ArkDSS Memorandum
Final

To: Bill Tyner and Kelley Thompson, Colorado Division of Water Resources

From: Wilson Water Group

Subject: Task 2.1 – Water Commissioner Interviews
Notes from Water District 13 Meeting

Date: February 2019

Introduction

This memorandum provides notes from the September 21, 2017 meeting with the Water District 13 Water Commissioner. Water District 13 includes tributaries in the Wet Mountain Valley, including Grape Creek. Meetings were held with Water Commissioners in each Water District in the ArkDSS study area. The objectives of these meetings were to 1) develop an initial basin understanding; 2) determine diversion and reservoir structures that should be included in future detailed modeling efforts, and 3) determine which reservoirs and diversions warrant more detailed investigation and technical documentation. These objectives support Task 3 Consumptive Use Analysis and Task 4 Surface Water Modeling. Information in this memorandum is believed to be accurate for water planning and modeling purposes; however this information should not be relied upon in any legal proceeding.

Approach

In preparation for the meeting, Water District 13 data were compiled and reviewed using the following procedure outlined in the ArkDSS Scope of Work:

1. Review the availability of diversion, reservoir storage, and streamflow data.
2. Review historical call data and identify how it may vary from current call reporting standards.
3. Identify net absolute water rights for structures in each Water District. Review the irrigated lands master parcel set to identify ditches with water rights and/or diversions records for which irrigated areas have not been identified.
4. Develop an initial list of key structures and structures with acreage and water rights, but no diversion records to understand areas without records and how to estimate their use.

Maps were also developed displaying reservoirs, diversion headgate locations, and irrigated acreage of the Water District to facilitate the discussions.

The interview with the Water Commissioner was intended to determine structures that should be considered key based on seniority, water administration, or basin operations. Because much of the irrigated acreage in the Water District 13 had inaccurate ditch assignments, the interview also served to correct irrigated parcels and ditch assignments required for modeling purposes.

Prior to the meeting, a brief description of the purpose and goals of the interview was provided to the Water Commissioner. The following is a summary of the meeting agenda:

1. Review straight-line diagrams for accuracy
2. Develop a list of major projects, reservoirs, and ditches in the water district, including names of knowledgeable contact people
3. Gather information on dry-up points in the river, calling rights, augmentation plans, and administration specific to the water district
4. Gather general information on the preliminary list of irrigation diversions selected to include in future detailed modeling efforts (key structures), and solicit input on their final inclusion
5. Develop information on reservoirs, such as owner entities, ditches that get reservoir deliveries, assigned delivery losses, etc.
6. Correct irrigated acreage information

Meeting Attendance

The meeting was held at the Division of Water Resources (DWR) Office in Pueblo. The following people attended the meeting:

Jerry Livengood, Water Commissioner for District 13.
Brian Sutton, Western Region Coordinator
Bill Tyner, Assistant Division Engineer (Surface Water Operations)
John Van Oort, River Operations Coordinator
Kelley Thompson, DWR, Lead Modeler
Erin Wilson, Wilson Water Group
Lisa Wade, Wilson Water Group

Transbasin Diversions

No transmountain diversions are delivered to Water District 13.

Compacts and Agreements Affecting District 13 Administration

As a tributary to the Arkansas River, Water District 13 is subject to conditions and stipulations set forth in the Arkansas River Compact between Colorado and Kansas. The Arkansas River Compact does not generally impact water administration on the Water District 13 tributaries; however they must provide notice of irrigation improvements.

Straightline Diagrams

Diagrams for Water District 13 are being developed. The majority of the headgates have been marked using GPS and are accurate. This should be reflected in the most recent version of HydroBase, but should be confirmed with the Division Office.

Stream Gages

There are three active streamflow gages and one active reservoir storage gage in Water District 13. The gages are operated by DWR or Upper Arkansas Water Conservancy District. In addition, there are two historical gages that may be used during model development. The gages, station IDs, and comments regarding the use or quality of the gage are summarized below.

Gage ID	Gage Name	Period of Record	Comments
DEWRESCO	DeWeese Reservoir	Unknown	Recorded storage data are used by the water commissioner to assist in the accounting of the reservoir
GRABDWCO	Grape Creek below DeWeese Reservoir	2012-2017	This is used by the water commissioner to assist in the accounting of the reservoir.
GRAWESCO	Grape Creek near Westcliffe	1925-2017	Used for administration
TCCKTCCO	Texas Creek near Texas Creek	XXXX-2017	Operated by Upper Arkansas Water Conservancy District for their augmentation plans. It is not used by the water commissioner for administration.
07094600	South Colony Creek near Westcliffe	1974-1978	
07094900	Middle Taylor Creek near Westcliffe	1975-1978 1984-1985	

Instream Flow Reaches

There are 28 separate decreed instream flow reaches in Water District 13 and 28 minimum lake level decrees. Most of the instream flow reaches are in the headwaters above significant diversions; and many of the instream flow reaches are on the same tributaries; with decreed rates generally increasing from upstream to downstream. The instream flows are not generally administered because there are no measuring devices. The only exception is the instream flow on Texas Creek (1300325) from Lake Fork to the confluence with the Arkansas River with a maximum decreed rate of 7.75 cfs. Occasionally, the water commissioner is contacted by CWCB to administer the instream flow reach using the Upper Arkansas River Water Conservancy District gage but, to date, there has not been enough water in the system to meet the flow right and the instream flow is junior to other uses.

Municipal Use

Round Mountain Water and Sanitation District supplies the town of Westcliffe. The supply is from wells. Some of the senior surface water rights have been transferred to the wells and had their use changed to municipal. They also are covered under augmentation plans. This is the only municipal provider in Water District 13. There are scattered subdivisions around the basin, but these are served by individual exempt domestic wells.

Reservoir Specific Information

Deweese Dye Reservoir (1303613) is the main reservoir in the district. Jerry does the accounting for the reservoir. He does weekly accounting and then reports to the Division Office and the users on a monthly basis. The reservoir generally fills every year, usually by the end of January at the latest. During wetter years, the reservoir will be full by the end of December. The end-of-month contents are measured. The reservoir has a capacity of 4338 acre-feet. End-of-month contents are generally complete in HydroBase from about 1988 to 2008. Recent content data is available and will be put entered into HydroBase. The accounts in the reservoir are for the following users:

- BLM. They use their pool to provide “fish water”. Releases are made to improve the streamflow conditions below the reservoir to the confluence with the Arkansas River. Generally, they release 2 cfs from November 15 until the reservoir begins spilling or flow is higher during runoff.
- Upper Arkansas Water Conservancy District. Releases are made for augmentation plans on Middle Taylor and Grape Creek.
- Deweese. Release to ditches in District 12 for supplemental irrigation. Additionally, the Deweese Reservoir participates in the “2250 water”. There is a stipulation as part of the winter water storage program that off-channel reservoirs can store a combined amount of 2,250 acre-feet during the winter water storage program season. Then in the spring, that water has to be “paid back” to the Colorado Canal, based on a pro-rata share of how much water was stored in each participating reservoir. That release is coordinated with the Colorado Canal. The water is released as soon after March 15 as possible, depending on when the accounting has been finalized and Colorado Canal has need for it.
- Round Mountain. They release for augmentation of the two active wells that Round Mountain Water and Sanitation use (Smith Well and the Gallery). The amount owed is determined on a monthly basis.
- DOW pool. No releases are made from this pool. It is a 500 acre-foot minimum pool for flat water fish habitat. Under an agreement with Deweese Dye Ditch and Reservoir Company, if there have been no releases from this pool, then the Deweese will cover the evaporation from the pool.

