

## **SPDSS Memorandum Final**

**To:** Ray Alvarado and Ray Bennett  
**From:** LRE, Erin Wilson & Kara Sobieski  
**Subject:** Task 3 – Identify Key Diversion Structures  
Notes from Water District 64 Meeting  
**Date:** April 6, 2003, revised May 3, 2006

### **Introduction**

This memorandum provides notes from October 30, 2003 meeting with Water District 64 Water Commissioner. Meetings are being held with Water Commissioners in each Water District in the SPDSS study area. The objectives of these meetings are 1) to develop an initial basin understanding; 2) to determine what irrigation structures should be included as “Key Structures” in future detailed modeling efforts, and 3) to determine which reservoirs and diversions warrant more detailed investigation and technical documentation. These objectives support both Task 3 – Identify Key Diversion Structures and Task 5 – Identify Key Storage Reservoirs and Develop Operating Memorandum. Information in this memorandum is believed to be accurate. However, this information should not be relied upon in any legal proceeding.

### **Approach**

Prior to the meeting, potential Key Structures for Division 64 were identified using the following procedure outlined in the SPDSS Scope of Work:

1. Identify net absolute water rights per structure. Select initial key structure cutoff value based on the 85 percent recommendation (SPDSS Feasibility Study, October 2001) for each water district.
2. Determine average annual diversion data for structures during three average hydrologic years, one year each during the 1950s, the 1970s, and the 1990s. Add additional structures to the key list that diverted an average of 1,000 acre-feet per year on the main stem during any of the representative years. Note that this step will allow the inclusion of larger diversion structures having active water rights during the earlier years of the study that were subsequently transferred to other ditches or other uses.
3. Review readily available straight-line diagrams and include additional structures as appropriate, based on water rights and location.

Table 1, provided in the Results Section of this memorandum, lists the initial list of key diversion structures, the total of their decreed water rights, the period of record of available diversion records, their average annual diversions for the period of record, the water source. In addition, as noted in the comment line, it includes new structures added during the interviews, or

structures that were removed as key and will be modeled in an aggregated fashion. Table 1 generally lists structures in upstream to downstream order. On-going Task 3 efforts include review of irrigated acreage, water rights, and diversion records. It is expected that the key structure list shown in Table 1 will be further refined during these, and model development, efforts.

The interview with the Water Commissioners and the Division Engineer was intended to determine additional structures that should be considered key based on seniority, water administration, or basin operations (including structures with supplemental reservoir water). Prior to the meeting, a brief description of the purpose and goals of the interview was provided to the Water Commissioner, Jim Hanrahan. 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 included 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.

David Ellington, Division 1, developed a preliminary straight-line diagram of Water District 64. In addition, LRE developed maps displaying reservoirs, diversion headgate locations, and canal layouts on a quad-sheet background of the water district facilitate the discussions.

### **Meeting Attendance**

The meeting was held at the Lower South Platte Conservancy District offices in Sterling. The following people attended the meeting:

Jim Hall, Division 1 Engineer  
Jim Hanrahan, District 64 Water Commissioner  
Russell Stroud, Deputy District 64 Water Commissioner  
David Nettles, Division 1  
Erin Wilson, Leonard Rice Engineers  
Kara Sobieski, Leonard Rice Engineers

### **Meeting Notes**

#### **Transbasin Diversions**

No transbasin diversions are delivered for use in Water District 64.

## **Compacts and Agreements Affecting District 64 Administration**

- **South Platte River Compact.** The 1923 decrees limit Colorado's use of South Platte River basin water as follows:
  1. From April 1<sup>st</sup> through October 15<sup>th</sup>, the measured flow at the combined Julesburg stream flow gage will not be diminished to less than 120 cubic feet per second by Colorado diversions junior to June 14, 1897. The Western Canal is the first diversion point in Nebraska, and has a water right for 120 cfs with a June 14, 1897 priority date.
  2. The compact priority is not recorded as a compact "call", but if flow is less than 120 cfs at the State line during the defined "irrigation season", diversions junior to June 14, 1897 are curtailed unless they are augmenting their use. Curtailment due to compact restrictions only occurs in Water District 64.
  3. From October 16<sup>th</sup> through March 30<sup>th</sup>, Colorado has full use of South Platte River water within the boundaries of the State of Colorado.

