platte River in the Metro area ranged from \$2,900 to \$3,000, and indicate a premium of 18% for their location over sales further downstream and on other tributaries.

Sale #	Reservoir Name	Grantor	Grantee	Sale Date	Sale Price	Water Storage Capacity (Acre Feet)	Water Surface (Acres)	Price/Acre Foot
SP11	Walker Pit	Central Colorado Water Conservancy District	City of Aurora	Mar-05	\$17,000,000	3,300	210 acres +/-	\$5,152
SP12	Lupton Lakes	SW Villaneaux, LLC to Bromley Mineral Holdings	Denver Water Board, et al	9/28/2006	\$25,685,806	11,400	220 ac. +/-	\$2,253
SP13	West Cooley	City of Arvada	City of Thornton	11/28/2006	\$5,000,000	1,226	40	\$4,078
SP14	Fort Lupton Reservoir	L.G. Everist	City of Aurora	2/9/2007	\$20,739,200	6,481	241	\$3,200
SP15	Zadel Pit	Zadel Family, LLLP	City of Thornton	8/1/2008	\$3,465,000	2,200	Undetermined	\$3,200
SP16	Heit	SW Chambers, LLC	City and County of Broomfield	7/14/2009	\$4,050,000	1,265	55	\$3,200

#### South Platte River Water Storage Sales

#### Cache La Poudre River Water Storage Sales

AVERAGE: \$3,200

Sale #	Reservoir Name	Grantor	Grantee	Sale Date	Sale Price	Water Storage Capacity (Acre Feet)	Water Surface (Acres)	Price/Acre Foot
P1	Taft Hill Pits	Lafarge	City of Greeley, Fort Collins-Loveland WD, East Larimer County WD & North Weld County Water District	11/1/2005	\$2,750,250	2,895	193	\$950 (Unlined)
P2	Overland Trail Pond #1	Linder, Mark	City of Greeley / Tri- Districts	7/20/2007	\$1,524,000	508	?	\$3,000
Р3	Flatiron/Timnath	Flatiron Companies, LLC	Lower Poudre Augmentation Company (Cache La Poudre Irrigation Company)	10/9/2007	\$1,577,352	657	55	\$2,400
P4	Overland Trail	Warson, James	City of Greeley / Tri- Districts	12/7/2009	\$585,750	213	12	\$2,750
P5	Overland Trail	Treiber, Alvin & Florence	City of Greeley / Tri- Districts	7/30/2009	\$1,489,000	541	12	\$2,750
P6	Grant Pit	Stoner and Company	City of Fort Collins	2009 (Failed Contract)	\$4,425,000	1,500	59	\$2,750
							AVERAGE:	\$2,725

The sale pairings above indicate that in the mid to late 2000s water storage values on the Cache La Poudre River were in the \$2,400 to \$3,000 per acre foot range. No known sales took place on the Big Thompson or St. Vrain Rivers. Water storage values on the South Platte River in the Metro area were near \$3,200 per acre foot and indicate a premium of 17% for their location over sales on the Poudre River.

## Valuation of Water Storage – Continued

					-			1
Sale #	Reservoir Name	Grantor	Grantee	Sale Date	Sale Price	Water Storage Capacity (AF)	Water Surface	Price/Acre Foot
SP17	Challenger Pit	Apex Material Specialist, LLC	City of Aurora	2010	\$2,600,000	800		\$3,250
SP18	Tucson/Rogers	Aggregate Industries	City of Thornton	2010 (2000 Contract)	\$5,308,000	2,212		\$2,400
SP19	Brighton-Hammer	Aggregate Industries	City of Thornton	2011(2000 Contract)	\$5,330,000	2,050		\$2,600
SP20	Everist Complex	L.G. Everist	City of Aurora	2011	\$45,000,000	12,400	N/A	\$3,452
SP21	Ergers Pond	Aggregate Investments LLC (Ready Mixed Concrete)	City of Brighton	2012 (2008 Contract)	\$3,500,000	2,100	90	\$3,500
SP22	Bromley Lakes Lot 1	Ready Mix Concrete Company	City of Brighton	8/8/2012	\$3,031,200	900		\$3,368
SP23	East Cooley	Aggregate Industries	City of Thornton	2016 (2000 Contract)	\$10,215,000	3,000		\$3,405