Conquistador Reservoir (1303535) is the next largest reservoir. It is decreed as a single structure, but has been constructed as two reservoirs right next to each other with a combined capacity around 135 ac-ft. Upper Arkansas Water Conservancy District owns 80 percent of the reservoir. The remaining 20 percent is owned by Hermit Basin Lodge. This was an old ski area, but now is used for conferences, summer camps, and developed lots. Both entities use the reservoir for augmentation. Upper Arkansas and Hermit Basin Lodge report monthly depletions, accounting, and end of month contents to Jerry.

Spruce Creek Reservoir (1303557) is a small storage pond used in several augmentation plans. They release 3.71 acre-feet per month in June, July, and August.

Jerry assesses the standard 0.07 percent per mile transit loss to all reservoir releases.

General Administration

Jerry has been the water commissioner for about thirteen years. Prior to that, he worked for Round Mountain Water and Sanitation District. He also is a water user on Taylor Creek and irrigates two hay fields using water from three ditches.

Water District 13 water rights are generally senior to the Arkansas River mainstem water rights. Therefore, it is very rare for an Arkansas River call to affect Water District 13 administration. The water commissioner estimates that 80 percent of the Water District 13 ditches are senior to an 1884 call on the Arkansas River. The call would have to be an 1880 seniority to start having a serious impact on Water District 13, and even then, most of the ditches have priorities dating to the 1870s. The Division Office enforces that ditches can only irrigate on the acreage identified in their decrees. They closely monitor for expansion of acreage and will turn off ditches to prevent un-authorized lands from receiving water.

In general, the district is tightly administered because most of the tributaries become water short at some point in the season. Jerry uses the Grape Creek near Westcliffe streamgage exclusively to administer the basin. The general sequence of runoff is that the southern and northern extremes of the basin start first, with the middle portion of the district coming off next. The water commissioner starts administration March 15th and starts working with ditches in the Texas Creek drainage area and on Antelope Creek because spring runoff will already be occurring in these areas. Next is the headwaters of Grape Creek (between April 1 and the 15th), but irrigators might not begin irrigating that early in the season. By late April or early May, the runoff will start in earnest for the full water district. The exact period is highly dependent on the temperatures. Generally, at the start of the run-off there is only enough water for the senior-most ditch on the tributaries.

As the runoff starts to build, more of the junior ditches on each tributary start to come into priority. This area has a relatively short growing season. The hay fields only get one cutting.

Irrigators start turning off at the end of July in order to dry out their fields before cutting the hay. At that point, the water commissioner is working with the junior pasture meadows to allow them to divert as the more senior ditches are no longer calling for water. Later in the fall (after the haying), some of the senior ditches will turn back on to "put the field to bed" for the winter; however this irrigation practice is not observed throughout the Water District. Jerry estimates less than half of the ditches try to put on a little more water. By November, most of the ditches have turned off because they start running into problems with icing conditions, which can cause flooding.

The local tributary calls generally drive the tributary administration, with the exception of the Risser and Locke Ditch (1300630). This ditch on Grape Creek will place a call that impacts ditches on the upstream tributaries (Colony Creeks, Macey, Antelope, etc). Risser and Locke Ditch will sweep the river. Information about senior and swing ditches on the individual tributaries are noted in the "Tributary Specific" section below.

Jerry is in close contact with ditches across the district. For example, he will visit Macey Creek three times a week. Most of the ditches understand how the administration works and they are diverting within the priority system. There are only a few ditches that Jerry has to turn on and off; and only a few padlocked headgates.

The majority of the diversions recorded are spot measurements when Jerry is at the ditch, or are user supplied. Jerry gives all of the water users a spreadsheet and asks them to make a note any time they change their ditch headgate setting. Some users make notes and send in their spreadsheets at the end of the year. Only a few of the users may embellish. None of the ditches have satellite diversion measurements; however the augmentation stations have continuous recorders.

There are only a few exchanges in the district. Users are exchanging water up to Deweese Reservoir and to Conquistador Reservoir. The exchanges are approved through the Division River Operations group and Jerry. They are recorded in Jerry's diversion records and the reservoir accounting. There has been one exchange into Spruce Creek Reservoir.

Over Jerry's tenure, the biggest change in the district has been the increase in augmentation plans and the accounting associated with them. There are a large number of exempt domestic wells that do not need augmentation plans. There are other small wells that are under augmentation plans. Other groundwater wells are for Round Mountain (see more details under "Municipal Use" section).

For information about on-farm efficiencies, Jerry recommends checking some of the recent change cases. There is wide variation. For example, Round Mountain Water and Sanitation

District got augmentation plans with 50 to 54 percent system efficiency for hay meadows, but 24 percent for pasture meadows.

One unique feature of Water District 13 is the naturally losing creeks. Jerry has seen 20 percent to 30 percent losses on Grape Creek below Deweese Reservoir, especially in dry years. Additionally, Macey Creek, Horn Creek, Alvarado Creek, and Dry Creek are all naturally losing reaches. The water will disappear under the streambed. Therefore, calls on the creeks are frequently futile, especially before or after the spring high flows. Jerry believes that most of the water then returns to the surface in the low-lying areas in the valley floor. There are several areas that see swampy conditions, which is most likely driven by the groundwater table. On the other hand, Antelope Creek is not a significantly losing creek. Jerry does not think that it is a gaining river, but he can curtail the juniors to get water down to the seniors.

Tributary Specific Information

Water District 13 can be divided into Grape Creek and its tributaries, and Texas Creek and its tributaries. Water District 13 is dominated by a large number of small tributaries that feed the mainstem of Grape Creek and the mainstem of Texas Creek. The tributaries all experience local calls, with some ditches also experiencing a call from Grape Creek. Water District 13 is generally senior to the Arkansas River call.

Antelope Creek

This tributary is located near the headwaters of Grape Creek.

- WM Korsch (1300928) is active.
- John Meyer No 1 (1300924) is active. A small fraction of the ditch has been changed to augmentation. There is a data logger at the augmentation station for the ditch. The remaining water right is used for irrigation.
- John Meyer No 2 (1300925) is active.
- J L Schwab No 2 Antelope (1300926) is active.
- J L Schwab No 1 Antelope (1300923) is active. One third of the ditch is used for irrigation. Two thirds of the ditch has been changed for augmentation and is involved in seven different plans. The Antelope Valley Ranch Reservoir (pond below the bottom of the irrigated area) is filled from the ditch and used for augmentation. There is a data logger for the augmentation station on the ditch.