## **Stream Gages and General Administration**

- The USGS gages on the South Platte River have gone through some adjustments in the past couple of decades. Due to flow splits in multiple channels in the lower South Platte River, only two reliable gages exist within District 64.
- South Platte River at Cooper Bridge, near Balzac, CO (067559910) is located at the upstream district boundary. The Balzac gage was moved in October 1980 from downstream to upstream of the Prewitt Inlet Canal, and recording responsibilities were assumed by DWR. Streamflow records for prior years can be found in records for the South Platte River at Balzac, CO (06760000) gage. When combining these two gages to get a full historical record, diversions through the Prewitt Inlet Canal and Testel Ditch need to be removed from the 06760000 gage.
- South Platte River at Julesburg, CO (06764000) is located near the Colorado state line at the downstream district boundary. The gage is compiled from three separate recorders and recorded as the total stream flow for the river. Three separate recorders are necessary due to multiple conveyance channels in the river. Multiple channels begin just downstream of the Balzac gage. An additional Julesburg gage exists on the main channel of the South Platte River, although does not represent the combined flow.
- Jim Hanrahan has managed Water District 64 since 1992. He retired from this position in February of 2004. There is a possibility that Russell Stroud, current assistant administrator, may accept the position as Water Commissioner of this District.
- Historically, little time is spent on administration of small tributaries to the South Platte River.
- Releases from Prewitt reservoirs are officially charged a delivery loss of 1 percent per mile. No charges are assessed other reservoirs in Water District 64, as they deliver for irrigation directly through ditch systems, and do not use the river for conveyance.
- Evaporation is not charged for most reservoirs – most reservoirs are off-channel.
- In general, irrigated acreage is served by only one ditch. Instances of co-mingling irrigation water are very few. Ditch irrigation service areas do not overlap in District 64. There are some exchanges between canals, but generally only one canal can physically serve each parcel of land.

- Sprinkler use in Water District 64 has only begun on a wide-scale in the last 5 to 10 years (late 1990s).
- Bank storage for the South Platte River is a big issue in District 64. Bank storage is thought to be responsible for the gain/loss pattern of the river. Typically, if the river is shown to be gaining at the Balzac gage, it is a losing river situation throughout the middle of the district due to large amounts of bank storage. Likewise, if the river is shown to be losing at the Balzac gage, it is a gaining river situation throughout the middle of the district. Note that these observations have not been supported by a gain/loss study of the reach.
- Wells are generally used to supplement surface water sources as alternate points of diversion and are beginning to serve as sources of augmentation. GASP previously provided most augmentation water for the district. Well users are now applying for augmentation decrees, generally in four groups:
  - Logan Well Users – located from the district boundary to approximately the Henderson and Smith Ditch.
  - Lower Logan Well Users – located from downstream of the Henderson and Smith Ditch to the Sedgewick County Line.
  - Sedgewick Well Users – located from downstream of the Sedgewick County Line to approximately Lodge Pole Creek.
  - Lower South Platte Water Conservancy District – located from Lodge Pole Creek to the Colorado State line.

In addition, Harmony Ditch Company and Lowline Ditch Company have filed for augmentation decrees. Prewitt Reservoir has been a large supplier of augmentation water to users in Water District 64 as well as upstream users, since the mid-1970s.

In general, when diversion rights have been changed to well alternate points, their decrees allow them to pump in priority and not worry about lagged depletions.