#### South Platte River Water Storage Sales

AVERAGE: \$3,357

#### **Cache La Poudre River Water Storage Sales**

Sale #	Reservoir Name	Grantor	Grantee	Sale Date	Sale Price	Water Storage Capacity (AF)	Water Surface	Price/Acre Foot
P7	Kyger Pit	River Bluff Ventures, LLC	Town of Windsor	3/10/2014	\$2,750,000	1,000	90 Acres	\$2,750
							AVERAGE:	\$2,750

The sale pairings above indicate that water storage values since 2010 on the Cache La Poudre River were near \$2,750 per acre foot. No known sales took place on the Big Thompson or St. Vrain Rivers. Water storage values on the South Platte River in the Metro area ranged from \$3,250 to \$3,452 per acre foot and indicate a premium of 22% for their location over sales on the Poudre River.

The previous analysis of locational impacts on the value of water storage indicates that values on the Big Thompson, St. Vrain and Cache La Poudre Rivers are considered to be similar. Sales on the South Platte in the Denver Metro area indicate premiums ranging from 17% to 22% over sales in these basins.

*Depth of Pit:* One of the ingrained components of location is the depth of the water storage. Depth is important because the shallower a pit is, the higher the percentage of evaporative loss will be. Typical evaporative loss on the Northern Front Range is near 2.5 acre feet per surface acre of lake. This means that a pit with an average depth of 10 feet would have an evaporative loss of 25%, while a 25-foot-deep pit would only have an evaporative loss of 10%.

The sales in the Denver Metro area have typically had a depth of 25 feet to 35 feet. While the Big Thompson sale was near 20 feet, the St. Vrain sales averaged from 10 to 18 feet and the Cache la Poudre sales ranged from 12 to 25 feet in depth. Pairing the sales with varying depths along the same river does not appear to show much difference in value. In fact, in 2002 CCWCD paid \$2,500 per acre foot for three pits that varied in depth, from 12 feet on the St. Vrain to 20 feet on the Big Thompson to 35 feet on the South Platte east of Greeley. Buyers today tend to consider factors like these more seriously than they did ten years ago, so depth would likely have some impact on value, although available market data does not lend itself to the precise quantification that percentage evaporation comparisons might suggest.

Given the aforementioned discussion, it would appear water storage facilities on the South Platte in the Denver Metro area carry a premium of near 20% over sales further downstream and on other tributaries. Greater differences in depth would likely result in a premium slightly above or below 20%, depending on the circumstance. The subject pit has a greater depth than the other Poudre basin sales and similar depth to the South Platte Basin sales. Since the premium was based on the pairing of the shallower Poudre sales with the deeper South Platte sales, a premium near 15% appears most appropriate for the location of the South Platte sale and thus will be applied as a downward adjustment to those sales.

## Valuation of Water Storage – Continued

*Size and Interconnects:* Per-unit values typically decrease with increasing size. However, this is not the case with water storage, due to public buyers having access to considerable financial resources. A second reason is that when costs are fixed for easements, and delivery and release structures and legal fees can be spread over a larger reservoir, per-unit costs decrease. This tends to offset increasing investment size. As a result, size does not appear to have a significant impact on value, and no adjustments will be required.

**Remaining Development Costs:** Most water storage sales consist of the delivery of a lined storage vessel, with the development of the delivery and release facilities to be done by the buyer. Besides infrastructure costs, this can also mean securing carriage agreements with ditch companies. Cost estimates are known on some of the sales, reflecting the total cost to create the storage vessel and to create a functioning water storage facility. These costs range from \$1,500 per acre foot on Thornton's Rogers Reservoir to \$2,500 per acre foot on Windsor's Kyger Reservoir. Based on recent sales, this would indicate values of finished water storage ranging from \$4,250 to near \$6,000 per acre foot.

There have also been a few sales of water storage facilities with delivery and release structures already in place. Aurora purchased the Walker Pit in 2005 for \$5,152 per acre foot, when the market for unfinished lined water storage was near \$3,200 per acre foot, indicating a premium of \$1,952 per acre foot or 60% for finished storage. In 2006, Thornton purchased the West Cooley pit for \$4,078 per acre foot, which was also a finished facility. It only shows a premium near \$900 per acre foot, or 28%. This is likely a low-end indicator considering the current costs associated with finishing water storage.