Cottonwood Creek and Froze Creek

These tributaries are located near the headwaters of Grape Creek. Note that Froze Creek has changed its course. It now cuts across the valley at the J L Schwab No 1 Froze (1300932) headgate and joins Cottonwood Creek.

- Puls No 1 (1301176) and Puls No 2 (1301177) are inactive.
- Beaver Lodge Ditch (1300704) is active. It fills the decreed pond, but does not irrigate.

- Boyer Diversion (1300941) diverts from a spring. The spring does not always run. The headgate is not mapped in the correct location in GIS. It should be located on the left side of Cottonwood Creek and might be more upstream.
- J L Schwab Ditch No 2 Cottonwood (1300943) is active.
- J L Schwab Ditch No 1 Cottonwood (1300943) is active. It is piped downstream to the irrigated acreage and comingles with J L Schwab No 4 Cottonwood (1300945). These ditches should be modeled as a diversion system.
- On Froze Creek – J L Schwab No 1 Froze (1300932) is active.
- Hudson Sieber Froze No 1 (1300933) and Hudson Sieber Froze No 2 (13001178) irrigate the same ground and are active. They comingle with the Frink & Company Ditch (1300938) for a portion of the fields. The Frink & Company also irrigates additional fields downstream of the Hudson Sieber ground.
- Pine Grove Ditch (1300946) is inactive.
- R B & S Ditch (1301159) recently changed the use of the water right to storage from irrigation, and abandoned a portion of the right.

Music Pass Creek

- G C Dihle Ditch No 2 (1300604) is not active, previous diversions records were in error, and should have been credited to Ulrich Kuster Ditch No. 1 (1300597).
- Ulrich Kuster Ditch No 3 (1301104) is active and Ulrich Kuster Ditch No 2 (1301105) has been transferred to it. The No 2 Ditch has some historical records.
- Pasture Ditch (1300594) has been moved into Harbor Ditch (1300593), and it will be used on the same parcel as Ulrich Kuster Ditch No 3 (13001104) in the future. These structures should be modeled as a diversion system.

Grape Creek (headwaters)

- Balsam Ditch (1300612) is active.
- Breshire Ditch (1300601) is active.
- Ulrich Kuster Ditch No 1 (1300597) is active. The ditch goes up to the north, then hooks around to the east, then spills into the pond.
- Mechanic Ditch (1300593) is active, but it is out of priority frequently.
- Bertram Ditch (1300596) is active. The ditch goes off the left bank.
- John Erps Ditch No 3 (1300607) is active. The ditch goes off the left bank.
- John Erps Ditch No 5 (1300608) is active. The ditch goes off the right bank.
- John Erps ditch No 4 (1301129) does not exist. It is potential on the abandoned list.

Crystal Falls Creek

- Southfield Ditch (1300598) is active.
- Northfield Ditch (1300599) is active.
- H Neermann Ditch No 1 (1300614) currently is not active.

- Grove Ditch (1300603) is active.
- Ford Ditch No 1 (1300590) is active.
- John Erps Ditch No 1 (1300600) is active.
- Ford Ditch No 2 (1301133) is currently inactive. The headgate is mapped in the wrong location in GIS.
- Middle Ditch (1300644) is active.

Grape Creek (downstream of Crystal Falls Creek and upstream of Hudson Creek)

- Ernest Roll Ditch No 2 (1300642) and Ernest Roll Ditch No 3 (1300641) divert at a common headgate in a simple change case, and serve the acreage on the left bank. They should be modeled as a diversion system.
- Ernest Roll Ditch No 4 (1300642) is active and serves the acreage on the right bank.
- Chetelat Ditch No 1 (1300624) is active and comingles with Chetelat Ditch No 5 (1301034), which is also active. They should be modeled as a diversion system.
- CHETELAT DITCH NO 3 (1300587) is inactive.
- CHETELAT DITCH NO 4 (1301033) is inactive.
- Bluff Ditch (1300588) is active. In a court case, it got split into the Bluff ditch and the Bluff Ditch Reid (1301192). Both are active.

Hudson Creek

- ServatiusDaemgen Ditch (1300662) and Reuker Ditch (1300885) are active. They carry over to the next drainage and are comingled.
- Daemgen Ditch No 1 (1301073) is inactive and should be on the abandoned list.
- Neermann Ditch No 1 (1301138) is active, but is not in priority very often. It has not run in the last 5 years. They irrigate pasture when in priority.
- Neerman Ditch No 5 (1300665) is active and irrigates pasture just below the Neermann No 1.
- Ambrose Ditch No 12 (1300555), Ambrose Ditch No 4 (1300652), Ambrose Ditch No 5 (1300656), Ambrose Ditch No 6 (1300657), Ambrose Ditch No 1 (1300663), Ambrose Ditch No 2 (1300895), Ambrose Ditch No 3 (1300937), and Neerman Ditch No 3 (1301132) have all been transferred to Gorman Ditch (1301140). Gorman Ditch is active.
- Ambrose Ditch No 9 (1300659) has been transferred to Ambrose Ditch No 7 (1300651). No 7 is active and irrigates to the south of the river.
- Ambrose No 8 (1300660) is inactive and has not been transferred. It will most likely be abandoned.
- Ambrose Ditch No 10 (1300648) is active. The headgate is plotting in the wrong location and the correct location has been noted.
- Ambrose Ditch No 11 (1300649) is active.
- Schulz Ditch No 2 (13001072) does not exist.
- Jacob Beck No 3 (1300658) is active.

- Jacob Beck No 2 (1300664) is active.
- Jacob Beck No 5 (1300654) provides supplemental water to the same field as Jacob Beck No 2. Model as a diversion system.
- Jacob Beck No 6 (1300650) is active.
- Jacob Beck No 4 (1300653) is active.
- Schulz Ditch No 1 (1301165) is active and gets supplemental water from Schulz Ditch No 4 (1300646). Model as a diversion system.
- Riester No 1 (1300553) is active. The water source is Hudson Creek and it irrigates on the west side.
- C B Ditch (1300551) is active. The water source is Hudson Creek and it irrigates between the rivers

Grape Creek (near confluence with Hudson and Upstream of Colony Creek complex)

- Bluff Ditch Reid (1301192) is active.
- Schulz Ditch No 3 (1300634) and Schulz Ditch No 5 (1300638) divert from the same location. They are comingled and also are comingled with Schulz Ditch No 6 (1300655). Model as a diversion system.
- Conrad Hein Ditch No 2 (1300647) also provides water to the same field as the Schulz Ditch No 3, 5, and 6. Model as a diversion system.
- C R H Ditch (1300623) also provides water to the bottom portion of the same field as Schulz Ditch No 3, 5, and 6 and Conrad Hein No 2. Model as a diversion system.
- R B Ditch (1300632) is active. It comingles with Riester No 2 (1300622). Both irrigate on the east side of the river. Model as a diversion system.
- B B Ditch (1300552) is active. It comingles a little with Riester and R B Ditch, but it can't serve the parcels on the west side of the fence line.
- Southern Ditch (1300619) flumes across the Yankee Ditch and has some comingling with diversion off Middle Colony Creek.
- Diez Ditch (1300621) irrigates the east side of the river.
- Colfax Ditch (1300636) is active.
- Blanco Ditch (1300613) is not active.
- Pinto Ditch (1300618) is active and has three different owners. It serves a large area. The ditch crosses the river and irrigates a little parcel on the west side. It comingles with Helmuth Ditch (1300631) on the east side.