Historically, GASP has utilized augmentation wells to replace out-of-priority depletions, but the use of these wells may change in Water District 64:

- 3 lower wells pump to the river for diversion to South Reservation Ditch (not used in 2003),
- 3 wells on the Peterson Ditch pump directly into the ditch (not used in 2003),
- 1 well on Powel and Blair Ditch pumps directly into the ditch, and
- 10 wells on Sterling #1 Irrigation Ditch, pump directly into the ditch.
- The following table provides a normal year river call sequence:

**Normal Year River Call Sequence**

Winter and early Spring	Generally, no calls from November through mid-December. All reservoirs are storing – Prewitt and North Sterling store all winter and spring. During the dry conditions the last few years, Julesburg Reservoir storage right has called during the winter fill, but upstream reservoirs have not had to pass water to assure filling of Julesburg reservoir. Diversions for recharge decrees downstream of Harmony #1 continue until they are frozen out. Julesburg generally calls again in spring
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	before irrigation season, and can usually fill before the spring runoff.
May to mid Irrigation Season	Once Julesburg Reservoir fills, there are typically Free River conditions until June, at which time recharge is the primary use in the District. . The irrigation season generally begins in May. Junior direct right diversion calls are on the river from June to July, beginning with Harmony #1 Ditch or Farmers and People's Ditch.
Mid June until End of Irrigation Season	Mid to early July, Sterling #1 controls the river, as they are the senior right. Senior direct right diversions govern and dry up the river. After end of irrigation season, recharge is occurring on the river. As of November 1 <sup>st</sup> in the last few years, recharge upstream of Julesburg Reservoir has been shut off to allow for fill of reservoir.

- In general, call sequence and reporting has changed over time.
- Most years, all three major reservoirs in the basin will fill.
- Junior rights in the basin are considered to be rights junior to the South Platte River Compact administration date of June 14, 1897.
- Dry up points in the river, upstream to downstream, are as follows. Note that the commissioner reports dry up, though Prewitt or other water sources may be passed.
  - Sterling No. 1 Ditch (6400528) – controls the river in low flows back to the City of Kersey.
  - Henderson and Smith Ditch (6400525) – return flows downstream of Sterling No. 1 Ditch allow for diversions at this ditch, then dry up below.
  - Below Low Line Ditch (6400524) – located close to the Henderson and Smith Ditch providing for overlapping dry up periods. Note that Prewitt augmentation water is “sheparded” below this ditch. If only Prewitt augmentation water in river, water commissioner still reports as dry-up.
  - Iliff and Platte Valley Canal (6400520) – for a majority of the summer, this ditch diverts the entire river (including augmentation water) for return above Powell and Blair Ditch. This is done to avoid excessive river losses.
  - Powell and Blair Ditch (6400516). If only Prewitt augmentation water in river, water commissioner still reports as dry-up.
  - Harmony Ditch No. 1 (6400511)
  - Peterson Ditch (6400504)
  - South Reservation Ditch (6400503)
  - Liddle Ditch (6400502) – infrequent dry up as the ditch typically uses more groundwater than surface water.
- The Colorado Division of Water Resources (DWR) established a series of coding principles to be used by the Water Commissioners to accurately describe diversions and uses within the Water Districts. Diversion coding for Water District 64 generally follows these basic coding conventions since the mid-1980s. Simple diversions with direct uses are typically correct from 1950 on. Prior to the mid 1980s, however, the coding for more complex diversions, including carrier ditches and exchanges, does not appear to follow the coding conventions set forth by the DWR.

## C-BT Water and Municipal Use

- Water District 64 has the opportunity to take advantage of C-BT return flows, however no entity in the district owns C-BT units.
- The City of Sterling owns shares in Sterling No. 1, Sterling No. 2, Pawnee, and Springdale Ditches. The City of Sterling owns all of the shares in the Henderson and Smith Ditch.
- The City of Sterling uses ground water to meet their municipal needs and use their ditch shares for augmentation. Their ditch shares have been decreed for augmentation.

