APPENDIX A

HISTORIC INFORMATION

Notes from
Powerful Rockey, The Blue Mountains and the Oregon Trail
By John W. Evans

Nathaniel Wyeth, first expedition:
8 Oct. 1832. "Moved 4 miles to the main creek" [Powder River] "and laid down cold and hungry and supperless hoping that our traps would give us beaver in the morning."

9 Oct. "Got 7 beaver and went to eating like good fellows moved this day 6 miles down creek here running about N."

10 Oct. "Moved N. and down creek about 15 miles...This day rain this creek from where we struck it to this place runs in an extensive plain of fertile soile equal to the best I ever saw of about 5 mils average width..." (pg. 31)

Nathaniel Wyeth, second expedition:
28 Aug. 1834. "...came on Powder River which we followed down about 5 miles and camped...This day killed an antelope and a Fawn and saw fresh Elk Track."

29 Aug. "There are Salmon here but we have no means of catching any without waiting too long. I think by the looks there are Beaver here but will ascertain in the morning in order that my trip here may not be entirely lost."

30 Aug. "...killed one Salmon and Two Otter...afternoon made N. N. W. on the trail. Here plain and good 15 miles" [Powder River Valley] "at 5 of which crossed another Fork of Powder River but dry at 5 more a little water and at camp a little and but a little country rolling and soil good." (pg. 35-36)

John Kirk Townsend, a naturalist on Wyeth's second expedition:
27 Aug. 1834. "...there is some small game to be found on the route, grouse, ducks, &c., and occasionally a beaver may be taken..."

28 Aug. "...at 2 o'clock struck Powder river, a narrow and shallow stream, plentifully fringed with willows. We passed down this river for about five miles and encamped...Our men killed, in the afternoon, an antelope and a deer fawn, which were particularly acceptable to us, we had been on an allowance of one dried salmon per day, and we had begun to fear that even this poor pittance would fail before we could obtain other provision. Game has been exceedingly scarce, with the exception of a few grouse, pigeons, &c. We have not seen a deer, antelope, or any other quadruped larger than a hare, since we left the confines of the buffalo country." (pg. 38-39)

Reverend Jason Lee:
29 Aug. 1834. "The fire for a few days has been raging in the woods upon the mountains a few miles distant, and the atmosphere was so filled with smoke that we could see but a short distance, and was painful to the eyes." (pg. 46)

Jason Lee, returning east in the spring of 1838:
13 May. "...the rain falling all day in such torrents, that it was not practicable (to travel).

14 May. "Rain continued with unabated force and we did not move."

22 May. "Wet some things crossing a branch of Powder R. and camped."

23 May. "On a branch of the same. The main river is too high to ford and we are forced to go around to cross the different branches, loosing at least one day." (pg. 49)

Narcissa Whitman:
27 Aug. 1836. "Came in sight of the hill that leads into Grand Round" [in the Powder River Valley]..."(Mr. McLeod) came into camp loaded with wild ducks, having taken twenty two...Here also Richard caught a fresh Salmon which made us another good meal & if we had been out of provisions we might have made a dinner upon fresh water clams for the river was full of them where we nooned." (pg. 51)

Thomas Jefferson Farnham:
18 Sep. 1839. "The atmosphere all the day smoky..."

19 Sep. "Cooked dinner at L'Arbor Seul, a lonely pine in an extensive plain. Encamped at night on a stream coming from the Blue Mountains" [North Powder River?], "in the north-west. Distance to-day, thirty miles." (pg. 60)

Medorem Crawford:
8 Sep. 1842. "The country over which we have traviled to day is mostly covered with Bunch Grass which the Horses are very fond of. We at last found the top of the mountain at a distance we could see what we suppose to be the Blue mountains and they struck us with terror their lofty peaks seemed a resting place for the clouds. Below us was a large plain and at some distance we could discover a tree which we at once recognized as 'the lone tree' of which we had before heard. We made all possible speed and...arrived at the Tree nearly an hour before the cattle. The Tree is a large Pine stand(ing) in the midst of an immense plain entirely alone. It presented a truly singular appearance and I believe is respected by every traviler through this almost Treeless Country. Within a few yards we found pleanty of water and we soon made ourselves comfortable by a good fire. As soon as we arrived at the top of the hill in sight of the Blue mountains felt an uncommon chilly wind which increased so as to be uncomfortable before we arrived. As soon as we

reached the valley we found our old friend Sage flourishing in a most unwelcome manner. The grass about camp was not good, traviled 18 miles."

9 Sep. "...found pleanty of frost on our beds and all about...Cold wind from the B. mountains on tops of which we soon discovered heaps of snow. Came to a large Creek" [Powder River] "which we followed a while &stopped for dinner at 12 o'clock. Started at 3 crossed the Creek. Crossed 2 more creeks soon" [North Powder River and Wolf Creek] "and camped...Found good wood, water, and grass about at our camp traviled 11 miles. Cold wind." (pg. 96-97)

James W. Nesmith:
27 Sep. 1843. "We crossed the divide and encamped at the lone pine tree....Snow, that fell the night before last on the mountains, in sight all day. Weather drizzly and rainy."

28 Sep. "Left the pine tree this morning. Trailed fourteen miles. Encamped on the third fork of Powder River" [Wolf Creek]. "Had a fine view of the snow-topped mountains through the clouds. Raining below them." (pg. 101)

Peter H. Burnett:
27 Sep. 1843. ""We had some rain during the night, and next morning left Burnt River. Today we saw many of the most beautiful objects in nature. In the rear, on our right and left, were ranges of tall mountains, covered on the sides with magnificent forests of pine, the mountain tops being dressed in a robe of pure snow, and around their summits the dense masses of black clouds wreathed themselves in fanciful shapes, the sun glancing through the open spaces upon the gleaming mountains. We passed through some most beautiful valleys and encamped on the branch of the Powder River at the Lone Pine.

"This noble tree stood in the center of a most lovely valley about ten miles from any other timber. It could be seen at the distance of many miles, rearing its majestic form above the surrounding plain, and constituted a beautiful landmark for the guidance of the traveler. Many teams had passed on before me, and at intervals, as I drove along, I would raise my head and look at that beautiful green pine. At last, on looking up as usual, the tree was gone. I was perplexed for a moment to know whether I was going in the right direction. There was the plain, beaten wagon road before me, and I drove on until I reached the camp just at dark. That brave old pine, which had withstood the storms and snows of centuries, had fallen at last by the vandal hands of man." (pg. 104-105)

[The Lone Pine possibly stood one-half mile east of the Baker City airport, in a direct line with the facility's east-west runway].

John C. Fremont, conducting a War Department survey of the Far West in 1843:
15 Oct. "...on arriving at the" [Powder] "River, we found a fine tall pine stretched on the ground, which had been felled by some inconsiderate emigrant axe...we were visited by

several Indians...on horseback, and were out on a hunting excursion, but had obtained no better game than a large gray hare, of which each had some six or seven hanging to his saddle. We were also visited by an Indian who...brought with him a beaver skin to exchange...I learned from him that there are very few of these animals remaining in this part of the country."

17 Oct. "We travelled this morning across the affluents to Powder river, the road being good, firm, and level; and the country became constantly more pleasant and interesting. The soil appeared to be very deep, and is black and extremely good, as well among the hollows of the hills on the elevated plats, as on the river bottoms; the vegetation being such as is usually found in good ground. The following analytical result shows the precise qualities of this soil, and will justify to science the character of fertility which the eye attributes to it: (pg. 110-111)

Analysis of Powder river soil.

Silica	72.30
Alumina	6.25
Carbonate of lime	6.86
Carbonate of magnesia	4.62
Oxide of iron	1.20
Organic matter	4.50
Water and loss	4.27
	100.00

James Clyman:
26 Sep. 1844. "Saw to our left mountains clothed with pine or other evergreen timber a few hours brought us to another detested sage plain that vegitable being Scarce for the last 2 days Nooned at what is called the lone Tree in the middle of a vally & a fine one it has been of the pine Spicies now cut down & all the branches used for fuel the day verry Smoky &...the whole country has been on fire for a month past & no rain yet a range of mountains lying close to our left seem to be all enveloped in Smoke Made 25 miles & encamped on Powder River which runs (when there is Plenty of water) through a fair vally of grass the hills Likewise are generally well covered with the Same"

27 Sep. "Passed through a beautifull vally this fore noon well grassed but to dry for cultivation a Timbred mountain close to our left the same seen range yestarday morning As we caught our horses for our afternoons travel Some Indian as is their habit when they discover Strangers in their country set fire to the grass about a half mile ahiad of us our rout being N. & a strong south wind blowing the fire kept ahead of us though the hills about 6 or 8 miles and when we overtook the fire we had some difficulty in passing it but all got through nearly suffocated with smoke & dust & entered the grand Round vally the whole mountains which surround this vally completely enveloped in fire and Smoke" (pg. 120)

Edward Evans Parrish:
11 Oct. 1844. "Started early and crossed an almost impassable muddy hollow, which, by double teams and hard work we got through. After a long drive camped on a branch with water in holes only. Grass scarce."

12 Oct. "It is exceeding cold this morning and frosty. Made a good day's drive and camped near a branch that did not run."

13 Oct. "Cold and frosty, though not so much so as yesterday. Yesterday we passed a small river called Powder River and a creek called Deep Creek." (pg. 123)

Joel Palmer:
9 Sep. 1845. "Powder river is a stream of some eight or ten yards in width, having its source in the high range of mountains on our left, which mountains in many places are covered with snow. An abundance of pine timber is found covering the sides of these mountains, sometimes extending far down into the bottoms, which here are between six and seven miles in width. The soil is fertile and would undoubtedly yield abundantly...The valley between Powder river and this range (on the right—the Wallowa Mountains) is very rolling, portions of it covered with wild sage. Wild fowl abound in this valley.

10 Sep. "This day we traveled about ten miles; our course was down the valley of Powder river; eight miles brought us to the crossing of the same, one mile to the middle fork" [North Powder River], "and one to the third fork" [Wolf Creek]. "There is good ground for encampments at any point along these streams." (pg. 131)

Absalom B. Harden:
27 Aug. 1847. ...(the road) "strikes the valley of Powder river thence...to a slough" [Baldock] "where the water stands in pools here is good grass and willow this valley is very fertile and rich to our left hand runs a large Chain of mountains...here from this camp in this valley we can see the lofty Snow cap mountains clad with snow the night and morning very cole we have not had aney rain Since we left the South fork of platt river worth menchening

28 Aug. "we Started and traveled farther down powder river and through the valley of the same til we came to the first crosing of powder river which is 12 mills very good road then we traveled 2 mills and came to the second crossing" [North Powder River] "hear we incampt very good grass and wood the mountains hear is beautiful clothed with pine and cedar timber and the snow Clad mountains presents them Selves very plain to our veaue theas valleys is very rich and fertile theas 2 streams is about 10 or 12 yards in width and very shallow we have saw no indians since we left Snake river near burnt

river the grass is plenty on the side hills and mountains but it is very dry at this time but the grass in the bottoms and valleys is yet good and green" (pg. 139-140)

Riley Root:
14 Aug. 1848. "Powder River valley, east of camp" [at the Lone Pine stump], "still retains the old character of desert and sage plain."

15 Aug. "East valley of Powder river is a spacious plain, very level, and would be as handsome a valley as my feet ever trode upon, were it covered with the rich grasses of the eastern states. At each of the three crossings...which unite a short distance below us and form the principal Powder river, is seen in small patches, a luxuriant growth of the well known grass, red top. As we advance, the climate changes. In camp, this morning, was seen ice on our cooking vessels, and by 10 we were uncomfortably warm. On our left, the Powder River mountains, close by which the river finds its way, are clothd with timber, nearly down their declivities to their base. On our right they yet are naked, Indians around us are burning, as fast as verdure becomes dry enough, which at this time, renders the air so smoky, that we can see but a short distance." (pg. 151)

William J. Watson:
15 Aug. 1849: "Blue Mountain is perceptible from the top of this hill. After arriving at Powder River, we encamped for the night: good grass; water in ponds, and very indifferent; willow scarce for wood: ducks, sage hens, and some cranes and geese from Snake River to this place..."

16 Aug. Starting at six o'clock traveling ten miles over a bottom, with a level, good road, we came to a tributary of Powder river, which is surrounded by high and continuous mountains, the highest in the west; some snow on the top. Leaving here and going five miles, we encamped on a small stream, where was good grass, and willow for fuel." (pg. 158)

Osborne Cross:
6 Sep. 1849. "...the road brought us to the top of a high ridge, giving us a beautiful view of the mountains running east and west and parallel to the ridge over which we were passing. The sight was very fine, as these mountains were the first we had seen covered with pine since leaving Soda springs. This range is high and rugged, with its base well wooded. Those to the left were equally so, while the Blue mountains to the northwest reared their peaks in dark blue masses high above the rest." [They were] "covered with as beautiful timber as can be found between here and the Pacific ocean. The valley between these two ranges is probably six miles wide. The soil appeared light, spongy, and of a quality very similar to that on Snake river.

"About five o'clock in the afternoon we came to the valley of the Powder river." [Here we] "encamped for the night on what was once the bed of the river, which now runs near

the base of the mountains and about two miles distant. This valley has many advantages over those I have passed on the march besides having a fine stream running through it. The mountains in the vicinity are covered with pine and hemlock, which is easy to procure. The soil is light and sufficiently level to be irrigated and will no doubt yield well when properly cultivated."

7 Sep. Last night was very pleasant compared with many we had [seen] since coming among the mountains. In the early part of the morning the view of the mountains on the east was destroyed by a dense smoke and fog, which we have frequently met since leaving Fort Hall. It soon began to disperse, which gave us a fine view before the middle of the day. The morning was pleasant and the day warm. We continued down the valley for eight miles, where we crossed the river where it turns to the right. Running through a range of mountain hills, over which we passed this morning, it flows into Snake river.

"We remained here tonight, having fine water, plenty of wood for ourselves, and good grazing for our mules and horses. This stream is about thirty feet wide, is clear, and runs quietly over a gravelly bottom. Here brook trout and salmon are found in great numbers. Being late in the season, the salmon become very poor in these streams, and many of them die. It is said by mountaineers that they get weak and sickly and never return to the Columbia river from this stream. Be that as it may, there is certainly a great difference in the taste of the salmon fish caught near the Pacific and in this stream, and there is very little doubt but what numbers of them perish here. We saw much sign of it about the banks of the creek. Those that were caught had a whitish appearance, very different from the healthy salmon found in the Columbia river, and were not fit to eat.

8 Sep. The morning was so smoky as to prevent us from seeing much of the country through which we were to travel today." (pg. 163-164)

Robert Robe:
9 Aug. 1851. "Crossed the ridge which brings us in view of Powder river valley descending we found plenty of grass—there is water standing here in pools not very good for cattle—drinking water by digging a few feet. Late in the afternoon we struck the first branch of the river. We went however two miles farther to the crossing—Grass here is very abundant. This vale would on several accounts form quite a good settlement" [where the city of North Powder is today]. (pg. 175)

P. V. Crawford:
19 Aug. 1851. "This day we traveled fourteen miles on the west side of Powder river. The road has been over gentle ridges and across small creeks coming in from the west all the way. Here the valley is striped with small streams of clear, cold water all along the west side of the valley. This night we are camped at a spring at the foot of the dividing ridge between Powder river and the Grand Ronde valleys" [Clover Creek area]. (pg. 178)

John Zieger:
16 Sep. 1851. "The best grass seen for many days was extended over all the" [Powder] "river bottom, which is large. Wood and W. plenty and good." (pg. 181)

Robert H. Renshaw:
21 Aug. 1851. "Left the waters of Burnt River this morning, and traveld about nine miles to the far edge of a flat, and nooned. No water, but plenty of grass. From thence we descended a long slant of hill to we came into a butiful bottom of land. We traveld down the bottom 3 or 4 miles to we came to water in holes in the bed of a creek. Here also is a seap spring. Plenty of grass. Road hilly and some rocky. Days traval 16 miles."

22 Aug. "Left the Seap spring early this morning and traveld to Powder River, a distance of ten miles and nooned. Plenty of grass. From thence we traveld over the point of a hill and down the side of the river some three miles and crossed the river. About two miles farther we crossed a butiful creek" [North Powder River]. "Plenty of grass. Two miles farther we crossed a small creek" [Wolf Creek] "and camped on the north side. Plenty of grass. Days traval 16." (pg. 187-188)

John T. Kerns:
30 Aug. 1852. "Only drove about eight miles across the valley to Powder creek, as the weather was the most disagreeable we have had since leaving Fort Laramie—cold, rainy and storming. This valley is the most handsome that we have seen since leaving Bear river. The valley is several miles wide, covered with a heavy coat of grass, and the creek runs through its center, its banks lined with willow, cottonwood, etc." (pg. 191)

E. W. Conyers:
26 Aug. 1852. "After lunch we traveled eight miles to the first slough of Powder River. The water in this slough stands in pools, with a thick green scum on it. Nevertheless we brushed the scum aside and filled our water cans and traveled on one mile to where we found good bunch grass and sage brush, and made a dry camp..."

27 Aug. "We started at 7 a.m. and traveled four miles to the second slough of Powder River. Here also the water stands in pools and does not look very inviting. We traveled on six miles over a good road to a branch of the Powder River. Here we lunched. After lunch we came one and one-half miles over a rocky hill and struck the same creek, and two and one-half miles brought us to Powder River, and eight miles further over a good road brought us to the bluffs. Here we camped. Good spring water and willow wood. The grass is very good, that is, what there is left, it having been burned over lately. We pity the last part of this year's emigration—not much grass left for them." (pg. 197)

Cecelia Adams and Parthenia Blank (sisters):
30 Sep. 1852. "After going about 4 miles found a kind of dry creek where was plenty of water standing in pools but poor stuff" [the first crossing of Baldock Slough]. "–Here we watered our cattle—Drove on about five miles and got badly fooled by the willows growing very abundantly about 2 miles to the left as we supposed it was Powder River" [it probably was] "—Stopped on some good feed for our cattle and (page torn) there for water to get our dinner but found none but dirty pools—The soil on this plain is much better than we have seen before—Grass in many places fresh and abundant. In about a mile's travel came to a small stream a branch of Powder river. Very sluggish, water poor, bad ford—and in about 6 miles more came to one of the main branches of Powder River and stopped for the night. Found good grass—and fine water"

1 Oct. "Traveled about 2 miles down the stream then crossed it and in about 5 miles crossed another branch of Powder River. Fine stream, then crossed several small streams..." (pg. 207-208)

Esther Hanna:
18 Aug. 1852. "Came to Powder River valley. This is a delightful valley of fine grass, and good water. Saw the Blue Mountains in the distance covered with pine. This evening we had a severe hail storm just before we came to our encampment. It had been raining in the mountains all evening and as we neared them, we got our share of ice! It is so cold that we are all shivering with our thick clothes on. Have nothing for fire but green willow branches."

19 Aug. "Travelled down Powder River valley 11 miles. Very good road. Encamped on the river. We have an excellent camp with plenty of wood. It still continues cool. This is a sudden change from the excessive heat we have had. Do not expect any more warm weather, as we will be among the mountains pretty much now." (pg. 211-212)

Abigail Jane Scott:
30 Aug. 1852. "The weather has been very cold all day...We came to a slough or dry branch in the Powder river bottom where we encamped."

31 Aug. "The first four miles brought us to another slough of Powder river which is larger than the first one; nine miles brought us to Powder river; this is a clear stream of ten yards in width; it's banks are ornamented with willow, birch, and bitter cottonwood; We left the river at this place and directed our course over a rocky bluff for two and one half miles to the river again, where we found a good camp The valley has a very fertile appearance, and I think would produce well" (pg. 216)

Henry Allyn:
10 Aug. 1853. "When we arrove on the high land the Blue Mountains appeared with their snowcapped peaks and their sides covered with pines and other evergreens which greatly relieved the monotony of the nudity of the country for near 1,600 miles. We soon began to descend into the valley of Powder River, which is about 2 miles wide and very fertile and terminates on the west side at the base of the Blue Mountains. Last night we had a frost. The nights are much cooler than in the states." (pg. 225)

John Fothergill:
21 Aug. 1853: "...a fine cool morning & traveled 15 miles. 10 miles of good road to the crossing of powder river, 3 to a tributary" [North Powder River], "2 to a 2nd" [Wolf Creek]. "Road good, on ea of these grass, water & fuel plenty. Cattle getting better, a little alkali on powder river bottom, but I believe it not of so deadly a nature. Saw some very fat cattle at a traders such as I never saw in the States. Sage fowl, prairie do. Sand hill cranes hares & fish very abundant""

22 Aug. "Decamped at 9. o'c a'm a cold frosty morng & traveled 14 miles. 7 miles partly over a stoney road to the headwaters of a nice little prill ." [probably Clover Creek].
(pg. 230)

Rebecca Ketcham:
3 Sep. 1853. "First thing that saluted my ears on awaking this morning was the rain falling gently on our tent. It sounded very much like a rainy day. We were obliged to arrange our clothes and fold our beds under the carriage, which is rather a difficult task, but we accomplished it without quite breaking our heads.

"Started at 8 o'clock for the Lone Tree Valley" [Powder River Valley]. "The road ran all the way between 2 ridges of mountains. Saw in the distance snow-topped mountains and considerable timber. Stopped for dinner in the Lone Tree Valley at 2 o'clock on a branch of Powder River. 'Tis a beautiful valley. The clouds are floating over the tops of the mountains, in some places white, fleecy, and beautiful, in others dark, threatening storm. Now and then we see a flash of lightning and hear the thunder in the distance. The wind blows cold."

4 Sep. "Yesterday afternoon started on our way at 5 o'clock. The wind blew very hard and very cold. We had our large shawls on but we suffered very much with cold...It was so cold this morning we were nearly frozen before we stopped for breakfast...The middle of the day has been quite warm.

"...The valley we now are in is most beautiful. 'Tis perhaps 8 miles wide. On the east side a tiny stream runs from a spring in the mountain. Beyond it the valley gently slopes up to the bluff where the animals belonging to Mr. Hines' company and to us are quietly feeding and resting, and it is really an interesting sight. On the west the hills rise high

and they are covered sufficiently with trees to make them look beautiful. We have so many hills and mountains without a tree or shrub, that seeing these really gives me a sort of home feeling. Toward the tops of these hills the forest is dense, down lower the trees are more scattering, forming here and there a grove. They look like some of the spots on the hills about Ithaca. South and southwest we see the Blue Mountains." (pg. 235-237)

Amelia Knight:
11 Aug. 1853: "Frost this morning"

15 Aug. "Traveled 11 miles, crossed Powder river three times (Powder river is a small clear stream) and have campt on a small creek about 12 miles from the Grand round Valley."

19 Aug. "Quite cold morning, water froze over in the buckets." (pg. 240-241)

Basil N. Longworth: (John W. Evans made the following summaries of Longworth's diary)
31 Aug. 1853. "Another shower of rain and hail about noon...camped at the first crossing of Baldock Slough."

1 Sep. "They proceeded to the second crossing, described by Longworth as deep and then to Powder River crossing and the 'Second Fork' two miles beyond (North Powder River), where they camped for the night. Longworth describes both rivers as beautiful streams thirty feet in width, fifteen inches deep on the riffles." (pg. 243)

Sarah Sutton:
12 Aug. 1854. "we are in powder river valley. It is 3 or 4 miles wide, and on our left the mountains are covered with tall pine trees down to the foot of them, and very rich perraries (prairies) joining and it begins to look a good deal more like getting to some place, than we have seen all the way."

13 Aug. "this valley is much prettyer than it was yesterday, and 7 or 8 miles wide. The mountains are high on the left, and covered with timber and plenty of snow on the top of them, the river running through it, and plenty of springs running down the mountains. Must be very cold in winter..."

14 Aug. "...stopt at a cold spring saw some handsomer situations for farms than I saw in Ill. The land very rich and the sides of the mountains covered with pine and fur and beautiful place to build by scattering fir trees and springs...but we beleive it too cold to live here as there is now frost every night." (pg. 253-254)

James S. McClung:
18 Sep. 1862. "...the road was level & nice for 14 miles to whare we struck Powder river it is a small creek 2 rods wide"

19 Sep. "traveled down the river one mile & crossed over & in traveling two miles we crossed two more forks of it here is a tolerable nice valley covered with good grass timber not very handy here we seen a house that some emigrants had built whare they had taken a claim & it had been so long since we had seen one we hardly knew what it was"

20 Sep. "a very disagreeable morning raining & cold. (pg. 319)

James L. Bailey:
22 Sep. 1863. "To day we traveled but five miles and layed over on the river about one mile off of the road, grass dry and water mudy caused by mineing above" (pg. 323)

Elizabeth Porter:
14 Sep. 1864. "Ice this morning. Big frost. Got to Powder River a little after noon then came 6 or 7 mi. across the valley. Saw the Blue Mountains."