Colony Creek

This creek splits and braids. There are two bifurcations that are controlled by control structures. These are basically headgate type structures that set the flow. Originally these were natural features and now they are administered by the water commissioner. Jerry determines how much water needs to be sent down each side of the splitter based on water rights. The flow is not measured at the splitters, but they have settings that send the correct amount down each

braid based on which ditches are in priority. The splitters get adjusted about 1 to 2 times per week before the run-off. During run-off, there is enough water and they might not need to be adjusted. After the run-off starts to recede, it needs to be adjusted once or twice a week until the end of the season. The first split divides Middle Colony Creek into North Branch Middle Colony and South Branch Middle Colony, just upstream of the German Company Ditch. South Branch Middle Colony then splits a second time into South Branch Middle Colony and Middle South Branch Colony Creek. This is just downstream of the W M Knuth Ditch No 12 (1300546). The stream lines from NHD are not reliable in this area.

For administration in the area, the Germany Company is the swing ditch. The water right priority date is generally around 1875.

- Charles Schulz Ditch A (1300524) got their headgate in this year and is active**.** This is a long ditch that comingles with some of the other Schulz ditches.

South Branch Middle Colony

- German Company Ditch (1300507) is located just below the first splitter. This is big ditch for the tributary. It comingles with the BB Ditch (1300552) and the Diez Ditch (1300621). They cover a big area, but none have a large water right, so the whole area is not under irrigation at the same time. Model as a diversion system.
- Kelling Brows Desert No 2 (1300525) just running for stock water; the acreage is sub-irrigated.
- W M Knuth Ditch No 10 (1300509) is active but the headgate is mapped in the wrong location.
- W M Knuth Ditch No 11 (1300510) is active but the headgate is mapped in the wrong location.
- Hartbauer Ditch No 1 (1300503) irrigates acreage on both sides of the Colony split.
- Hartbauer Ditch No 3 (1300505) comingles with the No 1 for the field to the north of the braid and then does a field by itself.
- O'Graske Ditch No 1 (1300504) is a very senior ditch. O'Graske No 2 (1300521) is a very junior ditch with non-functional headgate.
- G H Ditch (1300513) is active.
- Schneider Ditch No 5 (1300565) is mapped in the wrong location and the correct location has been noted.
- Half Section (1300506) is active. It irrigates a really large area, with a large amount of comingling with German Co Ditch, Southern Ditch, and DiezDitch.
- Yankee Ditch (1300514) diverts from Colony Creek, goes across the meadow, dumps into Grape Creek and then gets picked back up and is piped, so you can't see the ditch on the aerial.
- Colfax Ditch (1300636) is active.
- WM Knuth No 14 (1300549) is active.

- WM Knuth Ditch No 12 (1300546) is active.

Middle South Branch

- Hartbauer Ditch No 2 (1300562) is active and is the senior ditch.
- J Hein No 5 (1300566) is mapped in the wrong location. The headgate should be on the Middle South Fork.
- J Hein No 2 (1300563) is mapped in the wrong location. The headgate should be on the Middle South Fork.
- O'Graske Ditch No 3 (1300561) is active and irrigates lands north of the Middle South Fork.

Middle North Branch

- Schneider Ditch No 6 (1300564) comingles with Schneider Ditch No 1 (1300536) and possibly with Schneider Ditch No 3 (1300541). Model as a diversion system.
- Schneider No 2 (1300542) and Schneider No 4 (1300537) are active.
- Hartbauer Ditch No 4 (1300538) and Rocky (1300544) have a common headgate, but the diversions are measured separately. The Rocky is used for pasture and not very well maintained
- Hartbauer Ditch No 5 (1300539) is not comingled, and the headgate is mapped in the wrong location. It is downstream of Rocky and Hartbauer No 4.
- J Hein Ditch No 4 (1300545) is active.
- J Hein Ditch No 3 (1300548) is active. It irrigates the bottom field, close to the house.
- Kelling Ditch No 2 (1300535) has senior water rights.
- J Hein No 1 (1300540) is active and the correct headgate location has been noted.
- Walter Ditch (1300543) and Clara Ditch (1300515) are active. They share a headgate, but have separate diversion records.
- Arnold Ditch (1300517) comingles with Walter (1300540). Model as a diversion system.
- Pinto Ditch on Colony Creek (1301089) is active and the correct headgate location has been noted.
    - Grape Creek is a pretty bad creek at this point, but the Colony creek is much better. They pull the Colony water into the Pinto Ditch (1301089), then dump it into Grape Creek, and it then gets picked up by the Pinto Ditch on Grape Creek (1300618). These ditches need to be in a diversion system. They never place a call on the Grape Creek because it would be futile. The Pinto Ditch on Colony irrigates some independent acreage before it gets to Grape creek.

North Colony Creek

North Colony Creek has a bifurcation point that creates Piroth Creek. This occurs just downstream of Kelling No 7 headgate. The bifurcation point has a control structure that Jerry uses to split the flow and administer the amount of water flowing down the two branches. The Pirate and Aqua ditches are the swing ditches. The ditch descriptions start with the North Colony Creek.

- W M Lensch Ditch No 1 (1300580) is active and irrigates pasture.
- Prairie Ditch (1300576) is active.
- Kelling Ditch No 8 (1300533) is active. It is piped until the driveway. There is not enough water in North Colony Creek for the ditch to irrigate the originally decreed acreage. They currently irrigate about 80 acres.
- Rocky Point Ditch (1300530) has been abandoned.
- Kelling Ditch No 7 (1300579) does not have a functional headgate.
- Kelling Ditch No 6 (1301122) was located on a little swale that only gets water when it is flooding. Currently, there is no headgate and it is inactive.
- Kelling Ditch No 4 (1300570) is decreed for 60 acres, but serves wet swampy ground, so the ditch rarely runs full since they don't need the additional water. It is active.
- Kelling Ditch No 5 (1300537) also serves wet swampy ground (on the other side of the river as Kelling No 4). It is active, but rarely runs full since they don't need additional water.
- Kelling Ditch No 3 (1300567) shares a headgate with Kelling Ditch No 1. It serves the left bank and is active.
- Kelling Ditch No 1 (1300568) is active. It comingles with Kelling No 2, which is located on Middle North Colony and is one of the senior ditches. These structures should be modeled as a diversion system.
- Oelrich Ditch No 2 (1300575) is active and irrigates the left bank. It shares a headgate with Albert Ditch, which serves the right bank. Oelrich No 2 supplies water to Haga Pond, which is used in a substitute supply plan for Oelrich Pond No 1 and No 2.
- Albert Ditch (1300569) is active.
- Pirate Ditch (1300573) is active and irrigates on the left bank. It shares a headgate with Aqua Ditch, which serves the right bank. Note that there is lot of subirrigation in the area and wet ground. The ranchers frequently cut hay on these fields, but they are not being irrigated – only the acreage tied to the two ditches is irrigated
- Aqua Ditch (1300572) is active.
- Emma Ditch (1300584) is active.