Other indicators of finished water storage are current reservoir projects. In 2008, South Platte Reservoir was completed by Centennial Water and Sanitation. It consisted of a 6,400-acre-foot facility and had a total cost of \$40 million, or \$6,250 per acre foot. Also in 2008, Parker Water and Sanitation sold 8,000 acre feet of storage in Reuter-Hess Reservoir to Castle Rock, 1,500 acre feet to Castle Pines North Metro District and 1,200 acre feet to Stonegate Village Metro District, all for \$5,500 per acre foot. A more current indicator is the approved Chatfield Reservoir expansion that has several participants from the Denver Metro area and Northern Front Range. It is expected to create an additional capacity of 20,600 acre feet with a total cost of \$134 million, or \$6,500 per acre foot. These projects are ideally located for use in the Denver Metro area and likely set an upper range to values for finished water storage. If the 15% locational adjustment indicated prior is applied, a range of \$4,675 to \$5,525 per acre foot with an anticipated \$2,500 per acre foot left in costs to finish the storage. That equates to \$5,250 per acre foot, which falls into the indicated range for finished storage.

The subject has already had a significant amount of infrastructure put into place toward making it a functional water storage facility. Cell 2 has had \$1.82 million spent on installing the clay liner, wet well, rip-rap, one-third of Rural Ditch return flow ditch and sub-drains. Some remaining inlet/outlet structures will likely be needed to finish the facility. Overall, it appears the water storage facility is approximately 80% finished as far as remaining costs are considered.

Cells 3, SE-1 and SE-2 are further from being completed but also have a significant amount of infrastructure already in place. There has been approximately \$1.24 million spent on the slurry wall, sub-drain and concrete lined ditch for the slurry wall. There is also an inlet structure from the Rural Ditch return flow ditch to Cell SE-2. Once fully mined and reclaimed, the water storage reservoir is estimated to be 50% finished as far as cost remaining.

The estimated percentage of completion was based on discussion with an engineer at Weld County Public Works department. The sale of the Walker Pit mentioned previously is the best indicator of the premium for finished water storage at 60% above just lined storage reservoirs. If the indicated percentages of completion are applied to the premium of 60%, a premium near 45% for Cell 2 is indicated and 30% for Cells 3, SE-1 and SE-2. When actual costs are figured, the premium could be considered higher, but in many cases the market does not reflect what actual cost incurred were. This is why sales used to derive the premium are considered most reliable.

# Comparable Sales Adjustment Grid (Cell 2) McCarty Land & Water Valuation, Inc.

		-	l & Water Valuat				_
Sale Number	Subject	SV3	P4/5	SP20	SP21	SP22	P7
Grantor		Hall Irwin	Warson & Treiber	L.G. Everist	Aggregate Investments	Ready Mix	River Bluff Ventures
Grantee		CCWCD	Greeley/ Tri- Districts	Aurora	Brighton	Brighton	Windsor
Date of Sale	(6/24/2015)	Oct-04	Dec-09	2011	2012	Aug-12	Mar-14
Sale Price		\$3,500,000	\$2,074,750	\$45,000,000	\$7,000,000	\$3,031,200	\$2,750,000
Size (Acre Feet)	453 AF	1,200	754	13,000	2,000	900	1,000
Water Value & Minerals		\$500,000	\$0	\$0	\$0	\$0	\$0
Improvements		\$0	\$0	\$0	\$0	\$0	\$0
Water Storage Value		\$3,000,000	\$2,074,750	\$45,000,000	\$7,000,000	\$3,031,200	\$2,750,000
Price Per Acre	N/A	\$2,500	\$2,750	\$3,462	\$3,500	\$3,368	\$2,750
Adjustments to sale prices	1						
Property Rights	fee simple	=	=	=	=	=	=
Financing	cash	=	=	=	=	=	=
Conditions of Sale	normal	=	=	=	=	=	=
Market Conditions (date)	(6/24/2015)	+	+	+	+	+	=
ADJUSTED SALE PRICE		\$2,500	\$2,750	\$3,462	\$3,500	\$3,368	\$2,750
Elements requiring comparison		1					
Location	North of Firestone	=	=	-15%	-15%	-15%	=
Depth of Storage	12' to 25'	=	=	=	=	=	+
Size & Interconnects	453 AF	=	=	=	=	=	=
Remaining Development Costs	80% finished	45%	45%	45%	45%	45%	45%
Net Qualitative Adjustment	+	+	=	=	=	+	
Net Quantitative Adjustment	45%	45%	30%	30%	30%	45%	
Indicated Per Acre Foot Value	of Subject	1	I		Γ		
		\$3,625	\$3,988	\$4,500	\$4,550	\$4,378	\$3,988
			MEAN:	\$4,171	MEDIAN:	\$4,183	