## Reservoir Specific Information

- **Prewitt Reservoir (0103352)** – located just downstream of the district boundary on the south side of the river. The inlet to this reservoir originates at the South Platte River in District 1. There is no irrigation in route to the reservoir. Diversions to Prewitt Reservoir have been recorded and entered in HydroBase under the Prewitt Inlet Canal (0100829) since 1996. Prior to that time, they were recorded and stored in HydroBase under the reservoir WDID (0103352).

Reservoir releases through the outlet canal, capacity of 700-800 cfs, terminate in District 64. The Prewitt Outlet Canal intersects with the South Platte Ditch, although this ditch rarely takes any water. Capacity restriction allows for only 28,500 acre-feet, with a bulk of the capacity filled in the springtime. Prewitt Reservoir has a refill right for 29,800 acre-feet. This reservoir is typically the last reservoir in Water District 64 to be filled – North Sterling Reservoir must be full prior to storage water diverted to Prewitt. Prewitt experiences large seepage losses, and a drain ditch collect the seepage water and returns it back to the river.

Since the mid-1970s, Prewitt has been used extensively for augmentation. As note above, if the only water in the river is Prewitt augmentation water, the water commissioner still reports as dry-up. Augmentation releases are made directly to the South Platte and release schedule and subsequent accounting is managed by the reservoir company, and reported to the Water Commissioner monthly. Currently, Jon Altenhofen with Northern Colorado Water Conservancy District (NCWCD) does the accounting for the reservoir.

Prewitt Reservoir water users are split into three subdistricts:

- Morgan Prewitt Reservoir Company – includes users located upstream of District 1 and 64 boundary, receive augmentation water by exchange.
  - Logan Irrigation District – includes users located between the District 1 and 64 boundary and Iliff and Platte Valley Canal. Water must be used within this sub-district. Users include Pawnee, Schneider, and Springdale Ditches.
  - Iliff Irrigation District – includes users located between Iliff and Platte Valley Canal and Harmony No. 1 Ditch. Water must be used within this sub-district.
- **Point of Rocks Reservoir, aka North Sterling Reservoir (0103551)** – located north of the City of Sterling. North Sterling Canal (0100687), the reservoir's inlet, originates in District 1 and is approximately 65 miles long. Seepage from both North Sterling Canal and North

Sterling Outlet canal is decreed for augmentation and recharge; there is a measuring device just upstream of the reservoir to determine the amount of recharge that occurs along the length of the inlet canal. They can only claim seepage when not filling the reservoir or taking water under junior direct decrees. North Sterling Outlet Ditch is also approximately 65 miles long and terminates just downstream of Johnson Draw.

The reservoir's primary purpose is for irrigation water and is typically the first reservoir in District 64 to fill. The decree does not allow the water to leave the District. The irrigation water is delivered only through the North Sterling Outlet, which has a capacity to release approximately 700 cfs. Operationally, the reservoir will only release a minimum order of 100 cfs. Direct diversion right water may be run through the canal into the fall. If irrigation needs are satisfied, than direct diversion water can be credited to recharge.

North Sterling Irrigation District leases excess recharge to other entities, including GASP, North Sterling No. 1, Public Service, City of Fort Morgan, and various feed lots and dairies.

North Sterling Reservoir has storage decrees with Pawnee Creek and Cedar Creeks as sources – these decrees are stored in HydroBase under Point of Rocks Reservoir, WDID 6403551. North Sterling Reservoir also has storage decrees with South Platte as the source – these decrees are stored in HydroBase under North Sterling Reservoir, WDID 0103551. Diversions through structure are recorded under both WDIDs, and do not correspond.

- **Julesburg Reservoir, aka Jumbo Reservoir (6403906)** – located upstream of Colorado-Nebraska state-line on the north side of the river. Julesburg Reservoir is filled through the Harmony No 1 Ditch (6400511), which also diverts direct water for irrigation in route to the reservoir. The Highline Canal conveys releases from Julesburg Reservoir for irrigation off the Highline Canal, and to other ditches in the Julesburg Irrigation System, including Settlers and Peterson Ditches. No losses are assessed to released water.