Piroth Creek (bifurcation of North Colony Creek)

- Piroth Ditch No 1 (1300677) is active. It comingles with Piroth No 4 (1300582).
- Piroth Ditch No 2 (1300672) is active.
- Piroth Ditch No 3 (1300671) is active. It is also serving a swampy area with wet ground.
- August Menzel Ditch No 1 (1300676) is active.
- August Menzel Ditch No 2 (1300673) is active. It also gets tail water from No 1. August Menzel Ditch No 3 (1300674) comingles as well.
- August Menzel Ditch No 4 (1300670) does not exist.
- Oelrich Ditch (1300669) is active and comingles on some of the land with Oelrich No 2. It is the senior water right on Piroth.

- Werhan Ditch (1300681) is active.
- Century Ditch (1300680) is active.
- K&M Ditch (1301066) is active, but is very junior and the property owner holds less land than what the water right was decreed for.
- WM Knuth Ditch No 2 (1300675), WM Knuth Ditch No 3 (1301065), WM Knuth Ditch No 4 (1301163), and WM Knuth Ditch No 5 (1300684) are active. The owner has moved all of them into a single headgate with an 18 inch Parshall flume, but it is an undecreed change of point of diversion. The diversion point is just downstream from the K&M Ditch. The ditches serve the same acreage (on both sides of the river) and should be modeled as a diversion system.
- St John Ditch (1300683) does not exist.

Hartnoch Creek

This creek does not have a good supply. It only runs more than 2 cfs when it is flooding. The ditches off the creek rarely get a full supply. The local senior call frequently is futile. It is not tributary to Grape Creek, as Hardnack will dry up before it can reach Grape Creek. The senior rights are Hartnoch No 1 (1300727) and Davenport No 2 (1300728), which share a headgate and are comingled. The creek effectively ends at this headgate.

- W Andrews Ditch No 1 (1300730) is active, but is junior and rarely gets a fully supply.
- W Andrews Ditch No 2 (1300732) is active, but is junior and rarely gets a fully supply.
- Andrews & Brainard No 1 (13001116) is active, but is junior and rarely gets a fully supply.
- Hartnoch Ditch No 1 (1300727) and Davenport No 2 (1300728) are active. Watch out for Hartnoch Ditch No 1 in the modeling effort because the water decree is for 60 acres and a rate has not been computed.

Andrews Creek

This is a very small creek that only has two ditches. It cannot be administered as tributary to Grape Creek because the flow essentially stops before it gets to Macey Creek.

- Sidney B Andrews No 1 (1300731) is active.
- Sidney B Andres No 2 (1301109) is active.

Macey Creek

This creek has a relatively good supply. Recently, several of the water rights have been transferred to other headgates. Court case 2000CW52 describes the majority of the change cases that moved water rights to their current locations. Additionally, an augmentation plan in water court case 02CW168 changed a number of ditch water rights and dried up acreage under the Helen Ditch (1300699), Vannier Ditch (1300689), and Benoni Jarvis Ditch (1300687). These ditches no longer irrigate. As part of this same court case, Lane Ditch (1300688) is working on

fully quantifying the consumptive use credits. Lane Ditch did not irrigate this year, but was active prior to that.

- Andrews &Brainard No 2 (1300729) is active. It diverts from Macey Creek, then carries the water over to the Hardnack Creek drainage. It is flumed across Hardnack Creek.
- WM Condradts Ditch No 1 (1300685) is active. It is the senior ditch. A portion of the water rights have been changed to augmentation.
- Dieckman Ditch No 5 (1300698) and St Almo (1300703) share a headgate. Dieckman No 5 serves the left bank and St Almo serves the right bank. There was a court case that moved several water rights to this headgate. Dieckman No 1 (1300702), Dieckman No 2 (1300715), Dieckman No 3 (1300723), and Dieckman No 4 (1301113) have been transferred to the St Almo. Their headgate structures no longer exist. Dieckman No 8 (1300713) was transferred to Dieckman No 5 and its headgate no longer exists.
- J George Ditch No 2 (1300691) is active.
- August Klose Ditch No 1 (1300726) and No 2 (1301091) serve the left bank and are comingled. They should be modeled as a diversion system. August Klose Ditch No 4 (1300721) and Knuth & Klose No 1 (13000697) serve the right bank and are comingled. They should be modeled as a diversion system. All four ditches are located at the same headgate.
- WM Knuth Ditch No 15 (1300693) is active.
- WM Knuth Ditch No 6 (1300700) is active.
- Napolean (1300694) is active. The area is poorly irrigated because the ditch does not have a large enough water right to cover the fields.
- F Ackelbein Ditch No 2 (1300690) is active.
- F Ackelbein Ditch No 3 (1301161) is active and gets comingled with Thomas Speer Ditch No 2 (1300739).

Stanton/Spring Creek

The name of the creek changes from Stanton in the headwaters to Spring Creek when it crosses the county road, right above the headgate for W Ackelbein No 6 (1300743). This area is fed by the return flows from Horn Creek (especially H.H. Thompkins) and Macey Creek (especially WM Conradt No 1) senior ditches. When the ditches turn off, you can see the lagged return flows arrive to Stanton/Spring Creek and then end after several weeks. There is rarely enough water on this creek for any ditch except the most senior right. There is a large amount of sub-irrigation occurring in this drainage.

- G Etzel Stanton Creek No 2 (1300738), G Eztel Stanton Creek No 1 (1300734), and G Eztel Stanton Creek No 3 (1300736) are not active.
- WM Conradts Ditch No 2 (1300733) is active.
- WM Conradts Ditch No 3 (1300741) is active. This area can be comingled with H.H. Tompkins (1300751).

- Ditch No 76 (1300747) is active. This area can be comingled with H.H. Tompkins (1300751).
- WM Conradts No 2 (1300733) headgate location is not mapped accurately. Jerry has turned the ditch off the past several of years because it does not have a measuring device.
- W Ackelbien No 6 (1300743) is active and comingles with W Ackelbien No 7 (1300740) for a portion of the field. No 7 just got a measuring device installed this year and is irrigating again.
- Spring Creek Ditch (1300738) is active and is the senior right. It is always calling.
- W Ackelbein No 8 (1301048) is active.
- Thomas Speer No 1 (1300739) is active and has the 2nd most senior water right on the creek. It shares a headgate with Thomas Speer Ditch No 2 and serves the left bank.
- Thomas Speer Ditch No 2 (1300749) is active and comingles with F Ackelbein Ditch No 3 (1301161).