15 Sep. "Quite dusty today in the valley. The Blue Mountains run along the west side of Powder River. River all muddy by the miners digging at Orbeu" [Auburn]. (pg. 325)

Harriet A. Loughary:
9 Aug. 1864: "In the afternoon we pushed on to Wards ranch on the Powder river slough where we rested and grazed our almost starved horses. At night we had a genuine thunder storm, but did not complain since we expect something new and novel all the way through each day"

10 Aug. "Blue Mountains in sight for first time The highest peaks are snow clad, and they rise in their majestic whiteness far above the dark green foliage of tree tops covering the surrounding mountains. The scene is grand and picturesque. Our next point reached is Powder river, a small stream as a duck puddle, owing to the mines." (pg. 328)

Historic Notes

In the 1890's Isaac Hiatt wrote and published a short work entitled Thirty-One Years in Baker County. Following are some direct quotes from his book which give information about conditions in the Powder River – Powder Valley Watershed during the early years of European settlement.

In the spring of 1862, it was impossible to cross Powder River "anywhere in the valley nor cross the valley either for that matter." (pg 14)

Hardin Estes and Fred Dill "located on Washington Gulch the 16th day of June (1862)--- the first (land) claim taken in Powder River Valley." (pg 14)

"Returning from Walla Walla with provisions and hay making implements, on the third of July (1862) their animals had to swim Rock Creek, which indicates a greater amount of water than has ever been known in the stream since." (pg 14)

"In the fall of the same year gold was found on Salmon Creek, Marble Creek, and McCord's Gulch at the western edge of the valley. The former received its name from the abundance of salmon fish found in the stream, and Marble Creek was so named from the immense body of marble rock at its head." (pg 17)

George A. Fisher in "The History of Rock Creek" made the following two observations:

"In the year of 1880-81 a severe winter following a drought was experienced by the pioneers in Baker County and many of the farmers lost 70 percent of their cattle..."

"Very few varieties of vegetables were grown because of heavy frosts. Potatoes could not be grown successfully and consequently cabbage and rutabagas were mostly depended upon."

APPENDIX B

CLIMATE SUMMARIES

Baker City
Baker FAA Airport
Rock Creek

Table 43. Baker City Mean Temperatures

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg	
1973	26.13	36.16	39.81	45.47	55.00	61.07	68.97	65.71	57.52	46.48	36.15	33.68	47.68	
1974	23.05	35.55	39.24	45.08	50.60	64.95	66.94	66.63	60.08	47.08	37.45	26.84	46.96	
1975	23.68	27.36	35.65	40.43	51.84	58.40	70.37	62.81	58.43	45.84	34.13	30.76	44.97	
1976	25.76	29.97	34.87	43.55	53.47	56.90	67.34	62.26	59.50	47.18	38.52	28.19	45.62	
1977	19.48	35.59	36.31	48.68	49.19	64.27	65.29	67.84	55.77	47.45	35.28	33.37	46.54	
1978	32.90	36.32	44.48	44.60	50.81	60.02	67.32	63.35	55.68	47.27	30.62	14.94	45.69	
1979	10.02	29.61	40.02	45.12	54.05	60.92	67.63	66.85	60.82	49.23	31.67	32.94	45.74	
1980	25.48	36.41	36.69	48.25	53.58	56.97	67.58	62.66	59.15	47.77	35.93	31.35	46.82	
1981	33.66	33.46	39.81	46.00	51.27	58.50	64.94	69.56	58.87	45.24	38.28	31.08	47.56	
1982	22.69	26.71	38.39	42.50	51.69	62.47	65.56	67.37	56.47	45.90	32.98	27.63	45.03	
1983	32.42	37.84	42.50	42.68	53.53	58.53	64.11	68.74	54.30	48.37	37.78	18.48	46.61	
1984	20.85	24.48	37.66	43.02	51.11	57.05	67.81	68.74	55.35	43.19	36.53	18.47	43.69	
1985	16.03	20.27	34.03	49.07	54.71	62.48	72.27	64.40	52.60	45.92	23.55	17.85	42.77	
1986	31.19	37.52	45.13	45.92	54.95	64.17	61.87	69.18	51.68	47.18	35.28	26.60	47.56	
1987	22.06	33.93	39.69	50.07	55.03	62.50	64.00	62.94	58.93	47.60	36.03	28.89	46.81	
1988	23.55	31.34	37.68	46.43	51.55	60.97	66.19	64.42	55.33	52.79	33.73	23.11	45.59	
1989	17.00	14.66	36.34	47.20	49.95	60.83	66.66	61.87	56.35	45.11	35.23	28.42	43.30	
1990	29.56	29.32	39.35	49.10	50.31	59.73	67.95	66.39	62.62	43.71	35.42	16.27	45.81	
1991	21.31	36.93	37.18	42.88	49.06	54.68	65.63	67.35	58.35	45.95	33.97	30.35	45.30	
1992	31.53	39.83	43.65	48.32	57.23	63.48	63.45	65.65	56.12	48.74	31.70	22.60	47.69	
1993	18.34	24.45	37.45	43.75	57.35	56.45	57.79	62.58	56.37	48.02	28.23	30.79	43.46	
1994	32.21	29.14	41.26	47.98	54.82	59.40	68.76	68.31	60.55	45.52	29.20	25.69	46.90	
1995	32.40	9999.00z	39.11	43.38	52.40	57.85	65.85	63.00	59.87	42.95	38.98	30.92	47.88z	
1996	28.08	31.10	40.16	45.43	49.40	58.97	68.45	66.11	55.13	46.21	36.17	29.77	46.25	
1997	28.32	32.46	40.85	43.17	56.35	58.73	64.89	67.85	59.85	45.47	37.83	28.00	46.98	
1998	30.76	36.17a	39.68	44.68	51.37	57.75	70.87	68.34	63.00	44.48	38.07	26.29	47.62	
1999	31.15	29.82	38.34	42.98	49.16	58.38	64.47	67.63	56.40	46.89	42.03	26.23	46.12	
2000	28.16	36.79	38.82	48.42	53.16	60.45	67.39	66.89	54.03	45.73	29.35	26.27	46.29	
2001	22.40	27.52	40.42	42.10	54.31	58.53	67.18	70.02	9999.00z	44.00	36.65	24.32	44.31z	
2002	24.48	26.71	34.50	43.05	49.50	59.65	66.94	61.00	55.35	9999.00z	9999.00z	9999.00z	46.80c	
Mean	25.88	31.79	38.69	44.87	52.69	59.93	66.46	65.93	57.05	46.31	35.22	26.75	46.01	
S.D.	5.55	5.59	2.70	2.66	2.35	2.48	2.53	2.81	3.26	2.15	3.48	4.70	1.23	
Skew	-0.61	-0.81	0.46	0.11	0.23	0.45	-0.64	-0.05	0.01	0.51	-1.16	-0.80	-0.89	
Max	33.66	39.83	45.13	50.07	57.35	65.97	72.27	71.34	63.00	52.79	42.03	33.68	47.69	
Min	10.02	14.66	34.03	39.10	49.06	54.68	57.79	61.00	51.20	42.69	23.55	14.94	42.77	
Yrs	42	41	42	42	42	42	42	42	41	41	41	41	39	

Table 44. Baker City Maximum Temperatures.

Station Number 350412
Element : DAILY MAX TEMPERATURE Quantity : MONTHLY AVERAGE
Units : DEGREES F
a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,
z = 26 or more days missing, A = Accumulations present
Long-term means based on columns; thus, the monthly row may not
sum (or average) to the long-term annual value.

Maximum allowable number of missing days : 5

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
1961	37.48	44.71	49.23	58.10	66.10	84.13	89.61	90.68	68.37	59.16	44.80	35.32	60.64
1962	28.71	35.82	47.65	64.40	62.29	76.27	83.68	81.29	76.97	60.81	46.60	38.00	58.54
1963	29.90	50.07	49.71	53.53	68.65	71.70	81.19	83.58	80.33	65.45	47.63	34.26	59.67
1964	31.97	35.03	44.55	57.20	68.00	71.67	84.48	80.94	74.13	66.94	46.10	36.90	58.16
1965	36.87	42.89	50.52	60.53	64.97	73.67	83.61	80.26	70.10	69.71	50.67	37.61	60.12
1966	39.71	37.82	51.77	61.70	73.29	72.87	84.68	84.77	79.70	61.90	48.63	38.16	61.25
1967	40.77	46.32	48.35	52.60	67.71	75.90	87.16	91.06	83.33	61.32	47.73	35.39	61.47
1968	37.03	47.24	56.19	57.60	67.23	74.97	86.81	76.23	73.40	59.68	43.87	35.61	59.65
1969	34.00	35.75	50.61	59.97	71.55	76.03	83.03	85.87	78.00	59.58	51.30	40.97	60.56
1970	39.06	49.86	47.42	50.83	64.74	75.93	85.84	89.52	68.77	58.03	46.60	33.23	59.15
1971	36.65	42.93	45.39	58.00	68.10	70.73	83.10	89.29	67.47	58.10	44.20	31.32	57.94
1972	32.13	41.69	55.23	55.93	73.19	77.33	85.48	88.26	71.13	64.06	44.77	30.45	59.97
1973	34.23	45.29	51.10	60.23	71.81	77.50	89.52	85.77	74.97	62.65	43.40	40.71	61.43
1974	32.13	43.75	49.65	57.67	64.52	83.17	84.77	86.16	81.80	64.77	47.77	35.00	60.93
1975	31.16	35.68	44.03	50.93	66.06	72.33	86.29	79.45	79.87	57.84	44.07	38.74	57.20
1976	35.35	38.52	46.48	56.97	69.45	72.97	84.61	76.35	76.97	64.55	52.60	41.52	59.69
1977	27.90	48.21	47.97	67.77	62.06	81.60	84.06	86.19	71.73	63.26	45.63	40.19	60.55
1978	39.58	43.00	57.68	55.73	63.97	76.67	85.23	81.39	71.03	66.81	40.93	26.61	59.05
1979	20.23	37.39	52.74	58.37	69.58	78.00	87.16	83.61	80.83	64.23	43.80	40.61	59.71
1980	33.03	43.69	47.71	63.50	67.00	70.33	85.23	81.19	76.13	64.42	46.73	40.10	59.92
1981	39.65	43.89	52.97	58.93	63.35	72.87	84.06	90.52	77.57	58.48	48.97	39.06	60.86
1982	31.84	36.11	49.06	56.20	66.55	76.70	81.26	84.81	71.23	58.87	42.27	35.48	57.53
1983	40.19	45.11	51.68	55.83	68.26	73.37	80.29	85.42	71.43	64.03	45.50	26.90	59.00
1984	28.00	32.45	46.87	53.97	64.23	70.63	85.81	86.81	71.20	56.16	44.83	29.26	55.85
1985	25.90	31.11	44.52	64.27	69.03	78.97	92.00	82.03	66.53	59.68	32.83	27.03	56.16
1986	38.77	46.04	57.58	59.40	68.97	81.47	79.55	88.52	65.77	64.71	44.83	34.84	60.87
1987	31.26	44.14	51.13	67.10	70.19	79.33	80.32	82.90	80.07	69.42	46.73	36.90	61.63
1988	32.42	42.83	51.16	60.83	66.74	75.50	84.81	84.45	74.80	72.26	42.57	31.42	59.98
1989	27.48	25.93	47.13	61.83	64.16	76.80	85.58	77.55	75.00	60.23	47.37	41.61	57.56
1990	38.55	40.82	54.13	64.60	63.77	74.97	86.16	82.87	82.73	57.39	46.33	25.90	59.85
1991	31.00	48.46	48.10	55.50	61.61	68.17	83.74	86.81	77.77	63.74	41.87	39.68	58.87
1992	39.74	50.97	60.13	63.67	75.87	79.23	80.77	85.68	74.67	65.97	39.77	31.29	62.31
1993	27.45	31.96	46.52	55.73	72.10	69.83	72.68	79.55	77.03	63.45	41.70	38.13	56.34
1994	40.42	40.07	57.29	61.87	68.48	76.07	87.90	88.06	80.00	61.35	38.20	34.10	61.15
1995	39.81	9999.00z	50.61	56.67	66.71	71.60	82.71	82.26	78.83	58.71	49.13	39.19	61.48a
1996	37.39	43.07	53.19	59.40	62.84	76.00	88.94	85.58	73.20	61.87	47.27	38.55	60.61
1997	37.71	43.07	53.77	56.53	72.55	73.00	81.84	87.68	78.77	61.71	50.40	37.06	61.17
1998	40.16	45.04	52.06	59.37	63.45	73.33	89.77	89.23	81.40	61.55	46.33	34.42	61.34
1999	40.29	39.89	50.97	57.63	64.77	74.13	84.48	86.81	77.07	65.68	53.47	33.58	60.73
2000	36.10	45.69	51.61	65.20	67.39	78.33	86.87	88.26	71.13	59.97	39.20	35.26	60.42
2001	31.19	38.11	54.00	55.93	72.19	74.77	84.68	91.19	9999.00z	60.16	48.33	31.87	58.40a
2002	32.19	35.43	45.74	57.80	65.00	75.37	86.77	80.87	75.57	9999.00z	9999.00z	9999.00z	61.64c
Mean	34.41	41.36	50.58	58.81	67.34	75.34	84.68	84.75	75.29	62.41	45.51	35.42	59.69
S.D.	4.96	5.68	3.90	4.04	3.49	3.59	3.35	3.99	4.66	3.62	4.00	4.34	1.61
Skew	-0.60	-0.55	0.41	0.26	0.40	0.41	-0.85	-0.33	-0.24	0.59	-0.65	-0.59	-0.80
Max	40.77	50.97	60.13	67.77	75.87	84.13	92.00	91.19	83.33	72.26	53.47	41.61	62.31
Min	20.23	25.93	44.03	50.83	61.61	68.17	72.68	76.23	65.77	56.16	32.83	25.90	55.85
Yrs	42	41	42	42	42	42	42	42	41	41	41	41	39

Station Number 350412
Element : DAILY MIN TEMPERATURE Quantity : MONTHLY AVERAGE
Units : DEGREES F
a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,
z = 26 or more days missing, A = Accumulations present
Long-term means based on columns; thus, the monthly row may not
sum (or average) to the long-term annual value.

Maximum allowable number of missing days : 5

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN

Table 45. Baker City Minimum Temperatures.

1961	18.48	29.82	28.45	30.23	36.77	47.80	49.87	52.00	34.57	29.97	19.73	18.52	33.02
1962	9.58	20.21	25.10	31.70	38.52	42.80	47.13	45.61	37.73	33.97	27.27	23.71	31.94
1963	8.97	29.29	26.94	30.50	40.77	45.23	46.23	47.23	43.77	33.61	27.80	17.35	33.14
1964	14.19	13.03	25.16	29.03	38.03	47.33	49.06	44.19	37.33	28.87	23.80	21.52	30.96
1965	25.16	28.11	24.03	35.17	36.65	43.80	46.32	46.00	33.83	30.29	28.40	17.55	32.94
1966	23.39	15.82	26.55	29.90	36.81	41.73	45.58	43.87	42.87	27.58	27.77	24.74	32.22
1967	24.97	23.18	25.29	29.10	36.58	45.17	48.26	46.19	41.80	30.16	26.20	17.10	32.83
1968	17.77	28.59	28.90	26.73	35.94	44.53	47.42	46.35	38.03	29.19	27.53	19.71	32.56
1969	18.84	21.68	24.81	31.33	39.55	45.20	44.81	43.03	39.50	27.35	22.43	23.71	31.85
1970	23.23	26.00	25.13	27.37	36.94	48.87	51.97	47.77	36.27	27.35	27.47	15.16	32.79
1971	22.16	22.96	24.68	30.37	39.94	43.73	48.74	50.71	34.93	28.06	24.63	13.26	32.01
1972	13.84	22.90	30.32	28.87	39.97	46.67	49.45	50.48	36.73	32.10	28.73	13.94	32.83
1973	18.03	27.04	28.52	30.70	38.19	44.63	48.42	45.65	40.07	30.32	28.90	26.65	33.93
1974	13.97	27.36	28.84	32.50	36.68	46.73	49.10	47.10	38.37	29.39	27.13	18.68	32.99
1975	16.19	19.04	27.26	29.93	37.61	44.47	54.45	46.16	37.00	33.84	24.20	22.77	32.74
1976	16.16	21.41	23.26	30.13	37.48	40.83	50.06	48.16	42.03	29.81	24.43	14.87	31.55
1977	11.06	22.96	24.65	29.60	36.32	46.93	46.52	49.48	39.80	31.65	24.93	26.55	32.54
1978	26.23	29.64	31.29	33.47	37.65	43.37	49.42	45.32	40.33	27.74	20.30	3.26	32.33
1979	-0.19	21.82	27.29	31.87	38.52	43.83	48.10	50.10	40.80	34.23	19.53	25.26	31.76
1980	17.94	29.14	25.68	33.00	40.16	43.60	49.94	44.13	42.17	31.13	25.13	22.61	33.72
1981	27.68	23.04	26.65	33.07	39.19	44.13	45.81	48.61	40.17	32.00	27.60	23.10	34.25
1982	13.55	17.32	27.71	28.80	36.84	48.23	49.87	49.94	41.70	32.94	23.70	19.77	32.53
1983	24.65	30.57	33.32	29.53	38.81	43.70	47.94	52.06	37.17	32.71	30.07	10.06	34.22
1984	13.71	16.52	28.45	32.07	38.00	43.47	49.81	50.68	39.50	30.23	28.23	7.68	31.53
1985	6.16	9.43	23.55	33.87	40.39	46.00	52.55	46.77	38.67	32.16	14.27	8.68	29.37
1986	23.61	29.00	32.68	32.43	40.94	46.87	44.19	49.84	37.60	29.65	25.73	18.35	34.24
1987	12.87	23.71	28.26	33.03	39.87	45.67	47.68	42.97	37.80	25.77	25.33	20.87	31.99
1988	14.68	19.86	24.19	32.03	36.35	46.43	47.58	44.39	35.87	33.32	24.90	14.81	31.20
1989	6.52	3.39	25.55	32.57	35.74	44.87	47.74	46.19	37.70	30.00	23.10	15.23	29.05
1990	20.58	17.82	24.58	33.60	36.84	44.50	49.74	49.90	42.50	30.03	24.50	6.65	31.77
1991	11.61	25.39	26.26	30.27	36.52	41.20	47.52	47.90	38.93	28.16	26.07	21.03	31.74
1992	23.32	28.69	27.16	32.97	38.58	47.73	46.13	45.61	37.57	31.52	23.63	13.90	33.07
1993	9.23	16.93	28.39	31.77	42.61	43.07	42.90	45.61	35.70	32.58	14.77	23.45	30.58
1994	24.00	18.21	25.23	34.10	41.16	42.73	49.61	48.55	41.10	29.68	20.20	17.29	32.66
1995	25.00	9999.00z	27.61	30.10	38.10	44.10	49.00	43.74	40.90	27.19	28.83	22.65	34.29a
1996	18.77	19.14	27.13	31.47	35.97	41.93	47.97	46.65	37.07	30.55	25.07	21.00	31.89
1997	18.94	21.86	27.94	29.80	40.16	44.47	47.94	48.03	40.93	29.23	25.27	18.94	32.79
1998	21.35	27.07a	27.29	30.00	39.29	42.17	51.97	47.45	44.60	27.42	29.80	18.16	33.88
1999	22.00	19.75	25.71	28.33	33.55	42.63	44.45	48.45	35.73	28.10	30.60	18.87	31.51
2000	20.23	27.90	26.03	31.63	38.94	42.57	47.90	45.52	36.93	31.48	19.50	17.29	32.16
2001	13.61	16.93	26.84	28.27	36.42	42.30	49.68	48.84	9999.00z	27.84	24.97	16.77	30.22a
2002	16.77	18.00	23.26	28.30	34.00	43.93	47.10	41.13	35.13	9999.00z	9999.00z	9999.00z	31.96c
Mean	17.35	22.21	26.81	30.94	38.03	44.52	48.24	47.10	38.81	30.22	24.94	18.08	32.34
S.D.	6.29	5.97	2.32	1.96	1.94	1.99	2.29	2.57	2.67	2.19	3.75	5.43	1.16
Skew	-0.54	-0.82	0.84	0.00	0.05	0.31	0.17	-0.04	0.20	0.10	-1.03	-0.74	-0.69
Max	27.68	30.57	33.32	35.17	42.61	48.87	54.45	52.06	44.60	34.23	30.60	26.65	34.25
Min	-0.19	3.39	23.26	26.73	33.55	40.83	42.90	41.13	33.83	25.77	14.27	3.26	29.05
Yrs	42	41	42	42	42	42	42	42	41	41	41	41	39

Station Number 350412
Element : DAILY MEAN TEMPERATURE Quantity : MONTHLY AVERAGE
Units : DEGREES F
a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,
z = 26 or more days missing, A = Accumulations present
Long-term means based on columns; thus, the monthly row may not
sum (or average) to the long-term annual value.

Maximum allowable number of missing days : 5

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
1961	27.98	37.27	38.84	44.17	51.44	65.97	69.74	71.34	51.47	44.56	32.27	26.92	46.83
1962	19.15	28.02	36.37	48.05	50.40	59.53	65.40	63.45	57.35	47.39	36.93	30.85	45.24
1963	19.44	39.68	38.32	42.02	54.71	58.47	63.71	65.40	62.05	49.53	37.72	25.81	46.40
1964	23.08	24.03	34.85	43.12	53.02	59.50	66.77	62.56	55.73	47.90	34.95	29.21	44.56
1965	31.02	35.50	37.27	47.85	50.81	58.73	64.97	63.13	51.97	50.00	39.53	27.58	46.53
1966	31.55	26.82	39.16	45.80	55.05	57.30	65.13	64.32	61.28	44.74	38.20	31.45	46.73
1967	32.87	34.75	36.82	40.85	52.15	60.53	67.71	68.63	62.57	45.74	36.97	26.24	47.15
1968	27.40	37.91	42.55	42.17	51.58	59.75	67.11	61.29	55.72	44.44	35.70	27.66	46.11
1969	26.42	28.71	37.71	45.65	55.55	60.62	63.92	64.45	58.75	43.47	36.87	32.34	46.20
1970	31.15	37.93	36.27	39.10	50.84	62.40	68.90	68.65	52.52	42.69	37.03	24.19	45.97
1971	29.40	32.95	35.03	44.18	54.02	57.23	65.92	70.00	51.20	43.08	34.42	22.29	44.98
1972	22.98	32.29	42.77	42.40	56.58	62.00	67.47	69.37	53.93	48.08	36.75	22.19	46.40

Table 46. Baker City Precipitation

Station number: 350417 Station name: BAKER WB CITY

Element : DAILY PRECIPITATION Quantity : MONTHLY SUM Units : INCHES
a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,
z = 26 or more days missing, A = Accumulations present
Long-term means based on columns; thus, the monthly row may not sum (or average) to the long-term annual value.