### **Ditch Specific Information**

Ditches discussed in this section are generally listed in upstream to downstream order.

- **South Platte Ditch (6400535)** – provides some irrigation water to crops including alfalfa, corn and sugar beets. Irrigation is generally supplemented by wells. Where sprinklers are used, ground water is primary source. Prewitt Reservoir can release directly to the South Platte Ditch (but infrequent). The turnout at the South Platte River and the junction with the Prewitt Outlet are both equipped with measurement devices.
- **Farmer's Pawnee Ditch (6400533)** – has supplemental wells and augments its well use with own direct diversion rights.
- **Davis Bros. Ditch (6400532)** – no longer diverts, but water rights previously associated with ditch are under augmentation plans (called alternative points in decree). Note that during the original adjudication, Davis Brothers and Schneider Ditches, along with the Johnson and Edwards Ditch (0100526) in Water District 1, were assigned what are termed “sub-irrigation meadow rights”. This was intended to keep these ditches from expanding their use, and the rights only allow irrigation up to July 10<sup>th</sup>.

- **Schneider Ditch** (6400531) – ditch is part of the Logan Well Users augmentation plan.
- **Springdale Ditch** (6400530) – ditch water is supplemented with groundwater and water from Prewitt Reservoir – not many sprinklers under this ditch.
- **Sterling No. 1 Ditch** (6400528) – ditch will control the river upstream to Kersey, especially in low flows, and is a point of dry up. Because rights are senior, there are few wells on the system, although 10 GASP wells pump into the ditch for augmentation of well depletions. GASP wells are supposed to pump only when a call is on. Ditch has a history of being problematic with shareholders who are not receiving their water. City of Sterling owns shares in this ditch.
- **Sterling Hereford Cattle Co.'s Ditch** (6400527) – structures is not usable.
- **Sterling No. 2 Ditch** (6400526) – alternate point of diversion for the City of Sterling. Headgate is not usable.
- **Henderson and Smith Ditch** (6400525) – City of Sterling owns all of the shares. There is current irrigation. When Sterling No. 1 Ditch dries up the river, return flows are generally sufficient for diversions through Henderson and Smith and Low Line Ditches. They then dry the river.
- **Low Line Ditch** (6400524) – ditch can cause dry-up point along the river, in conjunction with the Henderson and Smith Ditch as noted above. Note that Prewitt Reservoir water released for augmentation is sheparded downstream of these two ditches, and there is some contention.
- **Bravo Ditch** (6400522) – small ditch and it shares a structure with Farmer and People's Ditch, diversions were historically recorded separately, but now are combined.
- **Farmers Ditch, aka Farmers and People's Ditch** (6400521) – the point of diversion for this ditch has been transferred to the Bravo Ditch.
- **Iliff and Platte Valley Canal** (6400520) – ditch responsible for summer months dry-up of river, as ditch diverts all the water (including augmentation water) and returns it to the South Platte via Lewis Creek. This is strategic – the river section between Iliff and Platte Valley Canal and Lewis Creek experiences high losses. Lewis Creek confluence is above the next point of diversion. Although Iliff and Platte Valley is not senior, it is generally satisfied by return flows from upstream senior diverters.
- **Jud Brush Ditch** (6400519) – alternate point of diversion for wells. Headgate has been abandoned.
- **Lone Tree Ditch** (6400518) – alternate point of diversion for wells. Headgate has been abandoned. Rights are very senior.
- **Powell and Blair Ditch** (6400516) – Can dry up river if Iliff Platte Ditch is not diverting during summer. One GASP well is located along the ditch system.
- **Harmony No. 2 Ditch** (6400515) – ditch no longer diverts from the river – used seepage from North Sterling Reservoir. No alternate point of diversion for wells are decreed for this system.
- **Ramsey Ditch** (6400514) – small ditch with only one owner irrigated along the river bottom. No wells are used on this system, however, old wells could be reactivated in the future.
- **Chambers Ditch** (6400513) – ditch no longer diverts from the river, although it is an alternate point of diversion to 15 wells serving the same historical lands.
- **Julesburg Res Int Ditch** (6400512) – this is an administrative structure used only to differentiate diversions under Harmony No 1 for direct use and diversions to Julesburg Reservoir.