Horn Creek

This creek has water, but is a naturally losing reach and the call will go futile. The area near the confluence of Horn Creek and Grape Creek is wet ground, most likely from groundwater fed by the creek.

- Schopp Bros Ditch No 1 (1300774) is active, but can only divert when it is determined that the downstream call is futile. They can divert until November 15 under an administrative decision made by the Division Office. Its irrigated acreage is in the Stanton Creek drainage.
- J Schmidt & F Deickman (1300776) is active, but can only divert when it is determined that the downstream call is futile.
- F Voss Ditch No 2 (1300768) does not exist.
- H. H. Tompkins Ditch No 1 (1300751) is the senior ditch on Horn Creek. 1/10th of the water right has been changed to augmentation. The dry-up acreage has been noted. The irrigated acreage is in the Stanton Creek drainage. They have multiple laterals and cover a fairly large area. They also comingle with diversions from Stanton Creek (mostly Ditch No 76. The area downstream of this ditch is sub-irrigated.
    - The Austin-Canda Seep ditch is decreed off tail water from the H.H. Tompkins. A measuring device has just been installed, but there is no headgate, so they cannot be shut off.
- F Voss Ditch No 1 (1300767) is active.
- W Ackelbein Ditch No 3 (1300760) is active and irrigates on both sides of the river.
- W Ackelbein Ditch No 1 (1300758) is active.
- C Blei Ditch No 2 (1300769) is active.
- W Ackelein No 5 (1300748) is active. It irrigates very wet ground, so wet that it cannot be hayed every year because it is too soggy to get the equipment out in the field.

- Davis Ditch No 2 (1300761) is active. Water rights from Davis Ditch No 3 (1300762), No 4 (1300763), No 5 (1300764), and No 6 (1300771) have been transferred to this ditch. Those headgates are no longer active.
- The No 73 Ditch (1300766) is active. It comingles with Davis Ditch No 1 (1300756).
- Davis Ditch No 1 (1300756) is active.
- Jarvis Ditch (130752) is active.
- Rabbit Ditch (Junior) (1300773) is active.
- Rabbit Ditch (Senior) (1300754) is active.
- Diamond Ditch (1300753) is active.
- Gagnier Ditch (1300759) is active and comingles with Cottonwood Tree Ditch (1300757) for a portion of the field.
- Cottonwood Tree Ditch (1300757) is active and irrigates some land independently of Gagnier Ditch.
- Schoolfield Ditch No 2 (1300755) is active.
- Schoolfield Ditch No 3 () is active and comingles with Schoolfield Ditch No 2 for a portion of the field. Historically, it was flumed across the Risser and Locke Ditch (1300630), but the Risser and Locke Ditch recently been put into a pipe, so the flume is no longer necessary.

Grape Creek (downstream of confluence with Stanton/Spring Creek)

The area across Grape Creek from Westcliffe is sub-irrigated. These are good hayfields, but they are not under irrigation. Also note that a seepage drainage named Spring Creek starts in this area. It has been straightened in parts by landowners, but is not a ditch.

- Risser and Locke (1300630) is a large, senior ditch that serves multiple parcels of irrigated acreage.
- Jarvis Bottom Ditch (1300643) is active.
- Aldrich Ditch No 2 (1300616) is active.
- McGuire Irrigation System (1301196) just became active this year and serves 25 acres. It is decreed off Little Spring Creek, which is a seepage area.
- Jesse Winn Ditch No 1 (1300591) is active.
- Gordon W Smith Ditch 1 (1300625) is active. They have also changed 0.3 cfs of use to the Round Mountain Well (not for augmentation, but a change in use/point of diversion).
- Gurdon W Smith 2 (1300915) is inactive and will be on the abandonment list.
- St Joe Ditch (1300615) is active and the correct headgate location has been noted.
- Voris & Jarvis Ditch 1 (1300629) is active and diverted into a pipe to reach its fields.

Dry Creek

This creek dries up downstream of the last headgate and does not reach Grape Creek.

- Aldrich Ditch No 1 (1300780) and Charles Jarvis Ditch (1300781) come off the same headgate and serve the same acreage. They should be modeled as a diversion system.
- Frank & Elze (1300782) is not active.

Hennequin Creek

This is a very small creek. It generally only runs about 1 cfs. It does not reach Grape Creek and calls from Grape Creek are generally futile.

- Miller Ditch No 1 (1301190) is very junior and only diverts when it is determined that the downstream call is futile or under free river.
- L Frank Hennequin Cr 1 (1300805) is not active.
- Hennequin Ditch (1300801) is active and is comingled with Hennequin Ditch No 2 (1300803), which diverts from Cottonwood Creek.

Cottonwood Creek

This is a very small creek. It dries up before reaching Grape Creek, and calls from Grape Creek are generally futile.

- Miller Ditch No 2 (1301050) is very junior and only diverts when the downstream call is futile or under free river.
- L Frank Cottonwood Cr 2 (1300790) is active. It irrigates in the timber for pasture.
- L Frank Cottonwood Cr 1 (1300789) is active and fairly senior.
- Hiltman & Falkenberg #4 (1300808) is active.
- F Kuehn Ditch No 2 (1300785) is active. It is diverted into a pipe until it reaches the fields.
- Moritz Brandenburg No 1 (1300795) is active.
- Moritz Brandenburg (1301123) is active.
- Moritz Brandenburg No 3 (1301084) is active.
- F Kuehn Ditch No 3 (1300798) is active and the correct headgate location has been noted.
- Hall Bros Ditch (1300788) is active.
- Jerome Ditch (1300787) is active.
- Legard Ditch No 1 (1300793) and No 2 (1300799) are currently not functional, but are working on getting fixed.
- South Cottonwood Ditch (1301060) is active.

Alvarado Creek

The creek was re-named in a court case. It has a bifurcation point and becomes North Alvarado and Alvarado Creek. The split is just upstream of the F Jeske Ditch No 3 (1301084) headgate. North Alvarado splits again into the South Branch of North Alvarado and the North Alvarado.

- Hiltman & Falkenberg #1 (1300797) is active.
- Hiltman & Falkenberg #3 (1300806) is active.
- Hiltman & Falkenberg #2 (1300809) is active and the correct headgate location has been noted.
- J Hiltman Ditch No 2 (1300812) is active and used for irrigation.
- J P Falkenberg No 1 (1300814) is active and comingles for part of the field with J P Falkenberg No 2 (1300854).
- Moritz Brandenburg No 5 (1300813) is active.
- Moritz Brandenburg No 4 (1301108) is active.
- Hall Ditch No 3 (1301106) is rarely active.
- Legard Ditch No 5 (1300826), No 6 (1301119), and No 7 (1301120) are active. They comingle to serve the same area and should be modeled as a diversion system.
- WA Bell Ditch No 1 (1300820) is active. It comingles with WA Bell No 3 APD (1300823). A portion of the WA Bell has been changed for augmentation and has been dried up. However, the area has wet ground and they are still able to hay the field because of the sub-irrigation.