Maximum allowable number of missing days : 5
99.99 = missing month 999.99 = incomplete year

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1913	1.55	0.37	1.60	1.90	1.10	2.76	0.47	1.07	0.55	1.07	0.64	1.10	14.18
1914	1.73	0.94	0.33	2.01	0.87	1.67	0.71	0.01	0.76	1.14	0.16	0.56	10.89
1915	0.73	1.17	1.33	1.59	3.18	0.45	1.09	0.00	0.07	0.05	2.14	1.99	13.79
1916	0.85	1.91	0.89	0.85	1.73	1.43	1.21	1.08	0.28	0.21	0.35	1.12	11.91
1917	1.35	1.06	0.72	1.59	0.71	0.23	0.04	0.02	2.44	0.07	0.92	1.14	10.29
1918	1.93	0.43	0.62	0.38	0.02	0.19	1.12	0.92	0.53	0.71	0.56	0.30	7.71
1919	0.62	1.39	0.73	0.67	0.19	0.00	0.00	0.46	0.26	0.77	1.61	1.14	7.84
1920	0.16	0.04	1.66	0.98	1.27	0.70	0.32	1.42	0.53	1.14	0.53	1.21	9.96
1921	2.21	1.35	0.50	0.66	2.99	0.81	0.08	0.18	0.80	0.27	2.47	0.97	13.29
1922	0.61	0.87	1.01	0.71	0.41	0.61	0.01	1.06	0.11	0.40	0.52	1.74	8.06
1923	0.80	0.53	0.36	1.28	1.59	2.54	0.60	0.77	0.36	2.19	0.38	1.16	12.56
1924	0.34	1.25	0.37	0.54	0.29	0.37	0.04	0.39	0.17	0.32	1.15	1.16	6.39
1925	1.07	0.62	0.58	1.36	1.42	0.76	0.79	1.13	1.18	0.36	0.21	1.00	10.48
1926	0.41	1.19	0.81	0.57	0.93	0.50	0.80	1.57	0.10	0.22	1.97	1.79	10.86
1928	1.02	0.30	0.86	0.86	0.18	1.46	0.45	0.06	0.60	0.73	0.40	0.51	7.43
1929	1.98	0.15	0.47	1.12	0.59	1.81	0.03	0.25	0.28	0.16	0.10	1.59	8.53
1930	0.86	0.74	0.17	1.71	1.74	0.86	0.05	1.16	0.73	0.29	0.36	0.64	9.31
1931	1.05	0.51	1.93	0.61	0.26	0.72	0.07	0.04	0.63	0.41	1.53	2.03	9.79
1932	1.35	1.48	1.74	0.53	1.06	0.43	0.13	0.05	0.02	0.52	0.96	1.29	9.56
1933	1.91	1.33	1.00	1.01	1.59	1.26	0.00	0.71	0.75	0.44	0.41	1.50	11.91
1934	0.70	0.57	0.55	1.34	0.45	2.76	0.01	0.01	0.29	1.52	1.02	1.01	10.23
1935	0.27	0.49	0.94	2.08	0.63	0.53	0.26	0.12	0.00	0.40	0.31	0.37	6.40
1936	2.44	1.64	0.98	1.15	0.69	1.60	0.49	0.08	0.33	0.03	0.00	0.35	9.78
1937	1.32	0.88	1.23	0.70	0.01	0.99	0.27	0.11	0.16	1.30	1.79	1.34	10.10
1938	0.53	1.51	1.13	0.56	0.53	0.71	0.60	0.25	0.73	0.66	0.92	0.19	8.32
1939	0.52	0.61	0.36	0.29	0.87	0.60	0.59	0.04	0.56	0.50	0.00	0.85	5.79
1940	1.79	1.51	1.92	0.85	0.38	0.68	0.57	0.00	3.90	2.68	0.93	0.54	15.75
1941	0.69	1.31	0.04	1.33	1.04	3.02	0.71	1.31	0.67	1.01	0.75	1.98	13.86
1942	1.04	0.83	0.47	1.33	3.61	1.02	0.37	0.22	0.34	0.59	1.51	1.91	13.24
1943	1.59	0.49	0.36	1.07	0.51	2.81	0.47	0.46	0.00	1.08	0.48	0.38	9.70
1944	0.32	0.82	0.32	0.53	1.28	2.48	0.19	0.00	0.19	0.30	1.01	0.35	7.79
1945	0.92	1.18	0.56	0.25	2.09	0.93	0.13	0.43	0.83	0.35	1.63	1.39	10.69
1950	1.20	0.36	1.04	0.59	0.32	2.37	0.45	0.18	0.12	0.79	0.63	0.71	8.76
1951	1.18	0.82	1.32	0.57	0.97	0.58	0.22	0.46	0.06	0.96	0.68	0.79	8.61
1952	0.41	0.87	0.38	1.38	1.67	2.40	0.02	0.12	0.50	0.02	0.45	0.64	8.86
1953	1.40	1.37	0.49	1.21	4.36	1.76	0.00	1.02	0.00	0.86	1.36	1.38	15.21
1954	0.84	0.43	0.72	0.97	1.21	2.18	0.16	1.36	0.68	0.25	0.39	1.05	10.24
1955	0.17	0.70	0.79	1.21	1.32	0.51	1.69	0.00	0.99	1.03	1.93	3.46	13.80
1956	1.15	0.65	0.20	0.05	3.62	2.35	3.31	1.08	0.42	3.15	99.99	0.55	999.99
1957	1.45	0.72	5.98	0.47	2.87	1.08	0.17	0.10	0.11	1.91	1.60	2.30	18.76
1958	99.99	99.99	0.53	1.23	1.08	3.41	1.17	0.29	0.33	0.43	1.13	0.99	999.99
1959	1.29	0.71	1.26	0.22	1.10	0.56	0.12	0.69	2.53	0.46	0.81	0.38	10.13
1960	0.64	0.41	1.61	1.00	3.42	0.00	0.67	0.96	0.78	0.15	2.54	0.69	12.87
1961	0.24	0.74	0.84	0.07	99.99	0.21	99.99	0.36	0.09	0.23	1.57	0.75	999.99
1962	1.34	0.81	0.47	0.53	2.61	0.06	0.04	0.32	1.12	1.27	0.74	99.99	999.99
1963	99.99	1.08	0.57	1.06	99.99	99.99	0.00	99.99	0.29	0.37	0.91	99.99	999.99
1964	99.99	99.99	0.35	0.05	0.65	3.52	1.20	99.99	0.40	0.00	0.81	2.97	999.99
1965	99.99	0.00	0.34	0.61	0.05	0.77	0.33	1.37	0.00	0.00	99.99	0.62	999.99
1966	0.64	1.06	1.25	0.42	0.85	1.47	0.30	0.10	99.99	0.20	1.52	99.99	999.99
1967	1.19	0.20	1.55	1.40	0.89	1.07	0.15	0.15	0.19	0.68	1.23	99.99	999.99
1968	0.77	1.29	0.41	0.66	0.56	0.81	0.05	2.33	0.17	1.01	2.14	1.52	11.72
1969	1.19	0.64	0.21	1.56	1.66	2.88	0.50	0.00	0.15	0.57	0.23	99.99	999.99
1970	3.10	0.16	99.99	0.25	2.12	1.37	2.45	0.00	1.11	0.89	1.23	1.22	999.99
1971	1.71	0.22	1.30	0.93	1.61	2.12	0.26	0.43	0.40	0.37	1.71	2.40	13.46
1972	1.46	0.84	1.57	0.57	0.80	1.54	0.54	0.75	0.71	0.41	0.84	1.08	11.11
1973	0.67	0.18	0.15	0.58	1.52	0.31	0.18	0.99	1.81	0.53	2.19	2.13	11.24
1974	1.83	0.54	1.05	1.39	0.59	0.19	1.81	0.17	0.00	0.34	0.25	1.59	9.75
1975	1.49	0.86	0.96	1.65	0.45	1.50	1.27	0.27	99.99	1.42	1.45	0.99	999.99
1976	1.11	0.89	0.79	1.42	1.00	0.72	0.98	2.80	0.61	0.52	0.09	99.99	999.99
1977	0.42	0.33	0.49	0.22	1.59	0.72	0.24	1.29	1.23	0.60	1.68	2.18	10.99
1978	1.23	0.76	1.17	4.27	0.60	0.72	1.92	1.11	2.17	0.00	99.99	0.64	999.99
1979	1.25	1.22	0.96	1.06	0.99	1.34	0.02	1.35	0.22	1.19	1.29	0.29	11.18
1980	1.40	2.30	1.12	0.68	2.20	2.55	0.75	0.17	2.38	0.80	1.22	1.28	16.85
1981	99.99	1.58	1.81	0.84	2.47	1.27	0.70	0.06	1.13	0.74	99.99	99.99	999.99

Table 47. Baker City Climate Summary

BAKER WB CITY, OREGON (350417)

Period of Record Monthly Climate Summary

Period of Record : 1/ 1/1928 to 12/31/1981

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	34.0	40.8	49.1	58.8	67.6	74.7	85.2	83.8	75.3	62.4	46.2	37.4	59.6
Average Min. Temperature (F)	17.3	22.5	27.2	32.2	38.9	44.9	50.6	48.8	41.7	34.3	26.9	21.2	33.9
Average Total Precipitation (in.)	1.10	0.80	0.96	0.93	1.32	1.35	0.53	0.51	0.61	0.70	1.07	1.19	11.07
Average Total SnowFall (in.)	10.0	5.9	3.3	1.2	0.2	0.0	0.0	0.0	0.0	0.2	3.9	7.7	32.4
Average Snow Depth (in.)	3	2	0	0	0	0	0	0	0	0	0	1	0

Percent of possible observations for period of record.
Max. Temp.: 98.6% Min. Temp.: 98.4% Precipitation: 98.3% Snowfall: 96.9% Snow Depth: 97%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Table 48. Baker Airport Precipitation

Station number: 350412 Station name: BAKER CAA AP

Element : DAILY PRECIPITATION Quantity : MONTHLY SUM Units : INCHES
a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,
z = 26 or more days missing, A = Accumulations present
Long-term means based on columns; thus, the monthly row may not sum (or average) to the long-term annual value.

Maximum allowable number of missing days : 5
99.99 = missing month 999.99 = incomplete year

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1943	99.99	99.99	99.99	99.99	0.40	1.53	0.34	0.32	0.02	1.08	0.50	0.45	999.99
1944	0.26	0.59	0.40	0.50	1.27	2.60	0.23	0.05	0.12	0.17	0.93	0.32	7.44
1945	0.81	0.62	0.44	0.37	2.35	1.55	0.00	0.48	0.80	0.32	0.97	0.86	9.57
1946	0.56	0.59	0.79	0.32	2.43	1.00	0.43	0.62	0.42	0.81	0.92	0.63	9.52
1947	0.66	0.34	0.69	0.64	1.00	1.77	0.00	0.01	0.66	1.67	0.92	0.40	8.76
1948	0.44	0.73	1.32	1.28	2.34	2.02	0.55	0.46	0.28	0.51	0.95	1.50	12.38
1949	0.33	0.88	0.63	0.71	1.60	0.15	0.16	0.14	0.51	0.19	1.26	0.44	7.00
1950	0.96	0.15	0.70	0.64	0.04	2.23	0.45	0.52	0.05	0.84	0.46	0.46	7.50
1951	1.04	0.51	0.87	0.31	0.79	0.32	0.14	0.53	0.03	0.77	0.92	1.23	7.46
1952	0.90	1.25	0.49	1.18	2.03	2.06	0.04	0.02	0.60	0.02	0.44	0.75	9.78
1953	1.38	1.37	0.71	1.24	3.80	1.83	0.00	0.87	0.01	0.63	0.67	0.83	13.34
1954	0.45	0.67	0.54	0.68	1.05	0.92	0.25	1.11	0.23	0.25	0.30	0.66	7.11
1955	0.57	0.59	0.54	0.98	0.69	0.39	1.10	0.00	0.82	1.12	1.55	1.97	10.32
1956	1.03	1.07	0.38	0.39	3.03	1.33	1.90	0.44	0.08	1.64	0.16	0.79	12.24
1957	0.90	0.92	1.93	0.42	1.74	1.26	0.19	0.18	0.40	2.18	0.75	1.22	12.09
1958	0.69	0.61	0.62	1.23	1.06	3.45	0.37	0.26	0.40	0.35	0.76	0.93	10.73
1959	0.51	0.49	1.02	0.41	1.23	0.66	0.16	1.28	2.32	0.38	0.27	0.26	8.99
1960	0.91	0.80	1.14	0.60	3.01	0.14	0.29	0.40	0.71	0.20	1.75	0.43	10.38
1961	0.21	0.90	0.67	0.21	1.93	0.70	0.02	0.36	0.41	0.75	1.51	1.16	8.83
1962	1.46	0.75	0.67	0.89	2.20	0.04	0.04	0.35	0.97	1.56	1.08	1.00	11.01
1963	1.00	0.67	0.44	0.69	1.26	1.61	0.03	0.63	0.58	0.35	0.97	0.82	9.05
1964	1.81	0.31	0.78	0.56	0.57	5.06	0.83	0.50	0.51	0.26	0.50	2.83	14.52
1965	1.90	0.17	0.66	1.73	0.18	1.19	0.62	2.05	0.10	0.11	0.82	0.26	9.79
1966	0.55	1.17	0.93	0.19	0.57	1.34	0.40	0.11	0.87	0.35	1.13	1.69	9.30
1967	0.70	0.21	1.29	1.37	1.16	1.03	0.10	0.06	0.40	1.26	0.54	0.63	8.75
1968	0.41	0.85	0.84	0.30	0.66	0.88	0.06	2.58	0.20	0.97	2.15	1.30	11.20
1969	1.16	0.82	0.13	1.31	1.81	2.46	0.12	0.00	0.21	0.83	0.24	1.79	10.88
1970	2.61	0.68	0.83	0.22	2.06	1.50	1.96	0.00	1.29	0.92	0.81	0.91	13.79
1971	2.59	0.19	1.26	0.74	1.64	2.05	0.20	0.21	0.39	0.54	1.07	1.29	12.17
1972	0.90	0.60	1.02	0.45	0.90	1.86	0.24	1.02	0.89	0.42	0.75	1.22	10.27
1973	0.56	0.17	0.26	0.25	1.97	0.37	0.08	0.25	1.33	0.62	1.86	1.65	9.37
1974	1.65	0.37	0.99	1.01	0.71	0.21	1.17	0.17	0.00	0.34	0.31	1.12	8.05
1975	1.03	0.49	0.61	1.01	0.59	1.57	0.52	0.46	0.12	1.09	0.65	0.45	8.59
1976	0.71	0.35	0.38	1.11	0.45	0.76	1.02	3.06	0.16	0.47	0.23	0.05	8.75
1977	0.30	0.54	0.84	0.03	2.13	0.88	0.22	2.52	1.51	0.58	1.47	1.71	12.73
1978	1.24	0.46	1.27	3.58	0.68	1.39	1.28	1.55	2.29	0.00	0.86	1.16	15.76
1979	0.78	0.91	1.12	1.18	1.17	1.41	0.00	1.25	0.26	0.71	1.35	0.18	10.32
1980	0.74	1.17	0.69	0.58	1.85	2.60	0.68	0.07	2.72	0.81	0.60	0.86	13.37
1981	0.83	0.55	1.42	0.93	2.26	1.59	0.59	0.33	1.00	0.92	2.03	1.41	13.86
1982	1.00	0.72	0.62	0.46	0.25	1.17	2.33	0.72	1.29	1.70	0.43	1.33	12.02
1983	0.65	1.05	1.81	0.80	1.12	1.20	0.81	1.36	0.56	0.40	1.00	2.60	13.36
1984	0.68	0.47	1.45	1.41	0.86	1.61	1.15	3.52	0.50	0.84	1.18	0.72	14.39
1985	0.26	0.55	0.50	0.48	1.48	0.86	0.59	0.53	1.39	0.41	1.22	0.44	8.71
1986	1.11	1.66	0.67	0.71	1.32	0.80	0.33	0.66	1.60	0.26	0.45	0.22	9.79
1987	1.07	0.40	0.77	0.30	1.03	1.09	1.41	0.12	0.00	0.00	0.80	1.17	8.16
1988	0.66	0.53	0.21	0.61	1.00	2.66	0.08	0.56	0.25	0.02	1.73	1.37	9.68
1989	1.31	0.80	1.42	0.65	1.98	0.89	0.14	2.39	0.32	0.51	0.50	0.10	11.01
1990	0.96	0.22	0.59	0.99	2.13	0.63	0.29	0.86	0.12	0.80	0.47	0.71	8.77
1991	0.39	0.52	1.01	0.79	3.92	1.38	0.15	0.01	0.21	0.38	1.82	0.11	10.69
1992	0.19	0.64	0.54	0.69	0.43	3.16	0.61	0.16	0.17	0.27	0.44	0.54	7.84
1993	0.84	0.30	0.69	0.61	1.02	1.84	0.88	1.30	0.00	0.63	0.37	0.15	8.63
1994	0.35	0.84	0.26	1.19	1.21	0.21	1.27	0.77	0.17	0.48	0.66	0.57	7.98
1995	.97	.00z	.96	1.21	1.18	1.57	1.15	1.16	.04	.30	1.58	1.35	11.47a
1996	.78	.59	.69	1.11	1.32	.35	.34	.52	.38	.49	1.42	2.57	10.56
1997	1.21	0.10	0.25	0.85	0.49	1.47	2.27	0.21	0.44	0.44	0.54	0.58	8.85
1998	1.09	0.61	1.09	0.79	4.20	0.59	0.56	0.08	1.66	0.24	2.02	1.05	13.98
1999	0.96	1.32	0.54	0.39	0.58	0.49	0.02	0.25	0.00	0.69	0.70	1.42	7.36
2000	1.54	0.98	0.96	0.90	0.69	0.59	0.17	0.07	2.01	1.65	0.43	0.49	10.48
2001	0.86	0.20	0.50	0.97	0.45	0.49	0.90	0.06	0.00z	0.60	0.80	0.94	6.77a
2002	1.00	0.12	1.03	0.68	0.29	0.60	0.28	0.40	0.34	0.00z	0.00z	0.00z	4.74c

Table 49. Baker Airport Climate

BAKER FAA AP, OREGON (350412)

Period of Record Monthly Climate Summary

Period of Record : 7/ 1/1948 to 12/31/2001

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	33.8	40.8	49.5	58.8	67.1	74.9	84.7	84.1	75.2	62.1	45.4	35.5	59.3
Average Min. Temperature (F)	16.5	21.7	26.3	30.8	38.1	44.2	47.7	46.3	38.4	30.0	24.4	18.0	31.9
Average Total Precipitation (in.)	0.94	0.67	0.80	0.81	1.40	1.30	0.57	0.74	0.64	0.62	0.92	0.99	10.41
Average Total SnowFall (in.)	7.4	4.3	3.2	1.2	0.3	0.0	0.0	0.0	0.0	0.3	3.2	7.6	27.4
Average Snow Depth (in.)	3	2	0	0	0	0	0	0	0	0	0	1	1

Percent of possible observations for period of record.
Max. Temp.: 99.8% Min. Temp.: 99.8% Precipitation: 99.8% Snowfall: 99.6% Snow Depth: 99.6%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Table 50. Rock Creek Climate Summary

ROCK CREEK, OREGON (357250)

Period of Record Monthly Climate Summary

Period of Record : 7/ 1/1948 to 12/31/2001

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)					Insuff	icient	Data						
Average Min. Temperature (F)					Insuff	icient	Data						
Average Total Precipitation (in.)	2.66	1.98	1.76	1.36	1.90	1.73	0.93	0.83	0.82	1.31	2.55	3.13	20.97
Average Total SnowFall (in.)	24.5	15.8	10.4	2.8	0.4	0.0	0.0	0.0	0.0	1.1	13.4	24.5	92.8
Average Snow Depth (in.)	19	22	16	3	0	0	0	0	0	0	2	11	6

Percent of possible observations for period of record.
Max. Temp.: 0% Min. Temp.: 0% Precipitation: 98% Snowfall: 98.3% Snow Depth: 96.8%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Table 51. Rock Creek Precipitation 1920-1966

Station number: 357250 Station name: ROCK CREEK

Element : DAILY PRECIPITATION Quantity : MONTHLY SUM Units : INCHES
a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,
z = 26 or more days missing, A = Accumulations present
Long-term means based on columns; thus, the monthly row may not sum (or average) to the long-term annual value.

Maximum allowable number of missing days : 5
99.99 = missing month 999.99 = incomplete year

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1920	0.56	0.12	2.52	1.73	1.07	0.84	0.05	1.69	1.76	1.71	1.20	2.43	15.68
1921	3.89	2.79	1.35	1.53	3.07	0.67	0.11	0.72	0.79	0.63	5.45	1.43	22.43
1922	1.58	3.01	2.61	1.01	0.54	1.06	0.00	0.15	0.07	0.61	0.30	3.62	14.56
1923	3.12	1.03	1.22	0.68	2.15	2.41	0.96	0.66	0.31	1.89	0.67	2.25	17.35
1924	1.02	1.35	1.08	0.35	0.00	1.12	0.03	0.31	0.03	2.00	2.98	2.76	13.03
1925	3.45	1.51	1.02	1.75	1.17	1.26	1.03	2.24	0.96	0.35	0.56	2.52	17.82
1926	1.81	2.56	1.01	1.53	1.21	0.79	0.22	1.72	0.35	0.54	3.27	2.30	17.31
1927	2.39	2.29	0.89	1.02	1.65	3.71	0.33	0.71	3.54	2.23	5.00	1.62	25.38
1928	2.48	1.05	3.38	2.04	0.15	1.30	0.99	0.00	0.48	1.14	1.28	1.70	15.99
1929	4.77	0.76	1.49	1.91	1.36	3.28	0.00	0.49	0.40	0.42	0.25	4.99	20.12
1930	1.52	3.58	0.45	2.56	2.16	0.92	0.16	1.04	0.85	1.04	1.04	0.47	15.79
1931	2.05	0.77	3.57	0.68	1.53	1.45	0.00	0.16	0.36	1.38	1.73	4.98	18.66
1932	2.85	2.20	3.77	0.75	1.57	0.69	0.39	0.14	0.15	0.60	2.20	1.68	16.99
1933	3.86	2.06	1.78	0.67	2.28	2.64	0.01	0.82	0.98	1.58	0.74	3.78	21.20
1934	1.09	0.55	1.47	1.41	0.64	2.90	0.19	0.00	0.40	2.57	2.40	2.78	16.40
1935	1.91	1.16	1.72	3.11	1.25	0.38	1.04	0.20	0.03	1.05	0.80	1.05	13.70
1936	4.42	3.24	1.58	2.21	0.99	2.27	0.70	0.08	0.83	0.15	0.00	2.75	19.22
1937	3.68	2.74	2.48	2.75	0.14	2.58	0.86	0.37	0.24	2.90	3.11	3.46	25.31
1938	2.53	3.95	2.69	1.20	0.43	1.98	1.32	0.49	0.74	1.39	2.16	1.59	20.47
1939	1.72	3.14	2.47	0.32	1.63	0.78	0.28	0.16	0.84	1.17	0.04	2.75	15.30
1940	2.66	5.56	2.67	1.48	1.21	0.34	1.65	0.00	4.34	4.33	2.77	2.18	29.19
1941	1.95	3.03	0.28	1.85	3.73	4.35	1.14	2.99	1.50	1.73	1.94	5.24	29.73
1942	1.30	2.45	0.76	2.09	3.50	2.33	0.87	0.89	0.39	0.81	3.96	4.62	23.97
1943	3.96	2.02	1.27	1.82	1.47	3.16	0.40	0.63	0.00	1.66	0.92	1.32	18.63
1944	0.76	2.58	1.43	1.45	0.85	4.07	0.61	0.00	0.51	1.16	2.36	1.38	17.16
1945	2.13	3.16	1.51	1.25	2.88	1.20	0.06	1.16	1.17	0.41	4.99	3.36	23.28
1946	2.40	1.88	1.20	0.48	3.16	1.48	0.90	0.85	0.48	1.80	3.94	1.78	20.35
1947	1.84	0.88	0.99	1.66	0.96	2.87	0.72	0.81	0.54	4.24	2.67	2.09	20.27
1948	3.40	2.56	2.40	2.91	3.04	3.36	0.70	1.09	99.99	1.25	3.73	5.17	999.99
1949	0.49	4.18	0.85	0.72	2.30	0.63	0.16	0.22	0.69	0.50	2.13	2.01	14.88
1950	99.99	99.99	99.99	99.99	99.99	99.99	0.49	0.59	0.16	3.69	1.90	1.86	999.99
1950	3.62	2.18	2.23	1.39	0.40	2.98	99.99	99.99	99.99	99.99	99.99	99.99	999.99
1951	3.70	1.83	2.84	0.46	1.91	0.72	0.46	0.76	0.04	2.76	2.22	4.36	22.06
1952	3.08	1.95	1.13	1.03	2.26	2.93	0.33	0.63	0.44	0.00	0.82	3.59	18.19
1953	4.41	2.76	2.87	1.80	3.41	2.35	0.00	1.44	0.11	0.81	2.34	2.71	25.01
1954	3.80	1.32	1.15	1.45	0.90	2.81	0.55	1.03	0.29	0.51	1.23	1.67	16.71
1955	1.46	1.27	1.85	2.22	1.20	0.99	1.28	0.00	1.00	2.10	3.70	6.20	23.27
1956	3.80	3.13	1.23	0.73	4.14	2.24	1.53	1.41	0.20	2.66	1.11	2.57	24.75
1957	1.71	2.76	2.84	1.60	4.18	1.18	0.47	0.48	0.14	2.99	1.38	4.30	24.03
1958	3.27	2.86	1.82	3.03	1.13	2.76	1.07	0.49	0.93	1.49	3.45	3.03	25.33
1959	3.14	1.70	1.41	0.54	2.34	0.54	0.21	0.88	4.16	1.40	1.36	0.91	18.59
1960	2.13	2.79	2.34	1.78	3.60	0.37	0.88	1.06	0.79	0.98	4.34	1.22	22.28
1961	0.71	3.02	2.10	0.79	1.83	0.90	0.13	1.68	0.66	1.38	2.79	2.42	18.41
1962	1.65	1.89	1.80	1.31	2.77	0.39	0.26	0.47	0.77	4.20	2.34	1.78	19.63
1963	0.71	2.53	2.38	2.37	2.03	0.99	0.82	0.29	1.55	0.56	3.05	1.52	18.80
1964	3.50	0.70	2.15	0.65	0.74	3.56	1.69	0.45	0.72	0.61	2.31	9.38	26.46
1965	5.62	0.93	0.71	1.71	0.94	1.47	1.39	3.85	0.43	0.19	2.27	1.10	20.61
1966	3.30	1.87	1.61	0.40	0.77	1.31	1.05	0.19	1.37	1.16	3.04	3.41	19.48

Table 51. Rock Creek Precipitation 1967-2002

1967	2.93	0.66	3.04	2.15	1.16	1.78	0.18	0.09	0.57	3.42	1.68	2.19	19.85
1968	2.69	1.88	0.49	0.41	1.34	1.22	0.41	2.42	0.44	2.47	3.56	3.81	21.14
1969	3.21	1.69	0.46	1.65	2.67	3.26	0.65	0.00	0.70	1.25	0.57	4.09	20.20
1970	5.39	0.95	2.52	0.34	2.81	1.76	1.74	0.00	2.51	1.57	3.59	3.36	26.54
1971	4.37	0.81	2.32	1.51	2.62	2.83	0.71	0.31	1.11	0.94	2.45	4.32	24.30
1972	2.82	1.66	1.98	1.03	1.13	3.83	0.68	1.70	1.38	0.25	1.75	2.58	20.79
1973	99.99	1.08	0.56	0.66	2.05	0.36	0.05	0.79	1.36	0.84	6.66	99.99	999.99
1974	3.94	2.06	3.04	1.00	1.09	0.58	1.58	0.15	0.00	0.69	1.22	3.52	18.87
1975	3.33	2.78	2.29	1.79	0.51	2.04	0.98	0.69	0.08	2.82	99.99	1.97	999.99
1976	2.62	1.88	1.57	1.89	0.74	0.95	0.82	2.70	0.98	0.31	0.56	0.27	15.29
1977	0.33	0.61	0.99	0.30	2.99	1.95	0.21	0.84	1.39	1.05	2.92	3.74	17.32
1978	99.99	2.41	1.25	4.50	1.11	0.89	1.58	1.37	1.97	0.00	1.76	2.87	999.99
1979	1.80	4.26	1.60	0.95	1.09	1.95	1.13	1.47	0.48	1.72	2.19	1.87	20.51
1980	3.20	1.88	1.41	2.23	2.20	3.06	0.89	0.18	2.50	0.83	1.73	4.90	25.01
1981	1.83	1.94	1.96	1.57	2.57	2.23	0.65	0.22	0.43	0.72	2.19	3.34	19.65
1982	3.74	2.21	1.87	1.58	1.04	2.62	3.68	1.03	1.93	2.28	1.69	3.82	27.49
1983	2.90	3.27	3.61	1.26	0.99	1.33	0.54	1.36	0.59	0.45	3.82	5.61	25.73
1984	2.33	1.75	2.98	1.48	1.79	2.44	1.12	3.53	0.38	1.67	4.02	2.09	25.58
1985	0.21	1.37	2.06	0.61	1.54	1.14	0.98	0.80	1.38	1.36	3.74	0.96	16.15
1986	3.07	4.48	1.62	1.07	1.53	0.88	0.56	0.43	1.19	0.69	2.31	0.43	18.26
1987	1.85	1.85	1.99	0.85	1.48	1.94	1.55	0.16	0.00	0.00	1.15	3.19	16.01
1988	2.18	1.32	1.80	1.09	1.52	2.89	0.06	0.24	0.64	0.11	5.28	2.41	19.54
1989	3.22	1.31	2.92	1.50	2.40	0.82	0.46	3.24	0.60	1.32	1.30	0.32	19.41
1990	2.96	1.65	1.02	2.54	1.98	1.50	0.63	1.13	0.00	1.36	1.71	1.67	18.15
1991	1.10	0.54	2.72	1.01	4.81	2.34	0.54	0.14	0.36	0.72	4.52	0.76	19.56
1992	1.04	0.87	1.02	1.42	0.33	2.72	2.76	0.17	0.71	1.40	2.79	3.07	18.30
1993	3.85	1.06	2.15	1.30	1.03	3.67	0.90	2.65	0.00	99.99	0.58	2.15	999.99
1994	1.38	1.68	0.19	0.95	2.59	0.97	0.80	0.04	1.06	0.72	3.39	1.41	15.18
1995	1.86	1.76	4.06i	.00z	.00z	.00z	.00z	.00z	.11	1.27	5.30	4.30	14.60f
1996	2.64	2.26	.42	2.68	2.49	.90	.34	.80	.23	.94	3.48	8.15	25.33
1997	2.92	1.06	0.00z	1.67	1.22	1.35	3.77	0.72	0.58	1.36	0.83	0.93	16.41a
1998	3.03	1.91	1.04s	1.49	5.32	1.31	2.82	0.32	1.98	0.34	4.45	3.22	26.19a
1999	2.32	3.95	0.67	0.41	0.69	0.44	0.10	0.78	0.00	1.84	2.77	2.50	16.47
2000	3.73	2.65	1.91	0.55	1.10	0.89	0.58	0.01	1.29	2.48	1.15	1.28	17.62
2001	1.21	0.61	1.12	1.93	1.27	1.22	0.00z	0.00z	0.38	1.81	2.26	4.38	16.19b
2002	2.68	0.95	1.99	0.94	0.24	0.70	0.99	0.97	0.48	0.00z	0.00z	0.00z	9.94c

Table 52.