Sale Number	Subject	SV3	& Water Valua P4/5	SP20	SP21	SP22	P7
Grantor	Subject	Hall Irwin	Warson & Treiber	L.G. Everist	Aggregate Investments	Ready Mix	River Bluff Ventures
Grantee		CCWCD	Greeley/ Tri- Districts	Aurora	Brighton	Brighton	Windsor
Date of Sale	(6/24/2015)	Oct-04	Dec-09	2011	2012	Aug-12	Mar-14
Sale Price		\$3,500,000	\$2,074,750	\$45,000,000	\$7,000,000	\$3,031,200	\$2,750,000
Size (Acre Feet)	455 AF	1,200	754	13,000	2,000	900	1,000
Water Value & Minerals		\$500,000	\$0	\$0	\$0	\$0	\$0
Improvements		\$0	\$0	\$0	\$0	\$0	\$0
Land Value		\$3,000,000	\$2,074,750	\$45,000,000	\$7,000,000	\$3,031,200	\$2,750,000
Price Per Acre	N/A	\$2,500	\$2,750	\$3,462	\$3,500	\$3,368	\$2,750
Adjustments to sale prices							
Property Rights	fee simple	=	=	=	=	=	=
Financing	cash	=	=	=	=	=	=
Conditions of Sale	normal	=	=	=	=	=	=
Market Conditions (date)	(6/24/2015)	+	+	+	+	+	=
ADJUSTED SALE PRICE		\$2,500	\$2,750	\$3,462	\$3,500	\$3,368	\$2,750
Elements requiring compariso		1	T	ſ	[		
Location	North of Firestone	=	=	-15%	-15%	-15%	=
Depth of Storage	15' to 20'	=	=	=	=	=	+
Size & Interconnects	455 AF	=	=	=	=	=	=
Remaining Development Costs	50% finished	30%	30%	30%	30%	30%	30%
Net Qualitative Adjustment		+	+	=	=	=	+
Net Quantitative Adjustment	30%	30%	15%	15%	15%	30%	
Indicated Per Acre Foot Valu			1				
		\$3,250	\$3,575	\$3,981	\$4,025	\$3,873	\$3,575
			MEAN:	\$3,713	MEDIAN:	\$3,724	

## Comparable Sales Adjustment Grid (Cells 3, SE-1 & SE-2) McCarty Land & Water Valuation, Inc.

## **Summary of Analysis**

*Cell 2:* The adjustment grid on page 82 consists of six sales that range in indicated values from \$3,625 per acre foot to \$4,550 per acre foot. They have a mean value of \$4,171 and a median of \$4,183 per acre foot. All of the sales have qualitative adjustments that indicate values slightly above their quantitative indicated value. The most recent sales, SP21, SP22 and P7 are considered some of the best indicators since they are most reflective of current market trends. They indicate a value slightly above \$4,300 per acre foot. Sale SV3 is the nearest sale to the subject and indicates a value above \$3,625 per acre foot. It is the oldest sale used for direct comparison and would require the largest adjustment for market trends. Based on historic sales on the St. Vrain tending to trend with sales on the Cache la Poudre, an upwards adjustment near 10% would be warranted. This would then indicate a value of \$3,988 per acre foot.

If SV3 is added to the other most recent sales, an average value of \$4,226 is indicated. The Walker Pit is the best comparable of finished water storage at \$5,152 per acre foot. If it is adjusted upwards 10% for market conditions, down 15% for location and down 12% for superior amount of completion, a value of \$4,137 per acre foot is indicated. This supports the indicted value of the other sales. Since SV3 and P7 are considered the best indicators, they will be given the most weight. Based on these considerations, a reasonable conclusion of value for the subject water storage is near \$4,200 per acre foot.