North Alvarado Creek (branch of Alvarado Creek)

- F Jeske Ditch No 3 (1301084) and Moritz Brandenburg No 6 (1300810) are at the same headgate and comingle to serve the same field. They are junior and rarely in priority, but are active when they can be. They should be modeled as a diversion system.
- See the decree 96CW0228 for the details on the Legard ditches. TLegard No 9 (1300825), No 10 (1301056), No 11 (1300816), No 12 (1300818), and No 13 (1300817) work together to cover a large area. Some parts of the field are comingled.
- Legard Ditch No 14 (1301055) is active.

South Branch of North Alvarado Creek (branch of North Alvarado Creek)

- Legard Ditch No 8 (13001121) is active.
- Legard Ditch No 9 (1300825) is active.

Venable Creek

- J P Falkenberg No 2 (1300854) is active.
- F Jeske Ditch No 2 (1300850) is active.
- F Kohl Ditch no 1 (1301058) is active.
- Hall No 7 (1301083) and Hall No 5 (1300849) are not active.
- Venable Ditch (1300832) is active and irrigates on both sides of the creek.
- WA Bell No 2 (1300846) has been purchased by Fountain and Widefield and will no longer be used for irrigation.
- WA Bell No 3 (1300848) is active. It has multiple water rights with different owners. Currently, the senior most water right is not being used. Some junior water rights have been purchased by Fountain and Widefield. The remaining junior water rights are owned by Roberts Ranch. They divert into a pipe and irrigate a field on the east side of

Alvarado Creek. This field also gets tailwater from a field irrigated by Risser and Locke Ditch.

- WA Bell No 3 APD (1300823) is active and comingles with WA Bell Ditch No 1 (1300820)

Goodwin Creek

- Hamlin Ditch No 2 (1300842) is active.
- H J Clark Ditch (1300830) is active.
- Ireland Ditch No 1 (1300841) is active
- Ireland Ditch No 2 (1301057) is active.
- Ireland Ditch (1300837) is active.
- F Kohl Ditch No 2 (1300840) is active.
- F Kohl Ditch No 1 (1300831) is active and the correct headgate location has been noted.
- F Riviere Ditch No 5 (1300835) is active and the correct headgate location has been noted.
- F Riviere Ditch No 6 (1300838) is active and the correct headgate location has been noted.
- A Tod Ditch No 1 (1300828) is active.
- Bowling Ditch (1300832) is active.

Taylor Creek Basin

There are three creeks (North, Middle, and South) that join to form Taylor Creek. The swing ditches generally have a water right priority date in 1873.

South Taylor Creek

This creek has water. There are areas throughout the drainage that appear to be irrigated, but are only receiving sub-irrigation. It joins with Middle Taylor Creek upstream of A Tod Ditch No 2 (1300861) and the NHD streamlines are not very accurate in that area.

- David Lloyd Ditch No 1 (1300883) is active and comingles with Hamlin Ditch No 2 (1300842).
- Charles Ireland No 1 (1300887) and Charles Ireland No 2 (1300878) share a headgate. No 1 serves the left bank and No 2 serves the right bank. They are both active.
- Hamlin Ditch No 1 (1300867) is active.
- Hamlin Ditch No 3 (1300865) is active and the correct headgate location has been noted.
- F Riviere Ditch No 1 (1300858) is active.

Middle Taylor Creek

This creek has water. Near the headwaters of this creek is the old ski resort, which has now been converted to Hermit Basin Lodge. The Conquistador Reservoir is in this area and supplies augmentation water. The municipal intake for the Hermit Basin Augmentation plan is located near the Priestly & Robins Ditch (1300882) headgate.

- Priestly & Robins Ditch (1300882) is active.

- Lawrence Young Ditch (1300863) is active and located on a braid of Taylor Creek.
- J Reichenback Ditch No 1 (1300880) is not functional.
- Hamlin Ditch No 5 (1300868) is active.
- Hamlin Ditch No 6 (1300879) is active and the correct headgate location has been noted.
- A Katzenstein No 1 (1300860) diverts at the alternate point and carries water to the Conquistador Reservoir.
- Hamlin Ditch No 7 (1300869) is not functional.
- A Tod Ditch No 2 (1300861) is active.
- Kitzman & Todd Ditch No 1 (1300871) and Kitzman & Tod Ditch No 2 (1300872) share a common structure, with headgates off both banks. Both are active.

North Taylor Creek

This tributary supports the largest ditch in Water District 13.

- Taylor &Luten Creek (1300857) aka the Hogback Ditch is active. It diverts from North Taylor and then dumps into Luten Creek and picks the water back up. Luten Creek is a small swale and does not have a well defined channel further downstream. The ditch irrigates on both sides of Luten Creek.
- Ula Ditch (1300862) is the largest ditch in Water District 13. It has multiple owners and the parcels are scattered around the valley.
- A Katzenstein No 2 (1300859) is active.
- R Kitzman No 1 (1301053) is decreed on springs downstream of the reservoirs. It is active.
- Gordon Ditch (1300890) is diverted into a pipe. It was just moved via court case and the headgate is 20 feet upstream of the Kitzman and Tod No 3 (1300897).
- R Kitzman No 3 (1301054) is inactive.
- Kitzman and Tod No 3 (1300897) is active.

Taylor Creek (downstream of confluence with South, Middle, and North Taylor creeks)

- Smith Ditch (1300855) is active. It is the senior ditch on Taylor Creek and has water rights for 8 cfs, making it one of the larger ditches in the valley. It also has a very junior additional appropriation of 1.2 c.f.s.
- Joe Davis No 1 (1300892) is active. It is decreed for tailwater from the Smith Ditch.
- Eldridge Shields Johnson (1300856) is active. The lower fields comingle with Kennicott & Davis No 3 (1300866) and Davis &Kennicott No 4 (1300881).
- Kennicott & Davis No 3 (1300866) is active.
- Davis & Kennicott No 4 (1300881) is active.

Swift Creek

This creek has water and rarely causes problems with administration.

- C-S Cox Short Creek (1300907) is active and the correct headgate location has been noted. It is located on Short Creek, which is a swale next to Swift Creek.

- J Jarvis Swift Creek No 3 (1300902) is active and the correct headgate location has been noted.
- H Lohstroh Ditch No 1 (1300909) is active and the correct headgate location has been noted.
- F L Kennicott Swift Cr 1 (1300899) is active.
- Freer Beckwith Kennicott (1300905) is active. About 35 acres have been dried up as part of a change to augmentation plan. The augmentation replaces evaporative losses for a series of ponds on the property.
- Highline Ditch (1301202) is active and has been through a change case for a portion of the water rights. For active flood irrigation, they are diverting into a pipe and irrigating about a 50 acre hemp field. The changed portion is used for the golf course. They are allowed to sprinkler irrigate 7 acres on the course (basically the greens and the tees). Additionally, a portion was changed to augmentation for the golf course ponds. The golf course has just gone into bankruptcy, so it might not be in use for a while.
- Voris Swift Creek No 1 (1300898) is active.
- Voris Swift Creek No 2 (1300901) has been transferred to the Highline and is no longer a functional headgate.
- J Jarvis Swift Cr No 4 (1300900) was also transferred to the golf course.