Station : 18D21S, WOLF CREEK SNOTEL

Unit = inches

year	January		February		March		April		May		June			
	date	dep	swe	date	dep	swe	date	dep	swe	date	dep	swe	date	dep	swe	date	dep	swe
74-1	E/ST		11.8	E/ST		12.8	E/ST		15.9									
75-1	E/ST		7.1	E/ST		13.1	E/ST		21.0									
76-1	E/ST		4.8	E/ST		10.4	E/ST		13.7									
77-1	E/ST		1.8	E/ST		3.4	E/ST		4.5									
78-1	E/ST		3.7	E/ST		7.5	E/ST		10.9									
79-1	1/01		3.9	2/01		6.2	3/01		11.8	4/01		12.3	5/01		13.1	6/01		0.0
80-1	1/01		5.4	2/01		9.8	3/01		12.9	4/01		14.2	5/01		5.3	6/01		0.0
81-1	1/01		5.1	2/01		8.6	3/01		11.5	4/01		6.0	5/01		0.0	6/01		0.0
82-1	1/01		9.4	2/01		18.0	3/01		19.8	4/01		22.1	5/01		21.0	6/01		0.0
83-1	1/01		10.6	2/01		15.0	3/01		20.5	4/01		24.8	5/01		19.1	6/01		0.5
84-1	1/01		12.4	2/01		16.3	3/01		21.0	4/01		28.4	5/01		28.4	6/01		1.3
85-1	1/01		11.3	2/01		12.2	3/01		14.6	4/01		18.1	5/01		11.9	6/01		0.0
86-1	1/01		7.0	2/01		10.1	3/01		14.3	4/01		14.9	5/01		6.1	6/01		0.0
87-1	1/01		4.6	2/01		8.2	3/01		11.8	4/01		14.5	5/01		0.1	6/01		0.0
88-1	1/01		4.2	2/01		7.7	3/01		10.2	4/01		12.4	5/01		4.6	6/01		0.0
89-1	1/01		9.8	2/01		17.5	3/01		19.6	4/01		24.6	5/01		14.8	6/01		0.0
90-1	1/01		1.9	2/01		6.3	3/01		9.6	4/01		10.0	5/01		1.5	6/01		0.0
91-1	1/01		4.3	2/01		7.0	3/01		6.8	4/01		10.8	5/01		6.1	6/01		0.0
92-1	1/01		5.6	2/01		6.7	3/01		8.1	4/01		7.3	5/01		0.0	6/01		0.0
93-1	1/01		10.3	2/01		15.7	3/01		17.8	4/01		19.7	5/01		16.0	6/01		0.0
94-1	1/01		4.6	2/01		8.4	3/01		12.7	4/01		12.5	5/01		0.1	6/01		0.0
95-1	1/01		11.1	2/01		16.0	3/01		17.6	4/01		21.0	5/01		15.2	6/01		0.0
96-1	1/01		5.6	2/01		10.9	3/01		14.6	4/01		13.1	5/01		7.2	6/01		0.0
97-1	1/01		12.5	2/01		17.0	3/01		17.3	4/01		21.7	5/01		15.3	6/01		0.0
98-1	1/01		5.6	2/01		12.2	3/01		17.5	4/01		19.5	5/01		13.2	6/01		0.0
99-1	1/01		7.4	2/01		12.2	3/01		21.2	4/01		20.3	5/01		15.0	6/01		0.0
0-1	1/01		6.0	2/01		13.1	3/01		19.2	4/01		24.5	5/01		4.5	6/01		0.0
1-1	1/01		5.3	2/01		7.7	3/01		9.4	4/01		11.0	5/01		6.9	6/01		0.0
79-2	1/15		5.0	2/15		8.6	3/15		12.5	4/15		13.5	5/15		5.0	6/15		0.0
80-2	1/15		8.6	2/15		10.4	3/15		13.1	4/15		16.0	5/15		0.0	6/15		0.0
81-2	1/15		5.2	2/15		9.8	3/15		10.8	4/15		2.0	5/15		0.0	6/15		0.0
82-2	1/15		11.7	2/15		18.6	3/15		20.8	4/15		24.0	5/15		7.0	6/15		0.0
83-2	1/15		12.3	2/15		17.8	3/15		22.8	4/15		27.0	5/15		10.8	6/15		0.0
84-2	1/15		14.9	2/15		17.6	3/15		22.8	4/15		30.8	5/15		22.1	6/15		0.0
85-2	1/15		11.5	2/15		13.2	3/15		16.1	4/15		14.8	5/15		0.0	6/15		0.0
86-2	1/15		8.4	2/15		12.0	3/15		15.5	4/15		11.3	5/15		0.0	6/15		0.0
87-2	1/15		6.3	2/15		9.9	3/15		13.1	4/15		12.3	5/15		0.0	6/15		0.0
88-2	1/15		6.5	2/15		9.3	3/15		9.8	4/15		10.6	5/15		0.0	6/15		0.0
89-2	1/15		16.0	2/15		17.8	3/15		22.1	4/15		20.8	5/15		0.0	6/15		0.0
90-2	1/15		3.9	2/15		8.2	3/15		10.7	4/15		4.2	5/15		0.0	6/15		0.0
91-2	1/15		6.3	2/15		7.4	3/15		8.2	4/15		10.2	5/15		0.0	6/15		0.0
92-2	1/15		6.4	2/15		7.1	3/15		8.8	4/15		2.2	5/15		0.0	6/15		0.0
93-2	1/15		12.0	2/15		16.6	3/15		19.9	4/15		20.3	5/15		3.7	6/15		0.0

(Table 52. Continued)

95-2 1/15	13.5 2/15	16.7 3/15	19.4 4/15	19.7 5/15	5.2 6/15	0.0
96-2 1/15	6.9 2/15	12.1 3/15	14.3 4/15	9.8 5/15	0.0 6/15	0.0
97-2 1/15	11.6 2/15	17.4 3/15	22.4 4/15	23.4 5/15	0.0 6/15	0.0
98-2 1/15	10.1 2/15	15.6 3/15	19.4 4/15	20.6 5/15	0.0 6/15	0.0
99-2 1/15	7.3 2/15	17.4 3/15	20.1 4/15	20.0 5/15	8.9 6/15	0.0
0-2 1/15	10.5 2/15	16.1 3/15	21.4 4/15	16.7 5/15	0.0 6/15	0.0
1-2 1/15	6.1 2/15	8.9 3/15	10.3 4/15	13.0 5/15	0.0 6/15	0.0

FIRST OF MONTH MEASUREMENTS

average depth and swe :

	6.9		11.1		14.5		16.7		9.8		0.1	
years	0	28	0	28	0	28	0	23	0	23	0	23

1971-2000 average :

7.0	11.2	14.7	16.7	9.8	0.1

MID-MONTH MEASUREMENTS

average depth and swe :

	9.1		12.9		16.0		15.4		2.7		0.0	
years	0	23	0	23	0	23	0	23	0	23	0	23

1971-2000 average :

8.9	12.8	15.9	15.4	2.8	0.0

NOTES: O/dd - October, J/dd - November, K/dd - December, E/ST - estimate
Card type 1 = First of Month, 2 = Mid-Month, and 3 = Special Measurement

Table 53.

Station : 18E03S, EILERTSON MEADOWS SNOTEL

Unit = inches

year	January		February		March		April		May		June	
	date	dep swe	date	dep swe	date	dep swe	date	dep swe	date	dep swe	date	dep swe
38-1	E/ST	3.5	E/ST	4.6	E/ST	11.7	E/ST	16.2				
39-1	E/ST	10.5	E/ST	9.0	E/ST	15.6	E/ST	9.8				
40-1	E/ST	1.4	E/ST	3.5	E/ST	13.5	E/ST	10.8				
41-1	E/ST	2.6	E/ST	7.1	E/ST	10.7	E/ST	8.4				
42-1	E/ST	1.6	E/ST	4.1	E/ST	9.1	E/ST	11.0				
43-1	E/ST	10.7	E/ST	17.6	E/ST	18.5	E/ST	15.2				
44-1	E/ST	1.0	E/ST	2.7	E/ST	4.8	E/ST	6.3				
45-1	E/ST	1.5	E/ST	3.2	E/ST	6.8	E/ST	8.9				
46-1		E/ST		10.2	E/ST	16.1	E/ST	15.7				
47-1	E/ST	0.3	E/ST	3.2	E/ST	3.1	E/ST	6.6				
48-1				E/ST		8.2	E/ST	9.2				
49-1		E/ST		8.4	E/ST	17.1	E/ST	15.7				
50-1				E/ST		10.8	E/ST	15.3				
51-1	E/ST	3.8	E/ST	15.8			E/ST	14.9				
52-1		E/ST		14.8	E/ST	17.6	E/ST	17.6				
53-1	E/ST	6.8	E/ST	9.9	E/ST	12.9	E/ST	15.9				
54-1	E/ST	3.7	E/ST	8.4	E/ST	11.1	E/ST	10.3				
55-1	E/ST	5.1	E/ST	4.4	E/ST	9.4	E/ST	11.6				
56-1	E/ST	6.1	E/ST	9.4	E/ST	14.8	E/ST	14.1				
57-1	E/ST	2.0	E/ST	9.1	E/ST	8.1	E/ST	9.5				
58-1	E/ST	7.7	E/ST	11.6	E/ST	14.7	E/ST	17.5				
59-1	E/ST	0.8	E/ST	1.6	E/ST	5.2	E/ST	7.0				
60-1	E/ST	0.3	E/ST	3.2	E/ST	7.3	E/ST	7.3				
61-1	E/ST	3.4	E/ST	4.2	E/ST	7.6	E/ST	9.7				
62-1	E/ST	5.7	E/ST	6.7	E/ST	9.4	E/ST	10.3				
63-1	E/ST	1.2	E/ST	1.8	E/ST	0.0	E/ST	0.1				
64-1	E/ST	2.6	E/ST	8.7	E/ST	9.8	E/ST	14.8				
65-1	E/ST	7.8	E/ST	15.5	E/ST	15.4	E/ST	17.6				
66-1	E/ST	1.7	E/ST	7.3	E/ST	10.5	E/ST	13.3				
67-1	E/ST	5.4	E/ST	9.3	E/ST	10.2	E/ST	12.1				
68-1	E/ST	3.8	E/ST	8.4	E/ST	8.3	E/ST	7.1				
69-1	E/ST	4.2	E/ST	12.8	E/ST	14.7	E/ST	15.0				
70-1	E/ST	3.3	E/ST	9.4	E/ST	13.5	E/ST	14.7				
71-1	E/ST	7.0	E/ST	13.4	E/ST	11.5	E/ST	14.5				
72-1	E/ST	9.6	E/ST	14.3	E/ST	14.7	E/ST	10.8				
73-1	E/ST	1.6	E/ST	4.1	E/ST	6.1	E/ST	6.9				
74-1	E/ST	9.0	E/ST	10.9	E/ST	16.6	E/ST	16.8				
75-1	E/ST	2.1	E/ST	7.8	E/ST	13.7	E/ST	16.0				
76-1	E/ST	2.7	E/ST	6.0	E/ST	10.6	E/ST	13.7				

(Table 53. Continued)

77-1 E/ST	0.0 E/ST	0.4 E/ST	0.0 E/ST	3.3		
78-1 E/ST	4.4 E/ST	8.3 E/ST	10.6 E/ST	9.0		
79-1 E/ST	4.1 E/ST	7.2 E/ST	12.4 E/ST	12.3		
80-1 E/ST	3.8 E/ST	7.8 E/ST	9.3 E/ST	12.4		
81-1 1/01	0.7 2/01	2.0 3/01	2.0 4/01	0.6 5/01	0.0 6/01	0.0
82-1 1/01	5.7 2/01	10.8 3/01	11.5 4/01	16.0 5/01	8.3 6/01	0.0
83-1 1/01	7.4 2/01	8.9 3/01	13.3 4/01	19.6 5/01	11.4 6/01	0.0
84-1 1/01	9.2 2/01	10.6 3/01	12.2 4/01	16.5 5/01	9.8 6/01	0.0
85-1 1/01	8.4 2/01	9.1 3/01	11.1 4/01	13.1 5/01	0.0 6/01	0.0
86-1 1/01	6.2 2/01	9.8 3/01	12.8 4/01	7.7 5/01	0.0 6/01	0.0
87-1 1/01	2.7 2/01	5.9 3/01	6.2 4/01	4.7 5/01	0.0 6/01	0.0
88-1 1/01	1.5 2/01	5.0 3/01	5.7 4/01	5.9 5/01	0.0 6/01	0.0
89-1 1/01	7.1 2/01	11.4 3/01	12.4 4/01	13.7 5/01	0.0 6/01	0.0
90-1 1/01	0.0 2/01	3.7 3/01	5.4 4/01	1.5 5/01	0.0 6/01	0.0
91-1 1/01	2.2 2/01	3.2 3/01	2.8 4/01	5.1 5/01	0.5 6/01	0.0
92-1 1/01	4.9 2/01	6.7 3/01	6.2 4/01	0.1 5/01	0.0 6/01	0.0
93-1 1/01	5.9 2/01	10.1 3/01	12.7 4/01	12.0 5/01	4.5 6/01	0.0
94-1 1/01	3.1 2/01	5.3 3/01	7.0 4/01	3.8 5/01	0.0 6/01	0.0
95-1 1/01	6.7 2/01	9.7 3/01	9.5 4/01	4.0 5/01	0.7 6/01	0.0
96-1 1/01	2.4 2/01	5.7 3/01	6.1 4/01	4.2 5/01	0.0 6/01	0.0
97-1 1/01	6.9 2/01	9.7 3/01	10.0 4/01	6.6 5/01	0.0 6/01	0.0
98-1 1/01	2.8 2/01	6.0 3/01	8.4 4/01	7.0 5/01	0.0 6/01	0.0
99-1 1/01	7.5 2/01	9.5 3/01	15.7 4/01	15.9 5/01	8.7 6/01	0.0
0-1 1/01	4.4 2/01	8.8 3/01	12.5 4/01	13.4 5/01	0.0 6/01	0.0
1-1 1/01	3.5 2/01	5.3 3/01	6.0 4/01	3.4 5/01	0.0 6/01	0.0
81-2 1/15	0.4 2/15	1.4 3/15	2.0 4/15	0.8 5/15	0.0 6/15	0.0
82-2 1/15	7.3 2/15	13.1 3/15	13.5 4/15	16.5 5/15	0.3 6/15	0.0
83-2 1/15	7.4 2/15	11.5 3/15	15.5 4/15	21.3 5/15	2.3 6/15	0.0
84-2 1/15	9.9 2/15	10.2 3/15	13.7 4/15	15.8 5/15	2.4 6/15	0.0
85-2 1/15	9.0 2/15	10.7 3/15	11.9 4/15	4.9 5/15	0.0 6/15	0.0
86-2 1/15	7.5 2/15	11.7 3/15	12.7 4/15	0.0 5/15	0.0 6/15	0.0
87-2 1/15	4.1 2/15	6.6 3/15	4.7 4/15	0.0 5/15	0.0 6/15	0.0
88-2 1/15	4.4 2/15	6.0 3/15	6.4 4/15	0.6 5/15	0.0 6/15	0.0
89-2 1/15	10.6 2/15	11.3 3/15	11.9 4/15	7.5 5/15	0.0 6/15	0.0
90-2 1/15	2.3 2/15	4.9 3/15	6.2 4/15	0.0 5/15	0.0 6/15	0.0
91-2 1/15	4.1 2/15	3.2 3/15	3.2 4/15	1.2 5/15	0.0 6/15	0.0
92-2 1/15	5.6 2/15	6.7 3/15	2.7 4/15	0.1 5/15	0.0 6/15	0.0
93-2 1/15	7.8 2/15	10.8 3/15	14.5 4/15	10.1 5/15	0.0 6/15	0.0
94-2 1/15	4.8 2/15	5.8 3/15	6.6 4/15	1.6 5/15	0.0 6/15	0.0
95-2 1/15	8.6 2/15	9.9 3/15	7.5 4/15	1.5 5/15	0.0 6/15	0.0
96-2 1/15	3.0 2/15	5.2 3/15	4.3 4/15	0.0 5/15	0.0 6/15	0.0
97-2 1/15	8.3 2/15	9.7 3/15	11.7 4/15	2.4 5/15	0.0 6/15	0.0
98-2 1/15	4.6 2/15	7.4 3/15	8.7 4/15	8.8 5/15	0.0 6/15	0.0
99-2 1/15	6.9 2/15	12.2 3/15	15.0 4/15	15.9 5/15	2.2 6/15	0.0
0-2 1/15	7.8 2/15	10.6 3/15	13.6 4/15	6.1 5/15	0.0 6/15	0.0
1-2 1/15	4.5 2/15	5.9 3/15	6.7 4/15	4.2 5/15	0.0 6/15	0.0

Table 54.

FIRST OF MONTH MEASUREMENTS
average depth and swe :

	4.3		7.8		10.2		10.6		2.1		0.0	
years	0	59	0	62	0	63	0	64	0	21	0	21

1971-2000 average :

4.7	7.7	9.6	9.6	3.4	0.0

MID-MONTH MEASUREMENTS
average depth and swe :

	6.1		8.3		9.2		5.7		0.3		0.0	
years	0	21	0	21	0	21	0	21	0	21	0	21

1971-2000 average :

6.2	8.7	10.0	6.9	1.0	0.0

NOTES: O/dd - October, J/dd - November, K/dd - December, E/ST - estimate
Card type 1 = First of Month, 2 = Mid-Month, and 3 = Special Measurement

/cdbs/or/snow41

Station : 18E03, EILERTSON MEADOWS

Unit = inches

year	January		February		March		April		May		June			
	date	dep	swe	date	dep	swe	date	dep	swe	date	dep	swe	date	dep	swe	date	dep	swe
38-1	1/02	011	4.0	1/30	019	5.0	2/28	031	11.5	3/29	035	15.7						
39-1	K/30	015	10.4	1/30	029	9.0	2/28	036	15.1	3/30	023	9.8						
40-1	K/31	004	2.0	1/30	019	4.0	2/29	030	13.2	3/31	020	10.7						
41-1	K/30	018	3.1	1/24	029	7.3	2/27	035	10.6	3/26	021	8.5						
42-1	1/01	009	2.2	1/30	018	4.5	2/27	033	9.1	3/26	029	10.9						
43-1	K/30	038	10.6	1/31	052	17.0	2/28	046	17.8	3/28	039	14.7						
44-1	K/31	010	1.7	1/31	017	3.2	2/29	026	5.2	3/27	022	6.5						
45-1	1/02	016	2.1	1/29	016	3.7	2/28	027	7.0	3/29	028	8.9						
46-1				1/22	038	10.1	2/27	051	15.6	3/28	042	15.2						
47-1	K/27	006	1.0	1/31	018	3.7	2/28	013	3.6	3/27	013	6.8						
48-1							3/03	028	8.3	3/30	031	9.2						
49-1				1/31	034	8.5	2/25	053	16.5	3/30	041	15.2						
50-1							3/04	030	10.7	3/31	036	14.8						
51-1	K/29	013	4.2	1/29	053	15.3							4/02	040	14.5			
52-1				2/10	048	14.4	3/02	053	17.0	3/30	043	17.0	5/04	000	0.0			
53-1	1/01	029	7.0	2/01	029	9.9	3/01	035	12.6	3/29	038	15.4						
54-1	1/01	018	4.1	1/31	035	8.5	2/28	033	11.0	3/28	031	10.2						
55-1	1/01	033	5.4	1/30	023	4.8	3/03	038	9.4	4/03	034	11.4	4/29	030	11.3			
56-1	1/01	021	6.4	1/30	036	9.4	3/03	053	14.4	4/02	036	13.7						
57-1	K/29	011	2.6	2/03	034	9.1	3/02	024	8.2	3/24	027	9.5						
58-1	K/28	028	7.8	1/25	042	11.4	2/22	043	14.3	3/28	045	16.9	4/27	036	14.3			
59-1	K/27	010	1.5	1/25	006	2.2	2/22	021	5.5	3/28	020	7.2	4/26	000	0.0			