- **Harmony No. 1 Ditch** (6400511) – Large water rights on the ditch have the ability to dry up the river. Ditch serves as the inlet to Julesburg Reservoir but also irrigates land en route and below the reservoir.
- **Harmony No. 3 Ditch** (6400510) – alternate point of diversion for some wells. Can be irrigated from Harmony No. 1 Ditch. Headgate has been abandoned.
- **Settlers Ditch** (6400508) – ditch does not have a headgate at the river, transferred to alternative point of diversion for wells. Julesburg Irrigation District uses seep water collected along the historic path.
- **Tamarack Ditch** (6400509) – No active water rights. Water rights transferred “to South Platte River” as part of augmentation plan. Quit diverting from the river in 1992. Wells now serve ~500 irrigated acres under junior rights.
- **Long Island Ditch** (6400507) – ditch no longer diverts from the river, alternate point of diversion to wells. Primarily owned by the Division of Fish and Wildlife.
- **Red Lion Ditch** (6400506) – ditch no longer diverts from the river, alternate point of diversion to wells. Primarily owned by the Division of Fish and Wildlife.
- **Peterson Ditch** (6400504) – ditch can divert from the river although also serves as an alternate point of diversion to wells. Irrigation water can be delivered directly to Peterson Ditch from Julesburg Reservoir through natural drainages. Peterson Ditch irrigates some Nebraska agriculture acreage.
- **South Reservation Ditch** (6400503) – for approximately 30 years, the South Reservation ditch has been filled by GASP pumping out of the South Platte just downstream of Peterson Ditch. This allows them to receive the 16 cfs without calling out the Peterson Ditch. Note that they did not pump in 2003, and may not pump in the future.
- **Liddle Ditch** (6400502) – ditch can divert from the river although also serves as an alternate point of diversion to wells. System generally uses more groundwater than ditch water.
- **Carlson Ditch** (6400501) –diverts through infiltration gallery/pumps.

## Recommended Detailed Documentation

More detailed information should be developed and included in the Basin Information Report for the following canals, reservoirs, or entities. Note that off-channel reservoirs are generally recommended to be included with the ditch entity operating memoranda, and not as stand-alone memoranda.

- North Sterling Irrigation District (North Sterling Reservoir)
- Prewitt Reservoir
- Julesburg Irrigation Company (Julesburg Reservoir)