Texas Creek

The Texas Creek drainage is tributary to the Arkansas River. The swing ditches generally have a water right priority date in 1879.

- Hugg Ditch No 2 (1300969) is active.
- Hugg Ditch No 1 (1300970) is active.
- Hugg Ditch No 3 (1300960) is active.
- Hugg Ditch No 4 (1301035) is active.
- Dissmore-Mclurken No 2 (1300958) is inactive.
- McClurken No 1 (1300959) is inactive.
- Ritter Ditch No 1 (1300951) is active.
- Ritter Ditch No 2 (1300955) is active.
- Caughman Ditch No 2 (1300975) is active. It is diverted into a pipe.
- Caughman Ditch No 1 (1300968) is active.

Greenleaf Creek

Greenleaf Creek is a tributary to Texas Creek. This area is dominated by the Schueler ditches. They are all decreed alternative points to each other and are owned by a single ranch. The ranch will “bump” the water around to the different headgates at will, so it is difficult to get good diversion records. Jerry is working with the user to get additional information. Consider modeling ditches serving the ranch as a diversion system.

- Schueler Ditch No 1 (1301032) is active.

- Schueler Ditch No 2 (1301166) is active.
- Schueler Ditch No 3 (1301167) is active.
- Vahldick Ditch No 1 (1301041) is active.
- Vahldick Ditch No 2 (1301078) is active.
- All the Schueller ditches (1-8) are active as of 2017.

Goat Creek

Goat Creek is a tributary to Texas Creek. This is a very small tributary and the channel is poorly defined in this area.

- Bricks Ditch (1301506) is active. The tailwater collects in the pond.

Texas Creek (Downstream of confluence with Greenleaf Creek)

- Myers Ditch (1300962) is active.
- Reed Ditch No 1 (1300967) is active, but not all of the fields in the area are irrigated. There is a lot of sub-irrigation and they have a beaver infestation problem that causes backwater.

South Brush Creek

- Coffin Ditch (1300998) is inactive.
- Sharp & Hendrickson (1301200) is inactive.
- Spruce Grove Ditch (1301005) and Wester Ditch (1301006) share a headgate and are comingled. They serve a single parcel together and should be modeled as a diversion system.
- Gader Ditch (1301149) is active but rarely diverts.
- Kick & Kint Ditch (1301002) is active and serves a large area. Some of the ditch is in a pipe.
- John Howard Ditch (1300999) is active and the correct headgate location has been noted. The owner is notorious for running the ditch late.
- Koch Ditch (1301003) is active and comingles with John Cox Ditch (1301001) and Houle Ditch No 1 (1301000).

North Brush Creek

The senior ditches on Brush Creek and Texas Creek divert from North Brush Creek. They are comingled, but have three different headgates close together. This includes Hendrickson & Dissmore (1300983), Sharp-Foster Ditch (1300982), Sawmill VorisDtich (1300988) and WR Voris (1300990). These ditches should be modeled as a diversion system.

- Adams Ditch No 2 (1300989) is active.
- Houle Ditch No 6 (1300991) is active.
- Houle Ditch No 5 (1300987) is active.
- Houle Ditch No 4 (1301081) is active.
- Houle Ditch No 2 (1300986) is active and the correct headgate location has been noted.

- Houle Ditch No 3 (1300985) is active.
- Thomas Balman Ditch No 5 (1300994) is active.
- Thomas Balman Ditch No 3 (1300998) is active. It is also used to fill the ponds, which are under an augmentation plan
- Thomas Balman Ditch No 4 (1301013) is active and some has been changed to augmentation.
- Gove Ditch (1301014) is active and diverts from Koch's Spring Branch Brush Creek.
- Thomas Balman Ditch No 1 (1300981) and Thomas Balman Ditch No 2 (1300984) are active. They are comingled and should be modeled as a diversion system.

Brush Creek

North and South Brush creeks join to form Brush Creek, just downstream of the Thomas Balman Ditch No 1 (1300981) headgate.

- Lockhart Ditch No 2 (1300992) is active.
- Murch Ditch (1301100) is active and comingles on the lower portion of the field with Lockhart Ditch No 1 (1300993).

Dissmore Creek

- Dissmore Ditch No 1 (1301016) is active.
- Dissmore Ditch No 2 (1301015) is active.

Texas Creek (downstream of Dissmore Creek confluence)

- Howard Ditch No 2 (1300966) is active.
- Howard Ditch No 3 (1300965) is active.
- Howard Ditch No 1 (1300978) is active. The Belknap & Howard Ditch (1300957) has been transferred to this ditch.
- Belknap & Hendrickson (1301037) is active. The Duckett No 1 (1300956) was moved to this ditch.
- Duckett Ditch No 2 (1300961) is active

Spruce Creek

- Duckett Creek Ditch No 1 (1301210), No 2 (1301212), and No 3 (1301213) are actually decreed for small springs and are very minor ditches.
- LeMaster Ditch (1301021) is active.
- Amsbary Ditch (1301189) is active.
- Pruett Ditch (1301042) is active.
- Dissmore Ditch (131018) is active and the correct headgate location has been noted.
- Prengle Ditch (1301019) is active.
- Abbott and Prengle Ditch (1301020) is active.

- Jake Wells Ditch (1301017) is active. A portion of the water right has been transferred to Spruce Creek Reservoir for augmentation (located just upstream of the ditch headgate).
- Henry Belknap (1301143) is not active.

Lake Creek

- John Duckett Ditch (1301031) is active.
- Mow Ditch (1301152) is active and under sprinkler irrigation.
- Abbott Ditch (Lake Crk) (1301029) is active and under sprinkler irrigation.
- Price Ditch No 2 (1301044) is active.
- Amsbary Ditch No 1 (1300821) is active.
- Squire Ditch (1301030) is active.
- Jasper M Duckett Ditch (1301026) is active.
- Hayden Ditch (1301022) is active.
- Rogers Ditch (1301023) is active. It is diverted into a pipe and under sprinkler irrigation.
- Belknap Ditch No 2 (1301025) is active and comingles with Burgman Ditch No 1 (1301028) for the lower portion of the field.
- Belknap Ditch No 1 (1301024) is active.

Texas Creek (downstream of confluence with Lake Creek)

- Vipond Ditch (1301036) is active and works with Mill Ditch (1300954) to supply water for an augmentation plan. Vipond Ditch also fills the Iron Horse ponds (1 ,2 and 3). The land has been dried-up under Mill Ditch. There is a data logger on Mill Ditch for the augmentation station. The augmentation plan covers the evaporative losses from the ponds.
- McCormick Ditch (1300953) is inactive.
- Likely & McCormick (1300953) is active.
- Hill Ditch No 1 (1300949) was moved up to McCormick, but they are not using it.
- Hill Ditch No 2 (1300950) diverts at the alternative point (1300526) and is active.
- Likely Ditch (1300964) has a new decreed point of diversion (1301145) and is active.