Table 55.

```
                          12  2.7
years     0   0     0   0     1   1     0   0     0   0     0   0
1971-2000 average :



NOTES:  O/dd - October, J/dd - November, K/dd - December, E/ST - estimate
        Card type 1 = First of Month, 2 = Mid-Month, and 3 = Special Measurement


/cdbs/or/snow41

Station : 18E01, ANTHONY LAKE
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Unit = inches
year   January        February       March          April          May            June
    date dep  swe  date dep  swe  date dep  swe  date dep  swe  date dep  swe  date dep  swe
    ---- --- ----- ---- --- ----- ---- --- ----- ---- --- ----- ---- --- ----- ---- --- -----
36-1                                3/23 091  27.7
37-1                                4/06 101  28.3
38-1                                3/28 077  24.4
39-1 K/29 037   8.1 1/28 051  13.4 2/25 073  21.3 3/28 073  29.4

40-1 K/29 014   4.0 1/30 029   9.3 2/28 063  18.6 4/01 058  23.1
41-1 K/30 037  10.9 1/30 046  16.1 2/28 058  20.6 3/24 057  19.1
42-1 K/31 028   7.7 1/30 036  10.3 2/28 048  14.9 3/26 056  19.0
43-1 K/31 065  25.1 2/03 083  30.8 3/01 080  33.0 3/25 093  37.9
44-1 K/31 023   6.2           2/29 055  13.2 3/29 060  21.1

45-1 K/30 022   3.4 1/30 034  12.0           3/27 078  22.3
46-1 1/03 047  16.3 2/02 076  28.6 2/26 072  31.6 3/27 081  33.3
47-1           2/04 069  26.0 3/04 070  29.2 3/26 072  30.6
48-1 K/31 048  12.6 1/30 050  18.0 2/27 068  21.4 3/30 085  30.7
49-1 1/02 070  19.8 1/30 071  24.4 2/27 095  36.0 3/29 092  35.0

50-1 K/30 037   8.9           3/01 066  23.8 3/31 085  32.3
51-1 K/29 026   9.8 2/03 060  14.2 3/03 076  26.6 4/01 077  29.4
52-1 K/31 062  16.0 1/31 070  22.9 2/29 076  26.3 3/25 088  31.7
53-1 K/31 032   7.2 1/31 055  19.0 2/27 075  22.6 3/30 085  30.2
54-1 1/02 046  14.8 1/29 068  20.3 2/25 066  23.1 3/26 074  26.3 4/29 059  28.4

55-1 1/07 040   9.1 1/28 042  12.2 2/27 066  18.6 4/06 071  28.7 5/02 080  31.6
56-1 K/30 051  18.0 1/27 075  25.6 2/24 096  31.5 4/02 088  36.1 5/03 053  29.7
57-1 K/27 039  14.3 1/28 056  15.7 2/25 075  24.0 3/21 087  29.9 4/29 083  37.0
58-1 K/26 045  13.2 1/23 058  17.7 2/24 067  24.9 3/20 078  29.2 4/28 094  37.0
59-1 K/23 016   4.9 1/23 040   8.7 2/25 058  17.4 3/26 064  20.1 4/28 052  19.5

60-1 K/29 020   4.8 1/27 035   8.5 2/26 056  15.1 3/28 051  18.7 4/27 055  21.7
61-1 K/28 043  11.8 1/24 041  12.2 2/27 065  18.8 3/27 079  27.3 4/27 065  27.4
62-1 K/27 049  14.8 1/27 056  17.0 2/26 070  21.9 3/28 091  29.7 4/26 060  31.4
63-1 K/26 021   5.9 1/29 033   8.4 2/24 039  11.6 3/25 054  16.3 4/24 072  24.4
64-1 K/27 036   9.0 1/27 063  17.5 2/27 072  22.3 3/24 087  29.3 4/27 087  32.6

65-1 K/28 072  21.9 1/26 089  28.8 2/23 109  38.9 3/29 102  40.9 4/26 085  43.7
66-1 K/29 018   3.4 1/26 046  12.3 2/28 056  17.7 3/29 056  22.4 4/28 039  19.3
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Table 55 cont'd

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67-1 K/30 043  14.7 1/31 064  21.9 2/28 066  24.8 3/31 086  29.7 4/27 095  36.2
68-1 K/29 027   9.3 1/31 043  12.3 2/29 048  18.1 3/28 055  19.8 4/30 053  21.9
69-1 K/30 046  11.7 1/27 055  17.4 2/28 062  21.3 3/27 065  25.4 4/28 053  25.6

70-1 K/30 033   8.4 1/30 069  22.2 2/27 068  26.3 3/31 098  33.9 4/30 097  39.8
71-1 K/30 043  11.7 1/29 061  19.5 2/26 069  22.9 3/29 082  29.8 4/30 079  31.8
72-1 K/30 072  19.5 1/27 083  28.6 2/28 092  34.5 3/30 095  37.8 4/28 094  43.2
73-1 K/29  34   8.0 1/30  45  13.6 2/28  48  15.5 3/28  59  18.8 4/27  49  18.7
74-1 1/02  68  20.1 1/28  78  25.2 2/26  82  30.1 3/28  87  35.3 4/29  97  41.2

75-1 K/23 050  10.0 1/27 066  20.2 2/26 075  27.8 3/27 090  35.1 5/01      40.7
76-1 K/29 039  11.8 1/27  62  21.8 2/26  74  23.7 3/30  88  30.6 4/28  89  36.2
77-1 K/27 008   1.4 1/28  13   2.6 2/24  25   4.8 3/29  60  13.2 4/29  14   9.4
78-1 K/27 044  12.1 1/25  51  15.2 2/23  60  20.4 3/27  58  22.7 4/26  58  26.9
79-1 K/28 040   8.7 1/26 051  14.5 2/27 075  24.1 3/28 071  24.8 4/25 083  31.7

80-1 K/27 028   8.0 1/30 052  15.1 2/29 058  20.2 3/27 081  26.4 4/29 050  34.7
81-1 K/29 021   6.7 1/29 029   7.9 2/27 039  12.8 3/27 060  17.1 4/30 040  23.2
82-1 K/28 060  11.3 1/28 070  22.8 2/26 072  27.6 3/29 091  33.8 4/29 082  40.8
83-1 K/29  46  12.0 1/28  57  18.2 2/28  71  24.3 3/31 101  33.8 4/28  86  36.7
84-1 K/30  52  14.9 E/ST     15.8 3/01  61  20.4 3/29  84  27.3 E/ST     31.0

85-1 K/27  48  14.4 1/31  56  17.5 2/28  61  20.7 3/28  75  26.7 E/ST     30.3
86-1 K/26  38  12.6 1/31  51  16.9 2/28  72  27.3 3/26  71  32.6
87-1 K/29  31   9.6 1/29  49  11.8 2/24  64  17.3 3/26  70  20.8
88-1 K/28  26   6.1 1/25  42  11.7 2/26  53  18.8 3/30  76  21.4
89-1 K/29  49  12.7 1/27  72  24.9 2/24  78  28.7 3/31  85  30.6

90-1 K/27  14   3.8 1/29  43  11.1 2/28  53  18.9 3/27  54  20.2
91-1 K/27  31   7.2 1/28  50  13.0 2/25  48  15.9 3/28  70  20.9 E/ST     24.9
92-1 1/02  33  10.4 1/30  41  12.7 2/28  46  15.5 3/27  46  16.5
93-1 1/04  57  15.0 1/29  60  19.0 2/25  62  21.9 3/26  70  25.9 E/ST     44.0
94-1 K/27  21   5.5 1/28  40  12.1 2/25  62  17.9 4/01  52  19.7 E/ST     24.9

95-1 K/30  38  12.7 2/01  50  17.8 2/27  50  18.4 3/31  73  27.3 E/ST     40.5
96-1 1/02  25   7.9 2/02  62  16.0 2/29  61  21.6 3/28  65  23.1 4/30  61  27.1
97-1 K/30  71  22.1 2/03  82  29.3 3/03  88  29.6 3/27  88  36.0 4/30  85  45.6
98-1 K/24  26   5.7 1/29  49  14.3 2/25  61  20.6 3/30  53  23.7 4/29  55  29.2
99-1 K/28  52  14.1 1/28  64  21.7 2/26  81  27.3 3/29  78  31.7 4/26  67  36.2

 0-1 K/28  32  10.6 1/28  57  18.6 2/28  68  23.5 3/28  71  26.8 4/28  45  22.6
 1-1 K/27  36   9.6 1/29  42  12.1 2/27  43  13.9 3/30  42  14.6 4/27  43  18.1
 2-1 K/26  35  11.4 1/28  60  18.3 2/26  59  20.6 3/26  77  27.1 4/29  58  33.4
49-2                          3/17 096  33.3


FIRST OF MONTH MEASUREMENTS
average depth and swe :
       39 11.0     55 17.2     65 22.3     75 26.9     67 30.9
years  63  63     61  62      63  63      67  67      36  43      0   0
1971-2000 average :
       40 10.9     55 17.0     64 21.8     73 26.3

MID-MONTH  MEASUREMENTS
average depth and swe :
                              96 33.3
```

Table 56.

years 0 0 0 0 0 0 1 1 0 0 0 0
1971-2000 average :

NOTES: O/dd - October, J/dd - November, K/dd - December, E/ST - estimate
Card type 1 = First of Month, 2 = Mid-Month, and 3 = Special Measurement

/cdbs/or/snow41

Station : 18E23, LITTLE ALPS

Unit = inches

year	January		February		March		April		May		June	
	date dep	swe	date dep	swe	date dep	swe	date dep	swe	date dep	swe	date dep	swe
59-1	K/23 003	0.8	1/22 018	4.5	2/25 032	8.0	3/26 036	9.7	4/28 018	6.9		
60-1	K/29 008	1.4	1/27 018	3.7	2/26 037	7.9	3/28 030	10.0	4/27 023	8.7		
61-1	K/28 024	5.3	1/24 022	6.4	2/27 033	8.8	3/27 045	13.0	4/27 030	10.4		
62-1	K/27 033	9.0	1/27 035	10.5	2/26 045	12.0	3/28 056	18.3	4/26 026	9.8		
63-1	K/26 010	2.1	1/29 019	3.4	2/24 011	3.0	3/25 020	5.6	4/24 032	9.4		
64-1	K/27 018	4.1	1/27 035	8.4	2/27 039	10.7	3/24 054	15.5	4/27 050	16.5		
65-1	K/28 037	8.9	1/26 056	12.6	2/23 061	17.8	3/29 061	21.6	4/26 040	17.1		
66-1	K/29 015	2.0	1/26 028	5.5	2/28 039	10.5	3/29 040	14.1	4/28 021	8.6		
67-1	K/30 024	5.8	1/31 034	10.4	2/28 039	13.0	3/31 054	15.4	4/27 066	20.2		
68-1	K/29 014	4.2	1/31 031	7.5	2/29 024	8.8	3/28 024	7.9	4/30 020	8.0		
69-1	K/30 038	8.7	1/27 042	11.2	2/28 049	15.2	3/27 050	17.5	4/28 034	14.9		
70-1	K/30 019	4.2	1/30 036	10.5	2/27 036	12.7	3/31 057	16.0	4/30 055	19.6		
71-1	K/30 032	7.7	1/29 042	13.2	2/26 040	12.6	3/29 051	16.8	4/30 043	15.9		
72-1	K/30 048	11.3	1/27 062	18.7	2/28 063	23.0	3/30 061	24.4	4/28 053	23.2		
73-1	K/29 17	3.4	1/30 25	5.5	2/28 27	7.0	3/28 31	8.2	4/27 21	6.6		
74-1	1/02 043	10.2	1/28 047	13.6	2/26 055	17.5	3/28 056	20.2	4/29 056	21.4		
75-1	K/31 25	4.6	1/27 33	8.6	2/26 48	15.0	3/27 62	19.2	E/ST	17.5		
76-1	K/29 014	3.9	1/27 27	8.4	2/26 40	10.4	3/30 47	13.6	4/28 46	15.4		
77-1	K/27 004	2.6	1/28 6	1.3	2/24 14	2.6	3/29 34	6.3	4/29 2	0.9		
78-1	K/27 018	4.1	1/25 28	7.0	2/23 34	9.2	3/27 32	10.8	4/26 30	10.5		
79-1	K/28 025	6.2	1/26 033	6.9	2/27 049	12.4	3/28 046	13.3	4/25 047	15.3		
80-1	K/27 017	3.4	1/30 029	7.1	2/29 033	9.0	3/27 051	13.0	4/29 025	8.3		
81-1	K/29 005	1.1	1/29 015	2.6	2/27 014	3.4	3/27 026	5.1	4/30 008	2.9		
82-1	K/28 034	5.2	1/28 043	11.4	2/26 040	12.8	3/29 054	17.2	4/29 046	17.4		
83-1	K/29 034	7.2	1/28 039	10.0	3/01 052	14.5	3/31 066	17.2	4/28 052	18.4		
84-1	K/30 36	8.0	E/ST	8.0	3/01 44	11.6	3/29 58	14.5	E/ST	16.8		
85-1	K/27 34	8.3	1/31 35	10.6	2/28 41	12.6	3/28 54	15.8	E/ST	12.7		
86-1	K/26 23	6.0	1/31 31	8.8	2/28 39	11.8	3/26 39	13.7				
87-1	K/29 18	4.0	1/29 31	7.5	2/24 39	9.6	3/26 39	11.1				
88-1	K/28 17	3.2	1/25 26	6.6	2/26 32	9.2	3/30 46	11.2				
89-1	K/29 30	7.4	1/27 45	12.5	2/24 50	15.4	3/31 56	17.2				

(Table 56. Continued)

```
90-1 K/27  2  0.6 1/29  21  4.1 2/28  25  5.8 3/27  26  7.8
91-1 K/27  16  3.1 1/28  25  4.8 2/25  22  6.2 3/28  42  10.1
92-1 1/02  21  4.9 1/30  27  6.6 2/28  27  7.6 3/27  25  8.6
93-1 1/04  39  8.5 1/29  47  12.6 2/25  47  13.8 3/26  43  14.7
94-1 K/27  13  2.6 1/28  22  5.6 2/25  38  7.9 4/01  26  8.1

95-1 K/30  24  6.5 2/01  29  7.4 2/27  27  8.4 3/31  37  11.6
96-1 1/02  9  2.0 1/29  41  7.7 2/29  33  8.2 3/28  34  9.0
97-1 K/30  38  9.7 2/03  42  11.6 3/03  57  15.4 3/27  41  14.7
98-1 K/24  18  2.9 1/29  31  8.8 2/25  44  12.3 3/30  35  13.5
99-1 K/28  33  7.4 1/28  39  10.8 2/26  55  15.3 3/29  50  16.9

 0-1 K/28  12  3.1 1/28  29  7.4 2/28  41  11.1 3/28  44  13.7
 1-1 K/27  21  5.1 1/29  26  6.6 2/27  28  8.0 3/30  25  7.3
 2-1 K/26  23  6.1 1/28  38  10.2 2/26  40  12.1 3/26  50  15.5

FIRST OF MONTH MEASUREMENTS
average depth and swe :
       22  5.2     32  8.3     38  10.9     44  13.3     35  13.1
years    44   44     43   44     44   44     44   44     24   27      0    0
1971-2000 average :
       23  5.3     33  8.5     39  11.1     44  13.2        10.9


NOTES:  O/dd - October, J/dd - November, K/dd - December, E/ST - estimate
        Card type 1 = First of Month, 2 = Mid-Month, and 3 = Special Measurement



/cdbs/or/snow41

Station : 18E34, LITTLE ANTONE (ALT.)
-------

Unit = inches
year   January       February       March         April         May          June
     date dep  swe  date dep  swe  date dep  swe  date dep  swe  date dep  swe  date dep  swe  date dep  swe
     ---- ---  ---  ---- ---  ---  ---- ---  ---  ---- ---  ---  ---- ---  ---  ---- ---  ---  ---- ---  ---
74-1 1/02 030   7.0 1/28 027   7.6 2/26 033   9.6 3/28 024   8.2 4/29 000   0.0

75-1 K/31 023   4.0 1/27 029   7.8 2/26 041  12.8 3/27 044  13.8 E/ST      6.2
76-1 K/29 012   2.6 1/27 021   6.1 2/26 029   8.2 3/30 029  10.0 4/28 006   2.2
77-1 K/27 004   0.7 1/28 006   1.7 2/24 007   2.4 3/29 013   3.0 4/29 000   0.0
78-1 K/27 008   1.9 1/25  18   4.3 2/23  22   6.4 3/27  12   4.7 4/26   0   0.0
79-1 K/28 020   3.9 1/26 030   6.6 2/27 043  11.7 3/28 026   9.5 4/25 010   2.8

80-1 K/27 017   3.9 1/30 022   6.0 2/29 016   5.8 3/27 017   5.0 4/29 000   0.0
81-1 K/29 009   3.0 1/29 019   3.8 2/27 018   5.2 3/27 010   4.1 4/30 000   0.0
82-1 K/28 026   3.8 1/28 036   8.0 2/26 029   9.4 3/29 027  10.1 4/29 011   4.7
83-1 K/29 026   6.1 1/29 033   8.5 3/01 038   9.6 3/31 027   9.2 4/28 003   1.1
84-1 K/30  35   7.8 E/ST       8.7 3/01  37  10.9 3/29  35  11.7 E/ST       3.3

85-1 K/27  23   5.0 1/31  23   6.4 2/28  28   8.4 3/28  38  10.8 E/ST       2.9
86-1 K/26  16   3.9 L/OO  26   6.4 2/28  30   9.6 3/26  18   6.8
87-1 K/29  10   2.8 1/29  21   5.2 2/24  28   6.5 3/26  16   5.3
```