#### 453 Acre Feet @ \$4,200/AF+/- = \$1,900,000

*Cell 3, SE-1 & SE-2:* The adjustment grid on the previous page consists of six sales that range in indicated values from \$3,250 per acre foot to \$4,025 per acre foot. They have a mean value of \$3,713 and a median of \$3,724 per acre foot. All of the sales have qualitative adjustments that indicate values slightly above their quantitative indicated value. The most recent sales, SP21, SP22 and P7, are considered some of the best indicators since they are most reflective of current market trends. They indicate a value slightly above \$3,820 per acre foot. Sale SV3 is the nearest sale to the subject, and it indicates a value above \$3,250 per acre foot. It is the oldest sale used for direct comparison and would require the largest adjustment for market trends. Based on historic sales on the St. Vrain tending to trend with sales on the Cache la Poudre, an upwards adjustment near 10% would be warranted. This would then indicate a value of \$3,575 per acre foot.

If SV3 is added to the other most recent sales, an average value of \$3,762 is indicated. Cell 3 still has a significant amount of mining to be completed, and it is not planned to be delivered for another 5 to10 years. There are currently 253 acre feet of existing storage, which will total an estimated 455 acre feet when finished. Most water storage contracts for future storage tend to be for the current market value without escalators and have a large upfront payment. Since over half of the storage is available, there would likely be a large upfront payment in this situation, which would temper a reduced present value due to future payments once the storage is delivered. However, this will be considered, and the indicated value of the subject water storage will be slightly reduced to account for the time value of money that is lost for the water storage not being fully available for 5 to 10 years.

Since SV3 and P7 are considered the best indicators, they will be given the most weight. Based on these considerations, a reasonable conclusion of value for the subject water storage is near \$3,600 per acre foot. After considerations are made for the future delivery of water storage, a final conclusion near \$3,500 per acre foot is considered reasonable.

455 Acre Feet @ \$3,500/AF+/- = \$1,600,000

## **Assumptions and Limiting Conditions**

This appraisal is subject to the following assumptions and limiting conditions:

- 1. The maps and pictures are included with this report to assist the reader in visualizing the property. The legal description contained herein is approximate for identification purposes; the appraiser has made no survey.
- 2. I assume no responsibility for matters of a legal character, nor do I render any opinion as to the title.
- 3. It is assumed that the title is merchantable, the property free and clear of liens and encumbrances, except noted leases, under responsible ownership and competent management.
- 4. The information furnished me by others is believed to be reliable, but I assume no responsibility for its accuracy.
- 5. I am not required to give testimony or attendance in court by reason of this appraisal, with reference to the property in question, unless arrangements have been previously made therefore.
- 6. Neither all nor any part of the contents of this report shall be conveyed to the public through advertising, public relations, news, sales, or other media, without the written consent and approval of the author, particularly as to valuation conclusions, the identity of the appraiser or firm with which I am connected, or any reference to the American Society of Farm Managers and Rural Appraisers..
- 7. Unless otherwise stated in this report, the appraiser did not observe the existence of hazardous material that may or may not be present on the property. The appraiser has no knowledge of the existence of such materials on or in the property. The appraiser, however, is not qualified to detect such substances. The presence of substances such as asbestos, urea-formaldehyde foam insulation, or other potentially hazardous materials, may affect the value of the property. The value estimated is predicated on the assumption that there is no such material on or in the property that would cause a loss in value. No responsibility is assumed for any such conditions, or for any expertise or engineering knowledge required to discover them. The client is urged to retain an expert in this field, if desired.
- 8. This report is done under the extraordinary assumption that all necessary access and crossing easements will be granted. This report is also based on the hypothetical condition that the subject parcels have been reconfigured and the water storage vessels have been fully mined and reclaimed.

## **Certification of Value**

I certify that, to the best of my knowledge and belief,

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
- I have performed no other services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of the assignment.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- My analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice*.
- The use of this report is subject to the requirements of the American Society of Farm Managers and Rural Appraisers relating to review by its duly authorized representatives.
- The American Society of Farm Managers and Rural Appraisers conducts a mandatory program of continuing education. I am current with the requirements of the program.
- I (Eric McCarty) have made a personal inspection of the property that is the subject of this report.
- Kevin McCarty, Certified General Appraiser (CG01319902) provided significant real property appraisal assistance to the person signing this certification.

After consideration of all the foregoing, I have formed the opinion the market values for the subject property, as of June 24, 2015, is estimated to be:

Cell 2:

#### ONE MILLION NINE HUNDRED THOUSAND DOLLARS (\$1,900,000)

Cell 3, SE-1 & SE-2:

#### ONE MILLION SIX HUNDRED THOUSAND DOLLARS (\$1,600,000)

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Eric McCarty Certified General Appraiser No. CG100014839