**Table 1**

<b>Structure</b>	<b>Name</b>	<b>Total Decree (cfs)</b>	<b>Diversion Record Period</b>	<b>Average Annual Div (af)</b>	<b>Diversion Source</b>	<b>Comment</b>	<b>Key</b>
6400625	SANDHILL D		1973 - 1978	1717	SOUTH PLATTE RIVER	Significant Diversions	NO
6400613	SPARKS DITCH		1949 - 1958	1253	SOUTH PLATTE RIVER	Significant Diversions	NO
6400599	RICE DITCH		1949 - 1958	1256	SOUTH PLATTE RIVER	Significant Diversions	NO
6400535	SOUTH PLATTE DITCH	173.95	1949 - 2001	11234	SOUTH PLATTE RIVER	Significant Diversions	YES
6400533	PAWNEE DITCH	165.40	1949 - 2001	26402	SOUTH PLATTE RIVER	Significant Diversions	YES
6400532	DAVIS BROS DITCH	65.21	1949 - 1991	3177	SOUTH PLATTE RIVER	Alternate Point Wells	YES
6400531	SCHNEIDER DITCH	48.79	1949 - 2001	8378	SOUTH PLATTE RIVER	Significant Diversions	YES
6400530	SPRINGDALE DITCH	62.28	1949 – 2001	7116	SOUTH PLATTE RIVER	Significant Diversions	YES
6400528	STERLING IRR CO DITCH 1	113.55	1949 – 2001	23334	SOUTH PLATTE RIVER	Significant Diversions	YES
6400527	STERLING HERFD CTL CO D	21.00			SOUTH PLATTE RIVER	Structure is not usable, Alternate point to wells	YES
6400526	STERLING IRR CO DITCH 2	43.54	1949 - 1998	1322	SOUTH PLATTE RIVER	Alternate Point to City of Sterling M&I Wells	YES
6400525	HENDERSON SMITH DITCH	36.50	1949 – 2001	2370	SOUTH PLATTE RIVER	Significant Diversions	YES
6400524	LOWLINE DITCH	39.76	1949 – 2001	6281	SOUTH PLATTE RIVER	Significant Diversions	YES
6400522	BRAVO DITCH	60.00	1949 – 2001	5738	SOUTH PLATTE RIVER	Primary ditch of Multisystem	YES
6400521	FARMERS DITCH	16.00	1949 – 1997	1482	SOUTH PLATTE RIVER	Multisystem with 522	MS
6400520	ILIFF PLATTE VALLEY D	150.00	1949 – 2001	19552	SOUTH PLATTE RIVER	Significant Diversions	YES
6400519	JUD BRUSH DITCH	10.00	1949 – 1975	344	SOUTH PLATTE RIVER	Alternate Point Wells	YES
6400518	LONE TREE DITCH	118.00	1949 – 1995	3001	SOUTH PLATTE RIVER	Alternate Point Wells	YES
6400516	POWELL BLAIR DITCH	40.00	1949 – 2001	4423	SOUTH PLATTE RIVER	Significant Diversions	YES
6400515	HARMONY DITCH 2	50.00	1967 - 2001	1622	SOUTH PLATTE RIVER	Watered from N. Sterling Reservoir Seepage and springs. Multisystem with 511	MS

6400514	RAMSEY DITCH	12.00	1949 - 2001	999	SOUTH PLATTE RIVER	Significant Diversions	YES
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Table 1 Continued

6400513	CHAMBERS DITCH	30.00	1949 - 1995	3412	SOUTH PLATTE RIVER	Alternate Point Wells	YES
6400512	JULESBURG RES INT D		1949 - 2001	17509	SOUTH PLATTE RIVER	Same as Harmony Ditch 1	NO
6400511	HARMONY DITCH 1	702.00	1949 - 2001	32578	SOUTH PLATTE RIVER	Primary ditch of Multisystem (with 515 and 511)	YES
6400510	HARMONY DITCH 3	219.00			SOUTH PLATTE RIVER	Multisystem with 511	MS
6400509	TAMARACK DITCH		1949 - 1992	1358	SOUTH PLATTE RIVER	No active Water Rights, lands now served by junior wells	YES
6400508	SETTLERS DITCH	103.74	1949 - 2001	2798	SOUTH PLATTE RIVER	Alternate Point Wells	YES
6400507	LONG ISLAND DITCH	34.50			SOUTH PLATTE RIVER	Alternate Point Wells	YES
6400506	RED LION SUPPLY DITCH	52.00	1949 - 1985	1269	SOUTH PLATTE RIVER	Alternate Point Wells	YES
6400504	PETERSON DITCH	199.00	1949 - 2001	8047	SOUTH PLATTE RIVER	Significant Diversions	YES
6400503	SOUTH RESERVATION DITCH	25.00	1949 - 2001	3465	SOUTH PLATTE RIVER	Significant Diversions	YES
6400502	LIDDLE DITCH	10.00	1949 - 2001	2065	SOUTH PLATTE RIVER	Significant Diversions	YES
6400501	CARLSON DITCH	16.00	1949 - 2001	721	SOUTH PLATTE RIVER	Significant Diversions	YES