(Table 56. Continued)

```
88-1 K/28 11  2.3 1/25 19  4.5 2/26 24  6.5 3/30 24  5.3
89-1 K/29 26  5.8 1/27 37 10.9 2/24 42 13.0 3/31 33 12.8

90-1 K/27  4  1.2 1/29 19  4.1 2/28 23  6.7 3/27 14  5.1
91-1 K/27 11  1.8 1/28 18  3.8 2/25 12  3.9 3/28 17  4.7
92-1 1/02 15  3.4 1/30 20  5.0 2/28 11  3.3 3/27  0  0.0
93-1 1/04 34  7.5 1/29 40 11.4 2/25 40 12.1 3/26 29 11.1
94-1 K/27 14  2.5 1/28 17  4.6 2/25 29  6.0 4/01  4  1.3

95-1 K/30 22  6.3 2/01 31  9.1 2/27 27  9.2 3/31 19  6.7
96-1 K/30  8  1.9 1/29 35  6.6 2/29 23  8.3 3/28 11  2.1
97-1 K/30 25  6.5 2/03 26  7.3 3/03 35  9.0 3/27 16  5.6
98-1 K/24 12  2.3 1/29 26  7.1 2/25 30  9.4 3/30 18  7.4
99-1 K/28 20  4.8 1/28 29  7.5 2/26 40 12.3 3/29 28 10.9

 0-1 K/28 13  3.3 1/28 28  7.2 2/28 31 10.3 3/28 28 10.5
 1-1 K/27 16  3.2 1/29 19  4.7 2/27 21  5.0 3/30  5  1.8
 2-1 K/26 24  6.9 1/28 34  9.0 2/26 29 10.4 3/26 28 11.2

FIRST OF MONTH MEASUREMENTS
average depth and swe :
       18 4.0    25 6.5    28 8.3    21 7.2     3 1.9
years  29 29     28 29     29 29     29 29      9 12     0  0
1971-2000 average :
       18 3.9    25 6.5    28 8.4    21 7.2       1.8


NOTES:  O/dd - October, J/dd - November, K/dd - December, E/ST - estimate
        Card type 1 = First of Month, 2 = Mid-Month, and 3 = Special Measurement
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APPENDIX C

OREGON LIST

THREATENED AND ENDANGERED SPECIES

SENSITIVE SPECIES

OREGON LIST OF THREATENED AND ENDANGERED FISH AND WILDLIFE SPECIES

COMMON NAME	*SCIENTIFIC NAME*	CATEGORY
Fishes		
Hutton Spring Tui Chub	*Gila bicolor* ssp.	*T
Borax Lake Chub	*Gila boraxobius*	*E
Foskett Spring Speckled Dace	*Rhinichthys osculus* ssp	*T
Warner Sucker	*Catostomus warnerensis*	*T
Snake River Chinook Salmon (Spring/Summer)	*Oncorhynchus tshawytscha*	*T
Snake River Chinook Salmon (Fall)	*Oncorhynchus tshawytscha*	*T
Lower Columbia River Coho Salmon	*Oncorhynchus kisutch*	E
Lahontan Cutthroat Trout	*Oncorhynchus clarki henshawi*	*T
Lost River Sucker	*Deltistes luxatus*	*E
Shortnose Sucker	*Chasmistes brevirostris*	*E
Amphibians and Reptiles		
Green Sea Turtle	*Chelonia mydas*	*E
Leatherback Sea Turtle	*Dermochelys coriacea*	*E
Loggerhead Sea Turtle	*Caretta caretta*	*T
Pacific Ridley Sea Turtle	*Lepidochelys olivacea*	*T
Birds		
Short-tailed Albatross	*Diomedea albatrus*	*E
Brown Pelican	*Pelecanus occidentalis*	*E
Aleutian Canada Goose	*Branta canadensis leucopareia*	E
Bald Eagle	*Haliaeetus leucocephalus*	*T
American Peregrine Falcon	*Falco peregrinus anatum*	E
Arctic Peregrine Falcon	*Falco peregrinus tundrius*	E
Western Snowy Plover	*Charadrius alexandrinus*	T (*T)1

	nivosus	
California Least Tern	*Sterna antillarum browni*	*E
Marbled Murrelet	*Brachyramphus marmoratus*	*T
Northern Spotted Owl	*Strix occidentalis caurina*	*T
Mammals		
Gray Wolf	*Canis lupus*	*E
Kit Fox	*Vulpes macrotis*	T
Sea Otter	*Enhydra lutris*	*T
Wolverine	*Gulo gulo*	T
Sei Whale	*Balaenoptera borealis*	*E
Blue Whale	*Balaenoptera musculus*	*E
Fin Whale	*Balaenoptera physalus*	*E
Gray Whale	*Eschrichtius robustus*	E
Black Right Whale	*Eubalaena glacialis*	*E
Humpback Whale	*Megaptera novaeangliae*	*E
Sperm Whale	*Physeter macrocephalus*	*E
Washington Ground Squirrel	*Spermophilus washingtoni*	E

***Denotes those species listed by the federal government (also see reverse)**

T= Threatened E= Endangered

1 Coastal Population only

FISH AND WILDLIFE SPECIES LISTED IN OREGON

UNDER THE FEDERAL ENDANGERED SPECIES ACT

BUT *NOT* UNDER THE OREGON ENDANGERED SPECIES ACT

COMMON NAME	*SCIENTIFIC NAME*	CATEGORY
Oregon Chub	*Oregonichthys crameri*	E

Columbia River Chum	*Oncorhynchus keta*	T
Oregon Coast Coho	*Oncorhynchus kisutch*	T
Southern Oregon Coho	*Oncorhynchus kisutch*	T
Oregon Coast Coho	*Oncorhynchus kisutch*	T
Upper Willamette River Steelhead	*Oncorhynchus mykiss irideus*	T
Lower Columbia River Steelhead	*Oncorhynchus mykiss irideus*	T
Middle Columbia River Steelhead	*Oncorhynchus mykiss gairdneri*	T
Snake River Steelhead	*Oncorhynchus mykiss gairdneri*	T
Snake River Sockeye salmon	*Oncorhynchus nerka*	E
Upper Columbia River Spring Chinook	*Oncorhynchus tshawytscha*	E
Lower Columbia River Chinook	*Oncorhynchus tshawytscha*	T
Upper Willamette River Chinook	*Oncorhynchus tshawytscha*	T
Bull Trout	*Salvelinus confluentus*	T
Northern (Steller) Sea Lion	*Eumetopias jubatus*	T
Columbian White-tailed Deer	*Odocoileus virginianus leucurus*	E

***For more information contact the US Fish and Wildlife Service or the National Marine Fisheries Service**

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OREGON
SENSITIVE SPECIES LIST
By Categories

COMMON NAME	SCIENTIFIC NAME	PROVINCE*
	-CRITICAL-	
FISHES		
Goose Lake Lamprey	*Lampetra tridentata ssp.*	
Sheldon Tui Chub	*Gila bicolor eurysoma*	
Summer Basin Tui Chub	*Gila bicolor ssp.*	
Oregon Chub	*Oregonichthys crameri*	
Goose Lake Sucker	*Catostomus occidentalis lacusanerinus*	
Coastal Cutthroat Trout	*Oncorhynchus clarki clarki*	Lower Columbia River Anadromous form
Chum Salmon	*Oncorhynchus keta*	
Coho Salmon	*Oncorhynchus kisutch*	
Coastal Steelhead	*Oncorhynchus mykiss ssp*	Lower Columbia River (including Hood River), Upper Willamette Basin (above Willamette Falls)
Chinook Salmon	*Oncorhynchus tshawytscha*	Lower Columbia Fall Run Stocks
Chinook Salmon	*Oncorhynchus tshawytscha*	South Coast Fall Run Stocks (S. of Bandon)
Bull Trout	*Salvelinus confluentus*	
Malheur Mottled Sculpin	*Cottus bairdi ssp.*	
AMPHIBIANS		
Columbia Seep Salamander	*Rhyacotriton kezeri*	
Northern Leopard Frog	*Rana pipiens*	
Oregon Spotted Frog	*Rana pretiosa*	
REPTILES		
Western Pond Turtle	*Clemmys marmorata*	
Painted Turtle	*Chrysemys picta*	
BIRDS		
Red-necked Grebe	*Podiceps grisegena*	Breeding Population
Northern Goshawk	*Accipiter gentilis*	
Ferruginous Hawk	*Buteo regalis*	
Yellow Rail	*Coturnicops noveboracensis*	
Upland Sandpiper	*Bartramia longicauda*	
Yellow-billed Cuckoo	*Coccyzus americanus*	
Flammulated Owl	*Otus flammeolus*	
Northern Pygmy Owl	*Glaucidium gnoma*	Blue Mountains
Burrowing Owl	*Speotyto cunicularia*	Willamette Valley and Klamath Mountains, High Plains, Col. Basin and Blue Mountains
Common Nighthawk	*Chordeiles minor*	Willamette Valley
Lewis' Woodpecker	*Melanerpes lewis*	Willamette Valley and Klamath Mountains, W. and E. Cascades and Col. Basin
White-headed Woodpecker	*Picoides albolarvatus*	
Three-toed Woodpecker	*Picoides tridactylus*	
Black-backed Woodpecker	*Picoides arcticus*	
Streaked Horned Lark	*Eremophila alpestris strigata*	Willamette Valley and Klamath Mountains
Purple Martin	*Progne subis*	

* Province in which listed. Stock or population listed. No notation indicates listing applies to all stocks, populations or species throughout its state range.

OREGON
SENSITIVE SPECIES LIST
By Categories

(CRITICAL-CONTINUED)

Pygmy Nuthatch	*Sitta pygmaea*	Blue Mountains
Yellow-breasted Chat	*Icteria virens*	Willamette Valley
(Oregon) Vesper Sparrow	*Pooecetes gramineus affinis*	Willamette Valley and Klamath Mountains
Sage Sparrow	*Amphispiza belli*	Columbia Basin
Western Meadowlark	*Sturnella neglecta*	Willamette Valley

MAMMALS

Townsend's Big-eared Bat	*Plecotus townsendii*	
Washington Ground Squirrel	*Spermophilus washingtoni*	
Fisher	*Martes pennanti*	

-VULNERABLE-

FISHES

Pacific Lamprey	*Lampetra tridentata*	
Alvord Chub	*Gila alvordensis*	
Catlow Tui Chub	*Gila bicolor ssp.*	
Oregon Lakes Tui Chub	*Gila bicolor oregonensis*	
Umpqua Chub	*Oregonichthys kalawatseti*	
Coastal Cutthroat Trout	*Oncorhynchus clarki clarki*	Coast-wide below natural impassable barriers
Westslope Cutthroat Trout	*Oncorhynchus clarki lewisi*	
Inland Steelhead/RedbandTrout	*Oncorhynchus mykiss ssp.*	All groups east of Cascades
Coastal Steelhead	*Oncorhynchus mykiss ssp.*	Coast
Margined Sculpin	*Cottus marginatus*	

AMPHIBIANS

Cascade Seep Salamander	*Rhyacotriton cascadae*	
Southern Seep Salamander	*Rhyacotriton variegatus*	
Del Norte Salamander	*Plethodon elongatus*	
Larch Mountain Salamander	*Plethodon larselli*	
Siskiyou Mountains Salamander	*Plethodon stormi*	
Tailed Frog	*Ascaphus truei*	
Western Toad	*Bufo boreas*	
Northern Red-legged Frog	*Rana aurora*	Willamette Valley
Foothill Yellow-legged Frog	*Rana boylii*	
Cascades Frog	*Rana cascadae*	

REPTILES

Mohave Black-Collared Lizard	*Crotaphytus insularis (bicinctores)*	
Sagebrush Lizard	*Sceloporus graciosus*	Columbia Basin
Desert Horned Lizard	*Phrynosoma platyrhinos*	
Sharptail Snake	*Contia tenuis*	
Common Kingsnake	*Lampropeltis getulus*	
California Mountain Kingsnake	*Lampropeltis zonata*	
Western Rattlesnake	*Crotalus viridis*	Willamette Valley

OREGON
SENSITIVE SPECIES LIST
By Categories

(VULNERABLE CONTINUED)

BIRDS		
Fork-tailed Storm Petrel	*Oceanodroma furcata*	Breeding Population
American White Pelican	*Pelecanus erythrorhynchos*	Breeding Population
Snowy Egret	*Egretta thula*	Breeding Population
Swainson's Hawk	*Buteo swainsoni*	
Sage Grouse	*Centrocercus urophasianus*	East Cascades, Col. Basin and Blue Mountains
Greater Sandhill Crane	*Grus canadensis tabida*	
Long-billed Curlew	*Numenius americanus*	Columbia Basin
Great Gray Owl	*Strix nebulosa*	
Pileated Woodpecker	*Dryocopus pileatus*	
Olive-sided Flycatcher	*Contopus borealis*	
Willow Flycatcher	*Empidonax brewsteri*	Klamath Mountains, West Cascades, Coast Range and Willamette Valley
Pygmy Nuthatch	*Sitta pygmaea*	E. Cascades, High Plains and Klamath Mountains
Western Bluebird	*Sialia mexicana*	Coast Range, Willamette Valley, Klamath Mountains, and W. Cascades
Loggerhead Shrike	*Lanius ludovicianus*	Columbia Basin, High Plains
Grasshopper Sparrow	*Ammodramus savannarum*	Columbia Basin
Bobolink	*Dolichonyx oryzivorus*	
MAMMALS		
Fringed Myotis	*Myotis thysanodes*	
Pallid Bat	*Antrozous pallidus*	
Pygmy Rabbit	*Brachylagus idahoensis*	
Northern (Steller) Sea Lion	*Eumetopias jubatus*	
American Marten	*Martes americana*	
Columbian White-tailed Deer	*Odocoileus virginianus leucurus*	Coast Range

-PERIPHERAL OR NATURALLY RARE-

FISHES	
Goose Lake Tui Chub	*Gila bicolor thalassina*
Warner Basin Tui Chub	*Gila bicolor ssp*
California (Pit) Roach	*Hesperoleucus symmetricus mitrulus*
Millicoma Dace	*Rhinichthys cataractae ssp.*
Lahontan Redside (Shiner)	*Richardsonius egregius*
Jenny Creek Sucker	*Catostomus rimiculus ssp.*
Tahoe Sucker	*Catostomus tahoensis*
Pit Sculpin	*Cottus pitensis*
AMPHIBIANS	
Black Salamander	*Aneides flavipunctatus*
California Slender Salamander	*Batrachoseps attenuatus*
Woodhouse Toad	*Bufo woodhousii*

OREGON
SENSITIVE SPECIES LIST
By Categories

(PERIPHERAL OR NATURALLY RARE CONTINUED)

REPTILES		
Western Ground Snake	*Sonora semiannulata*	
BIRDS		
Horned Grebe	*Podiceps auritus*	Breeding Population
Least Bittern	*Ixobrychus exilis*	
Franklin's Gull	*Larus pipixcan*	
Black Swift	*Cypseloides niger*	Assumed Breeding Population
Black-throated Sparrow	*Amphispiza bilineata*	
Grasshopper Sparrow	*Ammodramus savannarum*	Willamette Valley
Tricolored Blackbird	*Agelaius tricolor*	
Black Rosy Finch	*Leucosticte atrata*	Basin and Range

-UNDETERMINED STATUS-

AMPHIBIANS		
Blotched Tiger Salamander	*Ambystoma tigrinum melanostictum*	
Cope's Giant Salamander	*Dicamptodon copei*	
Clouded Salamander	*Aneides ferreus*	
Oregon Slender Salamander	*Batrachoseps wrighti*	
Northern Red-legged Frog	*Rana aurora*	Coast Range, West Cascades, Klamath Mountains
Columbia Spotted Frog	*Rana luteiventris*	
REPTILES		
Longnose Leopard Lizard	*Gambelia wislizenii*	
BIRDS		
Harlequin Duck	*Histrionicus histrionicus*	Breeding Population
Barrow's Goldeneye	*Bucephala islandica*	Breeding Population
Bufflehead	*Bucephala albeola*	Breeding Population
Spruce Grouse	*Dendragapus canadensis*	
Mountain Quail	*Oreortyx pictus*	Blue Mountains, East Cascades, High Plains
Boreal Owl	*Aegolius funereus*	
Williamson's Sapsucker	*Sphyrapicus thyroideus*	
Willow Flycatcher	*Empidonax alastus*	East Cascades, Columbia Basin, High Plains, Blue Mtns, Basin and Range, Owyhee Uplands
Bank Swallow	*Riparia riparia*	
MAMMALS		
Silver-haired Bat	*Lasionycteris noctivagans*	
Western Small-footed Myotis	*Myotis ciliolabrum*	
Long-eared Myotis	*Myotis evotis*	
Long-legged Myotis	*Myotis volans*	

OREGON
SENSITIVE SPECIES LIST
By Categories

(UNDETERMINES STATUS CONTINUED)

White-tailed Jackrabbit	*Lepus townsendii*
White-tailed Antelope Squirrel	*Ammospermophilus leucurus*
Western Gray Squirrel	*Sciurus griseus*
White-footed Vole	*Phenacomys albipes*
Ringtail	*Bassariscus astutus*

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SUBWATERSHED MAP LEGEND
Powder River-Powder Valley Assessment Area

MAP SYMBOL	SUBWATERSHED NAME	WATERSHED NAME	ACRES	WATERSHED HUC	SUBWATERSHED HUC
401	UPPER SALMON CREEK	POWDER RIVER/ROCK CREEK	16404	1705020304	170502030401
402	LOWER SALMON CREEK	POWDER RIVER/ROCK CREEK	15295	1705020304	170502030402
403	WILLOW CREEK	POWDER RIVER/ROCK CREEK	16012	1705020304	170502030403
404	ROCK CREEK	POWDER RIVER/ROCK CREEK	16123	1705020304	170502030404
405	MUDDY CREEK	POWDER RIVER/ROCK CREEK	19962	1705020304	170502030405
406	POWDER RIVER/SAND CREEK	POWDER RIVER/ROCK CREEK	14232	1705020304	170502030406
407	WARM SPRINGS CREEK	POWDER RIVER/ROCK CREEK	10554	1705020304	170502030407
408	POWDER RIVER/GENTRY CREEK	POWDER RIVER/ROCK CREEK	12573	1705020304	170502030408
501	UPPER NORTH POWDER RIVER	NORTH POWDER RIVER	14374	1705020305	170502030501
502	MIDDLE NORTH POWDER RIVER	NORTH POWDER RIVER	17517	1705020305	170502030502
503	UPPER ANTHONY CREEK	NORTH POWDER RIVER	14321	1705020305	170502030503
504	LOWER ANTHONY CREEK	NORTH POWDER RIVER	12523	1705020305	170502030504
505	LOWER NORTH POWDER RIVER	NORTH POWDER RIVER	16030	1705020305	170502030505
601	UPPER WOLF CREEK	POWDER RIVER/WOLF CREEK	19566	1705020306	170502030601
602	LOWER WOLF CREEK	POWDER RIVER/WOLF CREEK	9760	1705020306	170502030602
603	JIMMY CREEK	POWDER RIVER/WOLF CREEK	30831	1705020306	170502030603
604	ANTELOPE CREEK	POWDER RIVER/WOLF CREEK	16195	1705020306	170502030604
605	POWDER RIVER/THIEF VALLEY RESERVOIR	POWDER RIVER/WOLF CREEK	20137	1705020306	170502030605

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APPENDIX E

EXAMPLES OF THE SPEED AT WHICH CHANNELIZATION OCCURS, AND THE DEPTH, WIDTH, AND LENGTH OF THE CHANNELIZATION.

Table 59. Examples of the speed at which channelization occurs, and the depth, width, and length of the channelization. The values in parenthesis are the units used in the original text if other than meters or kilometers.

Location	Dates	Event	Amount of change	Time interval	Source
Willow Creek, OR (PR/PV assessment area)	Between early-1950s and 1967	Channel straightening and widening	Prior to early 1950s creek meandered through fields and was willow-lined. In 1950s channel straightened and result was the channel incised 12 feet deep and increased to 20 feet wide for 2.25 miles.	< 10 years	J. Kerns, Draft 2 of the watershed assessment rpt.
Blume-Zilkey Ditch, PRPV assessment area	Unknown	Ditch incises and widens	Ditch flows straight east down a very steep hill, and has cut a channel 30 feet deep and 30 feet across.	Unknown	J. Kerns, Draft 2 of the watershed assessment rpt.
Lower Bulger Ditch, PRPV assessment area	Unknown	Ditch incises and widens	Ditch flows in a general easterly direction down a very steep hill, and has cut a 1/2-mile long gully through soft granite rock. The upper section of the gully is 60 feet deep and 30 feet wide with straight, perpendicular walls.	Actively eroding	J. Kerns, Draft 2 of the watershed assessment rpt.
Upper Bulger Ditch, PRPV assessment area	Unknown	Ditch incises and widens	Ditch created a chasm 70 feet deep and 70 feet wide in places. The gully is cutting through soft granite rock. Banks are crumbling away, and taking large trees with them. The gully is perhaps 1/2-mile long. Severe downward cutting and continued bank erosion is an annual occurrence. During irrigation season a large volume of water is carried in the stream, which continues to erode the channel and banks.	Actively eroding.	J. Kerns, Draft 2 of the watershed assessment rpt.
Mansfield Ditch.	Unknown	Ditch incises and widens	Part of the ditch is in the channel of Little Muddy Creek. The gully is up to 50 feet deep. Erosion continues to occur, moving large amounts of granite	Actively eroding.	J. Kerns, Draft 2 of the watershed assessment rpt.

Location	Dates	Event	Amount of change	Time interval	Source
			sand downstream.		
Crane Creek, OR	Between 1925 and 1935	Channel incises	Channel incises to a depth of 7.6 m. Length of headcutting and amount of widening not stated.	10 years	Schaffer 1941
Rio Salado, NM	Between 1882 and 1918	Channel widens	From 3.6 to 14.9 m wide to 100.6 to 167.6 m wide	< 36 years	Bryan 1927
Felipe Gilbert Creek, NM	One storm event	Channel headcuts	Channel headcuts for a distance of 12 to 23 m	1 day	Bryan 1927
Whitewater Draw, AZ	One rainy season	Channel headcuts	Channel headcuts for a distance of 402 m	Up to a couple of months	Cooke and Reeves 1976
Kanab Creek, UT	Between 1883 and 1885	Channel incises, widens and headcuts	Channel incises 18 m and widens nearly 21 m for a distance of 25 km	2 years	Gregory 1917
Walker Creek, AZ	Between 1894 and 1913	Channel incises	Channel incises 24 m deep	< 19 years	Gregory 1917
Chinle Creek, AZ	Between 1894 and 1913	Channel incises	Channel incises 30 m deep	< 19 years	Gregory 1917
Mountain Meadows, UT	1884 – in one series of storms	Channel incises.	No numbers given but channel incises into what was once a wet meadow during a series of storms and continues to widen since 1884. Gullies fingering out to nearly all parts of meadow.	Up to one month for initial incisions	Cottam and Stewart 1940
Santa Cruz River near Tucson, AZ	Between 1880 and 1928	Channel incises	Channel incises 4.5 m	48 years	Bryan 1928b
Sonoita Creek, AZ	Between 1891 and 1912	Channel incises and widens	Channel incises 5.4 to 6 m deep and widens to 76 m	21 years	Bryan 1928b
Santa Cruz River near Tucson, AZ	Between Aug 5 and 9, 1890	Channel incises and headcuts	Channel incises some unknown depth for 2.5 km. Between August 7 and 9 channel begins to fork and headcut in multiple directions	4 days	Cooke and Reeves 1976
Gila River near Safford, AZ	Between 1905 and 1917	Channel widens	Channel widens from an average of less than 91 m to about 610 m for about 75 km of river	12 years or less	Burkham 1972
Cimarron River in southwestern	Between 1874 and 1939	Channel widens	Channel widens from average of 15.2 meters to 365.8 meters	65 years or less	Schumm and Lichty 1963

Location	Dates	Event	Amount of change	Time interval	Source
Kansas					
Rio Puerco, NM	Between about 1885 and 1892	Channel incises and headcuts	Channel incises and the incision migrates upstream for 183 km. Discontinuous incision existed prior to 1885 and this may have facilitated rapid headward migration of the incision.	7 years	Bryan 1928a
Douglas Creek, CO	Between 1882 and 1900	Channel incises	Channel has incised 5 meters	18 years or less	Womack and Schumm 1977
Wolf River near Memphis, TN	Between 1964 and 1999	Channel incises and headcuts	Channel incises and the incision migrates upstream for 17 km. Headcutting is episodic in nature with an average rate of headward migration of 0.6 km/yr. Some areas have had a 6 m drop in bed level and the channel has widened to twice its original width.	35 years or less	Wiens 2001
Price Creek, MT	1995 and 1998	Channel incises and cross-section area increase	Channel incises 0 to 0.8 m deep and cross-section area increases between 0.21 sq. m/yr and 1.08 sq. m/yr for sites less than 15 meters upstream of beaver dams as a result of dam failures	1 to 3 years	Fouty 2003
Obion River, TN	Since 1960s	Channel incises and widens	Channel has undergone headward migration of knickpoints as much as 1 km per year and channel widening as much as 1 m/yr	1 year	Shankman and Pugh 1992

APPENDIX F

STREAM FLOWS FROM GAGES

Pine Creek
Rock Creek
North Powder River
Anthony Creek
Wolf Creek
Powder River

Table 60.

PINE CREEK NEAR BAKER, OREGON—STATION No. 1515

Location—In Sec. 26, T. 8 S., R. 38 E., 300 feet above the intake of the Williams ditch and about 10 miles west of Baker.

Drainage Area—7.7 square miles.

Monthly Discharge of Pine Creek near Baker, Oregon, for 1913-1914

Month	Discharge in Second-Feet			Run-Off	Accuracy
	Maximum	Minimum	Mean	Total in acre-feet	
1913					
May 12-31	203	58	103	4,090	D.
June	168	41	82.6	4,920	D.
July	63	26	50.7	3,120	C.
August	26	5	16.0	984	B.
September	8	3	3.3	196	B.
October 1-13	8	5	6.4	165	B.
The period				13,500	
1914					
April 9-30	41	15	29.5	1,290	B.
May	130	41	75.3	4,630	B.
June	110	31	68.1	4,050	B.
July	55	12	27.8	1,710	B.
The period				11,700	

GOODRICH CREEK NEAR BAKER, OREGON—STATION No. 1518

Location—In Sec. 36, T. 8 S., R. 38 E., at the crossing of the Nelson ditch about 9 miles west of Baker.

Drainage Area—3.1 square miles.

Monthly Discharge of Goodrich Creek near Baker, Oregon, for 1913

MONTH	DISCHARGE IN SECOND FEET				RUN-OFF		Accuracy
	Maximum	Minimum	Mean	Per sq. mile	Depth in inches on drainage area	Total in acre-feet	
1913							
May 19-31	15.8	5.8	11.2	3.61	1.75	289	B.
June	13.9	7.9	10.4	3.36	3.75	619	B.
July	7.9	4.5	6.08	1.96	2.26	374	B.
August	4.7	1.3	3.18	1.03	1.19	196	B.
September	1.2	.5	.81	.261	.29	48.2	B.
October 1-11	.5	.5	.50	.161	.07	10.9	B.
The period						1,540	

Table 61.

13281200 ROCK CREEK NEAR HAINES, OR.

LOCATION--Lat 44°54'36", long 118°03'20", in NE¼SE¼ sec.33, T.7 S., R.38 E., Baker County, on left bank about 0.2 mi below Rock Creek powerplant and about 7 mi west of Haines.

DRAINAGE AREA--21.5 mi².

PERIOD OF RECORD--June 23, 1976 to current year.

GAGE--Water-stage recorder.

AVERAGE DISCHARGE--11 years (water years 1977-85, 1988-89); 32.3 ft^3/s; 23,400 ac-ft./yr.

EXTREMES--Period of record: Maximum discharge, 930 ft^3/s, June 7, 1977, gage height, 3.31 ft; maximum gage height 3.41 ft. May 10, 1989; minimum discharge, 0.08 ft^3/s, October 4, 1981, result of regulation.

DATE	MAX Q	GH	DATE	MIN Q
May 24, 1979	329	2.72	Nov 10, 1978	0.18
May 21, 1980	370	2.67	Nov 12, 1979	0.48
May 1, 1981	280	2.61	Nov 13, 1980	0.55
Jun 15, 1982	529	3.09	Oct 4, 1981	0.08
May 28, 1983	667	3.07	Oct 1; Nov 17,21	1.1
May 30, 1984	555	2.50	Dec 23, 1983	2.0 daily
May 25, 1985	263	1.92	Sep 25, 1985	4.7 daily
May 30, 1986	414	2.45	undetermined	
Apr 30, 1987	279	3.10	undetermined	
May 24, 1988	175	2.74	Jan 3, 1988	3.2 daily
May 10, 1989	414	3.41	Jan 8-9, 1989	4.2 daily

REMARKS--Records are: 1979 good except for Nov 1 - Mar 31, May 5-23 which are fair; 1980 good except for Nov 27 - Jan 31 which are fair; 1981 good except for Nov 14 - Feb 18, which are fair, feb 19 - April 19 which are poor; 1982 good except for Nov 27 - Feb 11, June 16-30 which are fair; 1983 good except for Nov 13 - Mar 13 which are fair; May 28 - July 12, July 28 - Aug 1, Aug 18-Sept 6 which are poor; 1984 poor except for April 15 - Sept 11, which are fair; 1985 good above 20 ft^3/s, poor below; 1986 poor Oct 1 - Mar 19, good Mar 20 - May 25, fair May 26 - June 18, good June 18 - Aug 4, poor thereafter and incomplete, 1987 good except for Dec 1 - Mar 1 which are poor and incomplete; 1988 good except for Dec 4 - Mar 31 which are poor; 1989 good Oct 1-31; fair Nov 1 - Dec 14, poor Dec 15 - Mar 7, fair Mar 8-July 10, good thereafter.

Table 61 continued

Discharge in Cubic Feet per Second, Water Year Ending September, 1979
Mean Values

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	13	5.9	8.5	3.5	3.8	5.0	8.5	28	94	55	28	15
2	13	7.2	8.1	3.5	3.8	4.6	8.5	32	121	47	27	14
3	13	7.2	7.2	6.0	4.5	5.8	8.5	36	174	43	25	13
4	12	6.9	7.0	6.0	5.0	6.6	8.5	42	226	40	24	13
5	12	6.6	6.8	5.0	5.4	6.9	9.4	78	216	39	24	13
6	10	7.2	6.0	4.2	5.8	8.9	9.8	64	177	45	23	13
7	9.8	7.6	5.0	4.2	6.2	9.4	9.8	42	126	41	22	12
8	9.4	7.6	5.0	5.0	6.4	9.4	10	33	98	38	21	7.7
9	8.5	7.2	5.2	7.6	6.6	8.1	9.6	28	90	35	19	7.4
10	8.5	4.9	5.8	7.0	6.9	8.1	9.0	23	98	33	18	7.0
11	8.5	4.9	6.6	6.5	7.2	8.5	9.4	21	131	33	18	7.4
12	8.1	5.4	7.8	6.4	7.6	8.9	9.8	22	164	33	17	7.0
13	7.6	5.8	8.0	6.3	9.8	9.4	10	24	209	31	20	7.0
14	7.6	4.8	8.0	6.8	8.5	8.9	10	31	144	28	28	7.0
15	8.1	4.5	8.0	7.4	7.6	9.4	10	55	102	27	27	7.4
16	8.1	6.0	8.0	7.4	7.2	9.4	11	112	88	25	24	7.0
17	8.1	6.4	8.0	7.0	7.6	8.9	12	106	74	24	24	6.7
18	7.6	6.4	8.0	6.2	7.6	8.9	11	112	65	23	22	6.7
19	7.2	6.9	7.1	6.6	7.2	8.5	11	121	58	23	20	6.3
20	5.7	7.4	7.2	7.2	6.8	8.9	11	126	55	22	22	6.0
21	5.0	7.4	7.8	7.2	6.0	8.1	11	158	58	21	20	5.6
22	5.3	7.4	8.1	7.2	5.6	8.1	11	205	62	20	18	5.6
23	5.3	6.6	8.5	7.0	6.6	8.5	12	289	64	20	18	5.6
24	5.9	7.0	8.5	6.4	7.2	8.9	13	284	67	19	17	4.8
25	5.9	7.0	7.6	6.0	7.2	9.4	13	240	73	19	17	7.4
26	5.9	7.0	7.0	5.5	6.9	9.4	15	251	76	18	16	8.1
27	6.6	5.7	6.6	5.0	6.4	10	17	261	73	31	16	6.3
28	6.6	8.5	6.0	4.8	5.8	10	20	202	52	32	15	7.0
29	6.6	9.4	5.5	4.0	---	9.4	21	131	68	31	15	7.0
30	6.2	8.9	5.0	3.8	---	8.9	25	100	65	30	15	7.0
31	5.5	---	4.0	3.8	---	8.5	---	90	---	28	16	---
Total	250.6	201.7	215.9	180.5	183.2	261.7	354.8	3347	3168	954	636	248.0
Mean	8.08	6.72	6.96	5.82	6.54	8.44	11.8	108	106	30.8	20.5	8.27
Max	13	9.4	8.5	7.6	9.8	10	25	289	226	55	28	15
Min	5.0	4.5	4.0	3.5	3.8	4.6	8.5	21	52	18	15	4.8
Ac-Ft	497	400	428	358	363	519	704	6640	6280	1890	1260	492

Wtr Yr 1979 Total 10001.4 Mean 27.4 Max 289 Min 3.5 Ac-Ft 19840

Table 61 continued

Discharge in Cubic Feet per Second, Water Year Ending September, 1980
Mean Values

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	7.0	7.4	5.6	6.7	6.9	8.9	7.0	129	51	81	33	15
2	7.0	8.4	6.0	6.7	7.4	8.9	7.0	150	51	92	30	15
3	6.7	8.1	8.1	6.7	7.4	8.9	7.0	170	49	98	29	15
4	6.7	8.4	7.7	6.7	7.1	8.9	7.4	202	52	90	28	15
5	6.3	7.7	7.4	7.7	7.0	8.9	7.4	237	54	74	28	13
6	6.3	8.1	7.7	6.0	7.0	8.1	7.4	280	51	65	26	13
7	6.3	7.7	7.4	4.2	6.7	8.4	7.0	244	51	59	25	12
8	6.3	6.6	7.7	5.0	7.0	8.1	7.4	205	55	68	25	12
9	6.3	6.7	8.1	6.0	6.7	8.1	7.7	174	71	83	24	12
10	6.3	6.0	7.7	7.0	6.7	8.1	7.4	144	98	70	23	12
11	6.3	6.0	5.0	6.6	6.7	8.1	7.7	114	121	58	23	13
12	6.3	4.9	7.0	5.9	5.6	7.7	8.1	98	153	51	27	12
13	5.6	6.0	7.0	11	5.6	8.4	7.7	90	121	43	28	20
14	5.6	6.0	7.2	11	5.6	7.0	12	90	131	40	27	18
15	6.7	6.0	7.4	9.9	5.6	7.7	12	88	114	37	26	18
16	6.7	7.0	7.0	8.9	6.0	7.7	8.4	85	104	34	26	13
17	6.3	8.9	7.7	8.1	6.7	8.1	6.7	81	134	33	25	13
18	6.7	7.0	7.7	8.0	8.9	8.1	7.4	88	184	32	25	11
19	9.4	5.5	7.4	6.0	8.9	7.4	13	114	202	32	24	11
20	7.7	4.9	7.4	5.4	7.7	7.4	40	170	205	32	24	9.1
21	7.0	8.1	7.4	6.0	7.7	7.4	65	280	195	33	23	9.9
22	6.7	7.7	7.0	6.5	6.7	7.7	76	147	205	34	22	8.9
23	8.1	8.1	10	7.0	7.0	6.1	87	244	170	35	22	8.4
24	8.1	7.7	17	7.0	7.0	6.7	81	150	116	35	21	8.4
25	14	7.0	8.1	6.7	7.4	7.4	70	110	98	33	21	8.4
26	12	6.0	6.8	6.0	8.1	7.4	74	102	90	31	20	8.1
27	9.4	4.5	6.0	5.0	9.9	7.0	87	76	77	28	19	8.1
28	8.4	4.2	6.0	4.2	9.4	7.4	124	67	70	27	18	7.7
29	8.4	4.2	6.0	4.2	8.9	7.0	195	59	74	25	16	8.8
30	8.1	5.0	6.0	4.2	---	7.4	158	59	81	24	16	8.1
31	8.1	---	6.0	5.0	---	7.0	---	49	---	25	15	---
Total	230.8	199.8	230.5	205.3	209.3	241.4	1212.7	4296	3228	1502	739	356.9
Mean	7.45	6.66	7.44	6.62	7.22	7.79	40.4	139	108	48.5	23.8	11.9
Max	14	8.9	17	11	9.9	8.9	195	280	205	98	33	20
Min	5.6	4.2	5.0	4.2	5.6	6.1	6.7	49	49	24	15	7.7
Ac-Ft	458	396	457	407	415	479	2410	8520	6400	2980	1470	708

Wtr Yr 1980 Total 12651.7 Mean 34.6 Max 280 Min 4.2 Ac-Ft 25090

Table 61 continued

Discharge in Cubic Feet per Second, Water Year Ending September, 1981
Mean Values

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	8.1	7.4	8.1	24	11	7.0	12	240	147	49	19	18
2	7.7	7.7	11	24	11	6.7	11	230	141	46	19	17
3	8.1	7.7	13	23	11	6.3	10	147	131	42	19	13
4	7.4	8.1	12	20	11	6.0	9.9	112	121	40	20	12
5	7.0	7.7	8.9	21	11	5.6	9.9	87	134	40	20	10
6	7.4	8.4	8.1	20	12	5.3	9.4	70	198	43	20	9.9
7	7.7	21	7.8	20	12	5.3	8.4	59	184	46	19	9.4
8	7.4	15	7.2	19	11	5.6	8.1	52	230	39	18	8.9
9	7.0	11	7.6	20	10	5.6	7.7	47	195	35	18	8.4
10	7.4	9.9	8.6	20	9.5	5.6	7.4	45	144	30	18	7.7
11	7.7	9.4	8.6	19	10	5.6	6.7	45	119	28	19	7.7
12	8.4	8.4	8.4	18	12	6.3	6.3	42	119	27	27	8.1
13	8.9	7.2	8.0	15	15	7.0	6.2	40	98	27	27	6.7
14	9.4	7.2	8.0	14	16	8.1	6.2	45	83	27	27	7.0
15	8.9	7.2	8.4	14	15	9.9	6.2	43	74	25	26	7.0
16	8.1	7.5	8.9	14	23	12	8.0	42	74	24	26	7.0
17	8.1	7.7	8.9	15	28	13	12	41	70	23	25	6.7
18	8.1	8.1	8.4	16	24	13	183	61	64	20	25	6.7
19	8.1	7.0	8.4	15	36	13	25	83	79	20	27	6.7
20	7.7	7.7	8.4	14	35	13	36	126	85	19	25	7.0
21	7.7	7.7	8.9	15	33	12	39	139	79	18	24	7.0
22	7.7	7.7	12	15	26	11	43	129	74	17	24	6.3
23	6.7	7.4	10	16	20	10	59	119	73	16	24	6.7
24	7.4	7.7	14	15	18	10	90	131	64	22	22	6.7
25	7.7	6.6	20	14	13	10	74	198	59	24	22	7.0
26	7.7	6.6	24	13	12	12	55	219	58	23	22	7.4
27	7.4	6.6	23	13	9.4	15	51	184	54	22	21	12
28	7.4	7.0	20	14	8.1	16	58	167	47	20	20	11
29	7.4	7.0	27	14	---	16	79	170	46	20	20	8.9
30	7.7	6.7	26	13	---	15	114	223	51	20	20	8.1
31	7.4	---	25	12	---	13	---	195	---	20	19	---
Total	240.8	252.3	386.6	519	463.0	299.9	1051.4	3531	3095	872	682	266.0
Mean	7.77	8.41	12.5	16.7	16.5	9.67	35.0	114	103	28.1	22.0	8.87
Max	9.4	21	27	24	36	16	183	240	230	49	27	18
Min	6.7	6.6	7.2	12	8.1	5.3	6.2	40	46	16	18	6.3
Ac-Ft	478	500	767	1030	918	595	2090	7000	6140	1730	1350	528

Wtr Yr 1981 Total 11659.0 Mean 31.9 Max 240 Min 5.3 Ac-Ft 23130

Table 61 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1981 TO Sep 1982

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	7.7	10	13	9.0e	9.9	19	12	45	108	288e	43	20
2	8.0	10	13	9.5e	11	18	12e	56	106	243	40	20
3	6.8e	9.9	10 e	10 e	8.9	18	13	68	119	200	38	19
4	6.1e	8.9	13	10 e	7.0e	17	13	62	141	171	36	20
5	7.4	8.9	13	11 e	7.0e	16	12e	59	126	143	32	19
6	7.4	8.9	15	9.0e	7.0e	15	12	62	106	129	30	18
7	9.4	8.9	13	7.0e	7.0e	16	12	68	90	135	26	18
8	8.4	8.9	13	7.5e	7.0e	14	12	67	81	140	29	17
9	9.4	8.9	13	8.0e	7.0e	15	13	61	79	129	30	17
10	10	8.4	13	8.5e	7.0e	15	13	56	90	124	34	17
11	8.9	8.4	10	8.7e	7.0e	15	18e	52	164	129	32	17
12	8.9	12	14	8.9	9.4	15	20	52	301	129	29	20
13	8.4	13	9.2e	9.2e	9.4	14	19	55	342	129	26	18
14	8.0	23	9.2e	9.5e	10 e	15	20	67	329	122	24	17
15	8.0	16	11 e	9.4	14	14	18	81	384	107	22	16
16	8.0	18	12	10	19	12	16	98	410	97	22	16
17	8.0	28	8.8e	10	15	13	18	110	384	84	20	16
18	8.4	20	15	9.9	14	14	17	106	342	78	20	16
19	9.4	17	16	9.9	17	14	16	96	346	76	19	19
20	7.7	16	17	8.9	20	13	16	102	301	75	18	20
21	7.7	17	15	8.0e	27	12	18	106	288	72	18	14
22	7.7	16	14	7.6e	23	13	20	129	268	63	17	12
23	8.0	16	12 e	7.6e	22	12	22	164	261	50	16	12
24	8.0	14 e	12 e	9.0e	22	13	25	173	225	45	15	12
25	8.0	12	10 e	9.4e	23	13	28	233	243	39	21	14
26	11	12 e	11 e	10	20	13	29	306	236	46	22	14
27	10	12 e	10 e	9.4	18	13	32	261	243	49	21	14
28	11 e	11 e	9.0e	9.4	18	13	36	198	218	45	21	12
29	10	12 e	8.5e	7.4e	------	13	39	150	190	43	22	12
30	9.9	11 e	8.5e	9.9	------	13	41	124	212	46	22	12
31	9.4	------	8.5e	9.9	------	13	------	110	------	46	20	------
TOTAL	265.0	396.1	369.7	281.5	386.6	443	592	3,377	6,733	3,272	785	488
MEAN	8.55	13.2	11.9	9.08	13.8	14.3	19.7	109	224	106	25.3	16.3
MAX	11	28	17	11	27	19	41	306	410	288	43	20
MIN	6.1	8.4	8.5	7.0	7.0	12	12	45	79	39	15	12
AC-FT	526	786	733	558	767	879	1,170	6,700	13,350	6,490	1,560	968

CAL YEAR 1981	TOTAL	11,802.8	MEAN	32.3	MAX	28	MIN	6.1	AC-FT	23,410
WTR YEAR 1982	TOTAL	17,388.9	MEAN	47.6	MAX	410	MIN	6.1	AC-FT	34,490

Table 61 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1982 TO Sep 1983

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	11 e	15	11	5.5e	9.3	9.6	12	34	298	155	30e	16 e
2	12	13	11	5.7e	8.6	12	12	35	262	157	38	15 e
3	12	14	14	6.3e	8.2e	13	12	39	246	115	37	14 e
4	12	16	14	7.5e	8.0e	15	12	46	229	100	45	13 e
5	12	14	12	10	7.5e	13	11	55	212	102	48	13 e
6	12	14	14	12	8.6	12	11	52	200	122	47	13 e
7	12	12 e	11 e	11	9.3	12	12	48	197	118	46	13 e
8	13	12	9.0e	12	8.6	12	11	46	225	95	46	12
9	13	12	8.0e	11	8.2	14	10	42	232	79	47	9.0e
10	13	11	8.0e	10	8.2	16	10	39	225	65	54	12
11	12	10	8.0e	10	8.6	18	9.6	37	203	55	48	11
12	12	10	8.0e	9.6	8.6	18	9.6	37	173	54	43	10
13	12	10 e	8.0e	9.6e	8.2	21	9.6	38	147	57	40	9.0
14	12	9.0e	11	9.6e	8.2	20	9.6	37	140	63	39	9.0
15	12	8.0e	11	10	8.6	20	10	37	165	53	37	9.3
16	14	8.0e	12	11	8.2	18	10	35	165	46	36	7.2
17	12	9.0e	12	9.6	10 e	18	12	36	171	38	33	6.8
18	13	14	11	9.6	14 e	16	14	41	168	33	28e	8.2
19	9.3	12	10	9.6	10	15	14	43	135	30	20e	9.3
20	12	10	10	9.6	9.6	15	18	63	109	29	16e	8.2
21	13	8.7e	12	9.6	9.6	14	21	83	91	37	16e	7.9
22	14	7.7e	10	9.6	9.6	14	23	106	88	46	22e	6.8
23	15	7.2e	10	9.6	10	14	26	135	95	45	28e	6.8
24	15	7.2e	7.5e	9.6	10	14	33	197	95	45	26e	6.0
25	14	7.2e	6.5e	9.3	10	14	31	278	97	42	23e	6.0
26	20 e	8.0e	6.5e	9.6	9.3	12	29	347	107	41	20e	6.0
27	16	9.5e	6.5e	9.6	9.6	12	28	399	120	37	17e	6.5
28	15	10 e	5.5e	10	9.6	12	27	465	120	33e	15e	6.0
29	16	11 e	5.5e	9.6	------	12	29	455	135	27e	14e	6.0e
30	16	11 e	5.5e	9.6	------	15	31	399	122	26e	14e	6.2
31	15	------	5.5e	9.6	------	14	------	326	------	28e	15e	------
TOTAL	411.3	320.5	294.0	294.9	256.2	454.6	507.4	4,030	4,972	1,973	988	282.2
MEAN	13.3	10.7	9.48	9.51	9.15	14.7	16.9	130	166	63.6	31.9	9.41
MAX	20	16	14	12	14	21	33	465	298	157	54	16
MIN	9.3	7.2	5.5	5.5	7.5	9.6	9.6	34	88	26	14	6.0
AC-FT	816	636	583	585	508	902	1,010	7,990	9,860	3,910	1,960	560

CAL YEAR 1982	TOTAL	17,400.8	MEAN	47.7	MAX	20	MIN	5.5	AC-FT	34,510
WTR YEAR 1983	TOTAL	14,784.1	MEAN	40.5	MAX	465	MIN	5.5	AC-FT	29,320

Table 61 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1983 TO Sep 1984

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	6.2	9.4	6.8e	8.0e	9.0e	7.4	12	30	236	207	34	39
2	5.8	11	7.4e	6.6e	9.0e	7.7	12	30	177	199	33	34
3	5.8	11	8.0e	8.0e	9.0e	7.6	11	30	144	193	31	32
4	5.4	14	4.8e	15 e	11 e	7.4	12	30	149	181	28	30
5	5.3	10	4.8e	23 e	10 e	7.9	12	29	140	169	27	29
6	4.9	14	4.8e	22	9.6e	6.9	12	28	124	163	27	29
7	5.1	13	4.8	21	10 e	7.2	12	30	105	138	24	32
8	4.7	10	4.8	20	11 e	7.4	14	32	88	107	23	26
9	7.5	9.8	5.0	17	12 e	7.9	13	37	76	86	21	22
10	6.4	11	4.8	17	12 e	8.7	11	36	62	73	19	20
11	6.2	18	5.0	15	10 e	7.2	12	46	61	68	19	20
12	6.1	13	4.6	13	14	7.4	13	53	62	69	19	19
13	6.1	12	5.2	12	17	7.7	12	66	63	65	18	19
14	6.2	10	4.9	10	15	8.6	14	96	75	69	18	18
15	6.0	11	4.9	18	14	8.0	21	90	114	66	33	18
16	6.0	11	4.5e	15	14	8.3	28	82	163	62	33	18
17	6.6	11	4.0e	9.9	13	8.2	33	80	168	60	33	18
18	6.7	9.7	4.0e	10	9.0e	7.7	33	86	177	59	33	16e
19	7.1	9.2	4.0e	13	10 e	8.9	32	102	211	57	32	14e
20	7.4	9.1	3.5e	12	11 e	13	31	136	250	52	31	15e
21	7.0	8.6	2.8e	10	12 e	17	31	136	216	48	25	17e
22	7.7	8.0	2.3e	9.4	12	15	33	131	177	44	23	15e
23	9.3	9.0	2.0e	9.1	11	15	36	172	176	42	22	17e
24	8.2	9.1	3.0e	75 e	9.6	15	35	158	218	45	22	15e
25	8.2	8.6	4.0e	35 e	9.7	14	34	144	297	42	22	14e
26	8.2	7.9	6.8e	26	9.1	14	32	211	339	41	22	14e
27	8.2	7.9	5.0e	24	8.8	14	31	202	335	49	21	13e
28	7.7	7.9	4.0e	19 e	8.1	14	30	221	352	48	21	13e
29	7.6	6.6	5.0e	15 e	8.1	14	29	298	372	46	20	13e
30	8.7	8.4	6.0e	12 e	------	13	29	458	260	39	27	12e
31	9.2	------	8.0e	10 e	------	13	------	339	------	36	51	------
TOTAL	211.5	309.2	149.5	530.0	318.0	319.1	670	3,619	5,387	2,623	812	611
MEAN	6.82	10.3	4.82	17.1	11.0	10.3	22.3	117	180	84.6	26.2	20.4
MAX	9.3	18	8.0	75	17	17	36	458	372	207	51	39
MIN	4.7	6.6	2.0	6.6	8.1	6.9	11	28	61	36	18	12
AC-FT	420	613	297	1,050	631	633	1,330	7,180	10,690	5,200	1,610	1,210

CAL YEAR 1983	TOTAL*	670.2	MEAN	7.28	MAX	18	MIN	2.0	AC-FT	1,330
WTR YEAR 1984	TOTAL	15,559.3	MEAN	42.5	MAX	458	MIN	2.0	AC-FT	30,860

* Incomplete Record

Table 61 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1984 TO Sep 1985

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	12e	11	8.0e	6.9e	8.0e	6.1e	15	60	97	34	30	6.0
2	12e	14	6.0e	6.2e	8.0e	5.7e	20	87	86	33	29	6.6
3	12e	15	5.5e	6.2e	7.0e	6.3e	20	99	81	32	25	6.5
4	12e	13	5.5e	6.2e	6.2e	5.8e	21	88	94	31	23	6.1
5	11e	12	5.5e	7.0e	6.2e	5.0e	24	77	112	30	23	4.7
6	11e	13	5.5e	8.0e	6.2e	7.0e	27	75	137	28	21	8.3
7	11e	12	6.0e	9.0e	6.2e	6.4e	31	75	162	28	20	9.4
8	11e	11	6.4e	7.9e	7.7e	6.7e	43	72	150	27	20	17
9	11	10	6.4e	8.2e	8.1e	6.6e	47	66	124	27	19	15
10	12	11	8.5e	8.9e	8.9e	5.8e	50	62	107	25	18	11
11	18	11	7.3e	8.9e	8.1e	6.0e	51	59	95	24	18	12
12	16	12	7.4e	8.4e	8.1e	5.6e	51	55	93	25	17	8.8
13	17	12	7.1e	9.3e	8.4e	6.2e	55	56	96	35	16	8.9
14	16	11	7.2e	9.2e	8.0e	6.8e	65	61	90	34	16	9.4
15	15	8.9	7.3e	9.2e	7.2e	6.3e	84	61	83	33	15	9.1
16	14	10	6.5e	8.3e	6.3e	6.5e	87	73	78	31	14	8.7
17	14	9.9	5.8e	9.2e	7.2e	8.1e	79	85	66	31	13	9.7
18	14	10	5.8e	9.8e	7.2e	9.6e	72	109	61	30	13 e	8.6
19	12	10	5.8e	9.8e	7.7e	9.9e	59	132	63	29	13 e	7.9
20	12	10	5.0e	9.8e	6.8e	10 e	52	119	62	28	13 e	7.1
21	11	9.6	5.0e	9.8e	6.4e	11 e	48	111	53	27	13 e	6.6
22	10	9.1	6.2e	9.2e	5.8e	9.6e	46	128	46	26	14	8.2
23	11	9.7	6.8e	9.4e	5.9e	11 e	44	172	40	25	12	6.5
24	12	10	6.8e	8.1e	6.1e	12 e	40	246	44	32	11	5.7
25	13	10	6.8e	8.6e	6.5e	11 e	37	221	44	31	9.0	4.1
26	15	9.0e	7.0e	8.5e	5.3e	9.7e	36	189	40	29	9.1	4.8
27	14	8.8e	7.6e	8.2e	6.0e	12 e	36	155	38	28	8.9	5.2
28	13	8.8e	7.6e	8.2e	6.9e	10 e	37	142	37	27	9.7	5.7
29	12	8.8e	8.0e	8.2e	------	9.2e	42	117	37	26	7.3	5.6
30	11	8.8e	7.7e	8.0e	------	11 e	47	94	36	26	6.4	6.1
31	10	------	8.1e	8.0e	------	11 e	------	79	------	32	5.7	------
TOTAL	395	319.4	206.1	260.6	196.4	253.9	1,366	3,225	2,352	904	482.1	239.3
MEAN	12.7	10.6	6.65	8.41	7.01	8.19	45.5	104	78.4	29.2	15.6	7.98
MAX	18	15	8.5	9.8	8.9	12	87	246	162	35	30	17
MIN	10	8.8	5.0	6.2	5.3	5.0	15	55	36	24	5.7	4.1
AC-FT	783	634	409	517	390	504	2,710	6,400	4,670	1,790	956	475

CAL YEAR 1984	TOTAL	15,809.5	MEAN	43.2	MAX	18	MIN	5.0	AC-FT	31,360
WTR YEAR 1985	TOTAL	10,199.8	MEAN	27.9	MAX	246	MIN	4.1	AC-FT	20,240

Table 61 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1985 TO Sep 1986

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	6.3	8.1	6.8e	6.8e	13 e	27	40	42	310	37	17	0
2	6.2	8.2	7.4e	7.1e	14 e	30	38	46	291	36	18	0
3	6.0	8.0	7.9e	6.8e	13 e	30	37	65	265	35	18	0
4	5.7	8.9	6.7e	5.7e	13 e	30	36	75	231	36	18	0
5	6.2	9.7	6.6e	6.7e	12 e	30	36	77	201	34	25	0
6	6.3	8.9	6.9e	4.5e	9.0e	33	38	81	153	31	25	0
7	7.3	12	7.0e	4.5e	7.0e	54	41	49	137	28	25	0
8	5.8	10	7.0e	4.9e	6.2e	50	44	47	116	27	24	0
9	3.8	7.9	7.0e	6.8e	6.2e	42	50	46	101	30	25	0
10	6.1	7.0e	7.0e	6.9e	6.2e	40	51	45	93	27	24	0
11	6.2	6.2e	6.6e	6.5e	6.2e	36	51	43	96	26	24	0
12	6.3	6.2e	5.8e	6.4e	7.6e	34	49	41	100	25	24	0
13	5.3	6.2e	5.4e	7.0e	7.6e	31	48	41	97	23	24	0
14	5.8	7.0e	5.4e	7.1e	7.8e	29	45	40	96	22	23	0
15	5.6	6.4e	5.4e	6.8e	9.2e	28	43	38	90	21	22	0
16	6.2	6.4e	5.2e	7.6e	9.6e	27	42	38	73	21	22	0
17	6.2	8.0e	5.2e	8.6e	10 e	26	42	42	71	20	23	0
18	5.6	8.2e	5.2e	7.8e	11 e	24	40	50	68	19	22	0
19	5.9	6.8e	5.2e	8.6e	9.2e	24	40	59	57	18	22	0
20	5.9	6.0e	5.0e	8.4e	8.0e	24	42	89	49	17	21	0
21	6.5	5.4e	5.0e	8.1e	7.6e	24	52	114	46	17	22	0
22	7.2	5.0e	5.0e	8.0e	10	24	85	93	42	16	21	0
23	8.1	4.8e	5.0e	9.2e	18	23	84	77	40	14	21	0
24	11	4.5e	5.0e	8.0e	22	26	71	72	40	15	24	9.3e
25	13	4.2e	5.0e	7.6e	22	25	61	103	46	19	23	
26	11	5.0e	5.0e	7.2e	23	25	54	185	48	20	23	
27	10	6.0e	4.9e	7.4e	24	26	52	264	46	20	23	
28	10	6.6e	4.9e	9.5e	24	30	49	314	47	20	21	
29	9.0	7.1e	4.9e	11 e	------	35	47	330	46	19	17	
30	8.1	6.8e	5.2e	14 e	------	39	44	336	40	19	14e	
31	7.4	------	5.6e	13 e	------	39	------	320	------	19	10e	------
TOTAL	220.0	211.5	180.2	238.5	336.4	965	1,452	3,262	3,136	731	665	9.3
MEAN	7.10	7.05	5.81	7.69	12.0	31.1	48.4	105	105	23.6	21.5	.39
MAX	13	12	7.9	14	24	54	85	336	310	37	25	9.3
MIN	3.8	4.2	4.9	4.5	6.2	23	36	38	40	14	10	0
AC-FT	436	420	357	473	667	1,910	2,880	6,470	6,220	1,450	1,320	18

CAL YEAR 1985 TOTAL* 611.7 MEAN 6.65 MAX 13 MIN 3.8 AC-FT 1,210 *

WTR YEAR 1986 TOTAL* 11,406.9 MEAN 31.8 MAX 336 MIN 0 AC-FT 22,620

* Incomplete Record

Table 61 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1986 TO Sep 1987

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1		10 e	7.8e	8.1	7.3	6.3	11	173	50	19	9.6	4.9
2		11 e	7.8e	8.2	7.3	6.0	13	106	46	21	9.8	5.6
3		9.0e	7.5e	7.7	7.3	6.9	14	78	43	19	10	5.8
4		8.0e	7.2e	7.2	6.9	7.4	16	68	43	19	19	5.8
5		7.6e	8.6	7.0e	6.9	10	17	86	45	18	24	5.6
6		7.8e	8.1	6.8e	6.9	13	18	119	46	17	27	5.3
7		8.1	7.8	6.7e	7.1	11	19	149	45	17	27	5.1
8		8.1	7.9	6.8e	7.1	9.9	20	160	55	16	26	4.7
9		8.4	7.8e	6.8e	7.1	9.6	19	163	50	15	25	4.5
10		9.7	6.6e	6.4e	7.1	9.5	21	152	44	15	24	3.9
11		9.1	6.6e	6.4e	7.0	9.2	26	145	41	15	24	5.1
12		10	7.8e	6.4e	7.1	11	23	138	39	14	23	4.4
13		8.9	7.8e	6.4e	9.1	20	22	129	38	14	23	4.1
14		9.0	7.8e	6.4e	8.1	15	23	121	37	14	22	4.0
15		8.9	7.8e	6.4e	7.6	14	27	124	39	14	22	3.8
16		8.9	7.4e	5.8e	7.4	13	32	122	37	13	21	4.7
17		8.9	7.4e	5.8e	7.3	13	40	102	36	13	20	5.3
18		9.4	7.4e	5.8e	7.4	12	38	87	34	13	19	4.8
19		10	7.4e	5.8e	7.2	11	34	76	31	13	18	4.1
20		10	7.6e	5.6e	7.0	11	31	63	29	11	16	4.6
21	5.7e	10	7.6e	5.4e	7.2	10	33	54	29	11	15	4.6
22		9.6	7.7	6.0e	6.8	10	41	49	28	17	9.7	4.1
23		9.7	8.1	6.4e	6.7	11	53	46	26	14	8.7	4.0
24		9.7	7.9	6.9	6.4	10	65	47	24	13	8.2	3.7
25		7.0	7.8	7.1	6.4e	10	73	48	23	12	8.0	4.2
26		10	7.8	7.3	6.2e	10	82	46	21	12	7.3	4.4
27		9.5	7.8	7.5	6.2e	9.8	112	50	20	11	6.9	5.3
28		9.0	7.1	7.2	6.2e	9.7	144	47	20	10	6.8	5.5
29		7.7	7.6	6.9	------	11	201	47	20	10	6.4	5.3
30		7.6	7.8	7.0	------	10	250	48	19	10	5.8	4.1
31		------	7.7	7.2	------	11	------	63	------	9.9	5.8	------
TOTAL	5.7	270.6	237.0	207.4	198.3	331.3	1,518	2,906	1,058	439.9	498.0	141.3
MEAN	5.70	9.02	7.65	6.69	7.08	10.7	50.6	93.7	35.3	14.2	16.1	4.71
MAX	5.7	11	8.6	8.2	9.1	20	250	173	55	21	27	5.8
MIN	5.7	7.0	6.6	5.4	6.2	6.0	11	46	19	9.9	5.8	3.7
AC-FT	11	537	470	441	393	657	3,010	5,760	2,100	873	988	280

CAL YEAR 1986	TOTAL*	513.3	MEAN	8.28	MAX	11	MIN	5.7	AC-FT	1,020
WTR YEAR 1987	TOTAL*	7,811.5	MEAN	23.3	MAX	250	MIN	3.7	AC-FT	15,490

* Incomplete Record

Table 61 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1987 TO Sep 1988

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	5.4	7.8	6.7	3.8e	4.0e	6.7	9.3	32	80	35	16	5.3
2	5.2	8.9	6.5	3.4e	4.0e	6.8	11	31	87	32	16	5.5
3	5.2	7.5	6.1	3.2e	4.0e	7.1	14	28	97	30	16	6.3
4	5.2	6.8	6.1	4.0e	4.3e	7.3	13	27	100	29	21	6.0
5	5.2	6.8	6.3	4.6e	4.3e	7.6	12	26	107	28	21	5.9
6	5.2	6.9	8.4	5.2	4.3e	7.3	13	24	97	26	21	6.0
7	5.2	6.4	6.7	5.0	4.5e	7.4	14	23	88	24	20	5.5
8	4.8	6.4	6.2	5.3	4.5	7.2	13	22	79	22	19	5.6
9	4.0	6.5	6.1	5.0	4.6	7.1	12	22	69	21	19	5.5
10	4.8	6.5	8.0	5.9	4.2	7.0	13	24	62	20	18	5.3
11	5.2	6.6	5.5	5.8	4.3	6.8	14	32	60	19	18	5.9
12	5.0	7.1	5.3e	5.6	4.4	7.7	16	65	60	18	19	5.9
13	5.0	9.7	5.2e	5.5	4.9	8.1	21	125	62	18	19	5.8
14	5.4	8.2	5.2e	5.6	4.9	7.2	29	103	68	18	18	5.4
15	5.4	7.0	5.2e	6.0	5.2	6.8	42	94	79	17	17	4.9
16	5.4	6.8	5.4e	5.6	5.1	6.7	55	107	95	16	17	5.7
17	5.4	4.4	5.5e	5.0e	5.4	7.1	58	94	110	14e	17	5.7
18	5.4	5.6	5.5e	4.5e	5.5	6.4	52	83	115	14e	16	5.9
19	5.7	6.2	5.2e	4.0e	5.3	8.0	48	75	102	14e	15	6.1
20	5.6	7.0	4.8e	4.0e	5.6	9.0	46	79	86	14e	16	6.4
21	5.7	5.4	4.8e	4.5e	5.4	9.7	45	97	80	14e	15	5.5
22	5.9	5.5	5.0e	4.6e	5.6	9.5	41	130	71	13e	12	5.6
23	5.4	5.7	5.0e	4.6e	5.2	10	37	157	62	13e	10	5.2
24	5.4	5.6	4.5e	5.0e	5.6	9.6	35	151	54	13e	8.3	5.0
25	5.7	4.8	3.8e	5.5	5.4	9.8	32	143	48	13e	8.3	4.8
26	5.7	5.9	3.6e	5.2	5.7	11	30	141	49	17	6.4	4.9
27	5.8	5.9	3.6e	4.9	5.8	11	30	133	47	18	7.5	6.3
28	6.0	5.4e	3.6e	4.8	6.0	11	33	130	41	18	7.2	5.9
29	6.4	5.2e	4.0e	4.6	6.7	9.7	37	112	42	17	7.1	4.2
30	6.5	5.6e	4.8e	4.7	------	9.2	35	88	40	17	6.9	5.1
31	6.6	------	4.0e	4.8	------	9.0	------	76	------	17	6.6	------
TOTAL	168.8	194.1	166.6	150.2	144.7	254.8	860.3	2,474	2,237	599	454.3	167.1
MEAN	5.45	6.47	5.37	4.85	4.99	8.22	28.7	79.8	74.6	19.3	14.7	5.57
MAX	6.6	9.7	8.4	6.0	6.7	11	58	157	115	35	21	6.4
MIN	4.0	4.4	3.6	3.2	4.0	6.4	9.3	22	40	13	6.4	4.2
AC-FT	335	385	330	298	287	505	1,710	4,910	4,440	1,190	901	331

CAL YEAR 1987	TOTAL*	529.5	MEAN	5.76	MAX	9.7	MIN	3.6	AC-FT	1,050
WTR YEAR 1988	TOTAL	7,870.9	MEAN	21.5	MAX	157	MIN	3.2	AC-FT	15,620

* Incomplete Record

Table 61 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1988 TO Sep 1989

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	5.2	5.7	10	4.6e	6.4	6.6e	9.7	42	58	49	14	17
2	5.0	5.9	11	4.8e	6.0e	6.8e	9.5	47	88	43	14	15
3	4.9	8.2	8.1	4.8e	5.8e	6.8e	9.5	52	153	41	15	15
4	4.6	6.3	9.1	4.8e	5.8e	6.8e	9.3	59	199	39	15	14
5	4.6	7.3	11	4.6e	5.8e	7.5	9.3	74	198	38	15	14
6	4.8	9.3	10	4.5e	5.6e	7.4	13	141	211	35	14	13
7	4.8	7.7	7.0	4.2e	5.6e	7.5	17	289	208	33	14	13
8	4.9	7.3	7.4	4.2e	5.6e	6.6	20	292	195	32	14	13
9	4.9	6.9	8.1	4.5e	5.6e	10	20	221	188	30	15	13
10	5.2	7.1	8.8	5.0e	5.6e	13	22	352	167	26	15	13
11	5.8	6.9	7.9	6.3	5.6e	13	22	227	149	24	15	12
12	5.7	7.1	8.0	6.2	5.6e	13	26	159	145	24	17	12
13	5.4	6.8	8.5	6.4	5.6e	12	31	125	145	23	19	12
14	5.3	6.0	7.2	6.1	5.6e	11	39	105	162	24	19	12
15	5.3	6.5	6.0e	6.5	6.0e	10	48	94	207	26	19	12
16	5.3	7.3	5.8e	6.3	6.4e	10	67	102	199	25	18	12
17	5.5	7.0	5.8e	6.2	7.0e	9.9	63	100	145	28	17	13
18	5.8	6.5	5.8e	6.3	7.2e	9.9	62	97	117	26	18	14
19	5.9	6.7	5.8e	6.2	6.6e	9.7	94	90	105	23	18	13
20	5.8	6.6	6.0e	6.3	6.4e	9.5	126	84	93	23	18	12
21	6.0	7.3	6.4e	6.3	6.4e	9.9	127	81	78	23	19	12
22	5.8	9.3	6.4e	6.4	6.4e	9.6	100	80	70	21	26	12
23	5.7	12	6.4	5.8e	6.4e	8.9	78	83	61	21	27	12
24	5.7	8.6	6.6	5.2e	6.4e	9.3	65	78	60	20	24	12
25	5.6	8.3	7.0	5.2e	6.4e	9.7	73	71	58	20	25	12
26	5.8	7.1	6.0e	5.2e	6.4e	10	62	67	54	20	22	12
27	5.6	7.8	5.0e	5.2e	6.4e	10	55	63	53	20	23	11
28	5.6	8.4	4.0e	5.2e	6.4e	10	50	59	48	20	20	11
29	5.7	8.5	4.0e	5.8e	------	10	47	55	48	18	20	17
30	5.7	7.8	4.0e	6.4e	------	9.7	45	53	53	15	23	17
31	5.7	------	4.4e	6.5	------	9.9	------	52	------	14	21	------
TOTAL	167.6	224.2	217.5	172.0	171.0	294.0	1,419.3	3,494	3,715	824	573	392
MEAN	5.41	7.47	7.02	5.55	6.11	9.48	47.3	113	124	26.6	18.5	13.1
MAX	6.0	12	11	6.5	7.2	13	127	352	211	49	27	17
MIN	4.6	5.7	4.0	4.2	5.6	6.6	9.3	42	48	14	14	11
AC-FT	332	445	431	341	339	583	2,820	6,930	7,370	1,630	1,140	778

CAL YEAR 1988	TOTAL*	609.3	MEAN	6.62	MAX	12	MIN	4.0	AC-FT	1,210
WTR YEAR 1989	TOTAL	11,663.6	MEAN	32.0	MAX	352	MIN	4.0	AC-FT	23,140

* Incomplete Record

Table 62.

NORTH POWDER RIVER AT GARDNER'S RANCH, NEAR NORTH POWDER, OREGON—STATION No. 154

Location—In Sec. 5, T. 7 S., R. 38 E., at a highway bridge 2 miles above Anthony Creek, 300 feet above the headgates of the Hutchinson ditch and about 9 miles west of North Powder. There are some diversions above the station, but the total diversion is probably less than 10 per cent of the total flow.

Drainage Area—52.5 square miles.

Monthly Discharge of North Powder River at Gardner's Ranch, near North Powder, Oregon, for 1912

MONTH	DISCHARGE IN SECOND-FEET				RUN-OFF		Accuracy
	Maximum	Minimum	Mean	Per sq. mile	Depth in inches on drainage area	Total in acre-feet	
1912							
May 7-31	605	65	311	5.92	5.50	15,400	B.
June	1,300	228	727	13.8	15.4	43,300	B.
July	144	57	97.3	1.85	2.13	5,980	A.
August	73	12	34.8	.663	.76	2,140	A.
September	57	16	28.0	.533	.59	1,670	A.
October 1-21	19	16	18.6	.354	.28	775	A.
The period						69,300	

NORTH POWDER RIVER AT NORTH POWDER, OREGON —STATION No. 155

Location—In Sec. 22, T. 6 S., R. 39 E., at an abandoned bridge at the residence of I. L. Yankey near the east boundary of the town of North Powder.

Drainage Area—Not measured.

Monthly Discharge of North Powder River at North Powder, Oregon, for 1912-1914

MONTH	DISCHARGE IN SECOND-FEET			RUN-OFF	Accuracy
	Maximum	Minimum	Mean	Total in acre-feet	
1912					
March 19-31	55	22	42.7	1,100	B.
April	153	50	74.4	4,430	B.
May	520	27	180	11,100	B.
June	940	174	543	32,300	B.
July	134	22	53.0	3,260	B.
August	55	17	29.0	1,780	B.
September	22	13	17.6	1,050	B.
October	22	13	16.8	1,030	B.
November	22	17	18.1	1,080	B.
The period				57,100	
1913					
May 20-31	1,100	224	598	14,200	B.
June	940	94	438	26,100	B.
July	210	5.2	66.0	4,060	B.
August	9.4	3.2	5.27	324	B.
September	15	3.2	8.58	511	B.
October 1-14	55	7.8	28.0	778	B.
The period				46,000	
1914					
April 8-30	197	87	141	6,430	B
May	750	76	267	16,400	B.
June	590	9.4	148	8,810	A.
July	13	.1	4.71	290	B.
The period				31,900	

Table 63

ANTHONY FORK NEAR NORTH POWDER, OREGON — STATION No. 156

Location—In Sec. 20, T. 6 S., R. 38 E., at a highway bridge about 2 miles above the mouth of Anthony Fork and about 9 miles west of North Powder.

Drainage Area—39 square miles.

Monthly Discharge of Anthony Fork near North Powder, Oregon, for 1912

MONTH	DISCHARGE IN SECOND-FEET				RUN-OFF		Accuracy
	Maximum	Minimum	Mean	Per sq. mile	Depth in inches on drainage area	Total in acre-feet	
1912							
April 27-30	13	8	9.2	0.236	0.35	73.0	C.
May	317	8	160	4.10	4.73	9,840	C.
June	387	73	238	6.10	6.81	14,200	C.
July	93	13	35.0	.897	1.03	2,150	C.
August	23	8	15.3	.392	.45	941	C.
September	13	5	6.6	.169	.19	393	C.
October	5	2	3.4	.087	.10	209	C.
The period						27,800	

WOLF CREEK NEAR NORTH POWDER, OREGON—STATION No. 1524

Location—In Sec. 3, T. 6 S., R. 38 E., at Bauer's ranch, about 6 miles west of North Powder.

Drainage Area—35 square miles.

Monthly Discharge of Wolf Creek near North Powder, Oregon, for 1913-1914

MONTH	DISCHARGE IN SECOND-FEET				RUN-OFF		Accuracy
	Maximum	Minimum	Mean	Per sq. mile	Depth in inches on drainage area	Total in acre-feet	
1913							
May 23-31	192	124	169	4.83	1.62	3,020	B.
June	95	20	38.0	1.09	1.22	2,260	C.
July	26	7	14.0	.400	.46	861	C.
August	8	4	5.5	.157	.18	338	B.
September	6	4	4.1	.117	.13	244	C.
October	10	5	8.0	.229	.26	492	C.
The period						7,220	
1914							
April 9-30	260	79	178	5.09	4.16	7,780	
May	155	28	77.2	2.21	2.55	4,750	
June	38	14	24.8	.709	.79	1,480	
July 1-25	13	5.5	8.45	.241	.22	319	
The period						14,400	

Table 64.

13283600 WOLF CREEK AB WOLF CR. RESERVOIR, NR NORTH POWDER, OR.

LOCATION--Lat 45°03'50", long 118°01'54", in SW¼SW¼ sec.2, T. 6 S., R.38 E., Union County, on left bank 200 ft upstream from highwater elevation of Wolf Creek Reservoir, and about 6.2 mi northwest of North Powder.

DRAINAGE AREA--30.7 mi².

PERIOD OF RECORD--March 1973 to current year.

GAGE--Water-stage recorder.

AVERAGE DISCHARGE-- 16 years (water years 1974-89), 30.4 ft^3/s, 22,020 acre-ft/yr.

EXTREMES--Period of record: Maximum discharge, 1350 ft^3/s May 13, 1984, gage height, 4.92 ft; minimum discharge, 0.6 ft^3/s Aug. 23, 1977.

DATE	MAX Q	GH	DATE	MIN Q
May 4, 1979	392	3.83	Nov 11, 1978	0.75 freeze-up
Apr 23, 1980	360	3.60	Oct 8-12, 1979	1.2
Apr 23, 1981	244	3.43	Nov 13, 1980	1.1
			Sep 17-18, 1981	1.1
May 17, 1982	437	3.88	Oct 1-2, 22, 1981	2.1
May 5, 1983	356	3.72	Sep 16-18, 1983	2.2
May 13, 1984	1350	4.92	Dec 23, 1983	1.8 estimated
Apr 14, 1985	448	3.90	Aug 28-Sep 1, 1985	2.0
Mar 7, 1986	299	5.59	Dec 9, 1985	1.2
Apr 17, 1987	135	3.07	Sep 1-2, 7-8, 1987	1.2
Apr 16, 21, 1988	179	3.24	Sep 2-6, 1988	1.0
Apr 19, 1989	740	4.33	Oct 6-10, Nov 13, 25, 1988	1.5

REMARKS-- Records are good above 5 cfs, fair 1-5 cfs and poor below 1 cfs except as follows: 1979, Nov. 11-27, Dec 6 - Feb 7, Feb 14, 15, 20-22, Mar 1-3, 8-14, 17 which are fair; 1980, Nov. 11-13, 27-31, Dec. 1, 2, 7, 9-31, Jan. 1 - Feb. 10 which are fair; 1981, Nov. 14-16, 24-27, Dec. 1, 2, 6-22, Jan. 10-28, Feb. 1-14 which are fair; 1982, April 10 - May 17 which are fair; 1983, Nov 6-27, Dec 7-15, Dec 24 - Feb 10 which are fair; 1984, Nov 21 - Dec 7, Dec 16 - Jan 25 which are fair; 1985, Nov 25-Mar 9 which are fair; 1986, Nov 11 - Dec 1, Dec 10 - Jan 23, Feb 6-14 which are fair; 1987, Dec 1-16, 31, Jan 2-23, Feb 4, 20, 21, 26, 28 which are fair; 1988, Nov 26 - Dec 1, Dec 9 - Jan 6, Jan 18 - Feb 7, Feb 17-25 which are fair; 1989, Nov 26 - Mar 8 which are fair.

Carnes Ditch diverts water from Anthony Creek and other streams, some of which is bypassed to Shingle Gulch, a tributary to Wolf Creek, above station.

Table 64 continued

Discharge in Cubic Feet per Second, Water Year Ending September, 1979
Mean Values

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.0	2.9	4.5	1.3	2.0	3.8	31	238	36	8.1	1.9	2.3
2	2.0	2.9	3.6	1.8	1.8	3.6	28	265	41	6.9	1.8	2.2
3	1.9	2.9	4.7	2.1	2.1	3.7	25	318	39	5.8	1.8	2.2
4	1.9	3.1	5.8	2.2	2.8	3.9	25	322	45	5.3	1.7	2.2
5	1.9	2.7	13	1.9	3.1	4.1	31	329	51	5.0	1.6	2.1
6	2.0	2.3	17	1.5	3.2	5.4	47	283	50	5.0	1.6	1.9
7	1.9	3.2	7.0	1.8	3.4	7.6	59	204	50	5.6	1.5	1.8
8	1.9	3.6	2.7	2.5	3.6	9.5	66	174	44	4.7	1.4	1.8
9	2.0	4.3	2.7	4.3	3.6	9.3	67	156	43	4.5	1.3	1.8
10	1.9	1.9	2.8	4.1	3.6	9.1	63	141	41	4.2	1.3	1.7
11	2.0	1.9	3.0	4.0	3.9	9.0	58	125	40	4.2	1.3	1.7
12	2.0	1.9	2.8	3.6	3.9	9.0	50	135	37	4.0	1.2	1.7
13	2.0	1.9	2.7	3.4	5.0	10	48	165	35	3.8	1.5	1.7
14	2.4	1.7	2.7	3.6	5.8	12	47	183	36	3.7	3.3	1.6
15	2.4	1.9	2.7	3.8	5.2	14	48	201	33	3.3	2.6	1.6
16	2.4	2.7	2.5	4.0	4.3	16	53	240	35	3.1	2.3	1.6
17	2.3	2.8	3.0	3.0	4.1	16	69	210	44	3.1	2.3	1.5
18	2.3	2.8	3.3	2.5	3.9	16	71	192	40	2.9	2.6	1.5
19	2.3	3.0	2.9	2.5	3.9	16	66	177	37	2.8	2.9	1.5
20	2.4	3.0	2.8	3.5	3.9	18	59	171	36	2.8	3.3	1.5
21	2.4	3.0	3.2	3.3	3.9	21	59	165	35	2.6	2.6	1.5
22	2.4	2.9	3.7	2.9	3.7	26	73	150	35	2.6	2.4	1.5
23	2.4	2.9	3.6	2.5	3.6	39	95	147	32	2.4	2.3	1.5
24	2.6	2.9	3.5	2.7	3.6	38	110	135	31	2.3	2.3	1.5
25	2.6	3.2	3.3	2.8	3.6	44	110	115	30	2.3	2.1	1.5
26	2.2	2.9	3.2	2.8	3.6	39	118	99	19	2.3	2.1	1.9
27	2.7	2.7	3.2	2.8	3.9	43	118	80	23	2.2	2.1	1.7
28	2.7	3.6	3.2	2.7	3.9	52	148	63	22	2.2	2.1	1.5
29	2.8	3.6	2.4	2.4	---	49	193	51	17	2.1	2.1	1.7
30	2.8	4.7	1.6	1.8	---	43	211	44	8.9	2.1	2.2	1.7
31	2.0	---	1.3	1.8	---	36	---	40	---	1.9	3.1	---
Total	69.5	85.8	124.4	85.9	102.9	626.0	2246	5318	1065.9	113.8	64.6	51.9
Mean	2.24	2.86	4.01	2.77	3.68	20.2	74.9	172	35.5	3.67	2.08	1.73
Max	2.8	4.7	17	4.3	5.8	52	211	329	51	8.1	3.3	2.3
Min	1.9	1.7	1.3	1.3	1.8	3.6	25	40	8.9	1.9	1.2	1.5
Ac-Ft	138	170	247	170	204	1240	4450	10550	2110	226	128	103

Wtr Yr 1979 Total 9954.7 Mean 27.3 Max 329 Min 1.2 Ac-Ft 19750

Table 64 continued

Discharge in Cubic Feet per Second, Water Year Ending September, 1980
Mean Values

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.4	3.1	3.5	3.2	3.7	17	11	135	60	31	5.0	2.3
2	1.4	2.9	4.0	3.2	3.7	19	11	130	62	30	4.2	2.4
3	1.3	3.1	4.7	3.2	3.7	20	11	128	58	36	4.5	2.6
4	1.3	3.1	5.0	3.2	4.1	23	11	125	63	36	4.0	2.3
5	1.3	3.3	4.7	3.0	4.7	26	12	120	60	35	4.2	2.2
6	1.3	3.3	4.2	2.5	4.6	23	13	115	60	35	4.0	2.3
7	1.3	3.1	3.5	2.0	4.5	20	12	89	58	31	4.0	2.3
8	1.3	2.9	4.2	2.5	4.5	18	12	85	58	29	3.7	2.2
9	1.3	2.9	4.5	3.2	4.5	16	14	108	41	28	3.5	2.1
10	1.3	2.6	4.7	2.8	4.5	17	17	87	53	28	3.3	2.8
11	1.2	2.5	3.7	2.7	4.5	19	18	76	55	26	3.3	3.1
12	1.2	2.4	3.2	4.0	4.5	18	24	65	62	21	3.3	2.8
13	1.3	2.5	3.2	5.4	4.2	18	39	57	57	19	3.1	6.1
14	1.3	2.6	3.2	6.5	3.8	18	60	48	62	19	3.1	5.0
15	1.6	3.1	3.2	6.2	3.8	17	72	41	60	17	3.1	3.3
16	1.7	4.0	4.0	5.8	3.8	16	96	36	57	13	2.9	2.9
17	1.9	6.4	4.3	5.4	5.6	14	130	31	51	12	2.9	2.6
18	2.1	5.0	4.2	4.3	13	14	168	27	47	11	3.3	2.8
19	3.8	3.7	4.2	3.6	19	13	192	23	41	8.1	3.3	3.8
20	3.3	4.0	4.2	3.4	21	13	213	23	37	7.7	3.1	3.1
21	3.1	3.8	4.5	3.2	15	13	276	23	35	7.3	2.8	3.5
22	3.1	3.8	4.5	3.5	13	12	315	20	40	6.6	2.6	2.9
23	4.0	4.7	3.2	4.7	11	13	311	17	43	6.4	2.6	2.8
24	3.7	4.7	3.5	4.8	10	13	283	17	39	5.8	2.6	2.3
25	3.5	4.7	4.3	4.8	9.3	13	228	27	32	5.8	2.4	2.3
26	3.5	4.5	3.7	3.7	9.7	13	204	33	28	5.6	2.3	2.3
27	2.9	3.5	3.3	2.5	11	13	207	32	27	5.3	2.3	2.3
28	2.9	2.7	2.9	2.3	14	12	216	41	25	5.6	2.3	2.3
29	2.9	2.7	2.9	2.2	15	12	234	48	24	5.6	2.3	2.3
30	2.9	3.5	2.9	2.4	---	12	174	51	23	5.0	2.3	2.3
31	3.5	---	2.9	2.8	---	11	---	53	---	4.7	2.2	---
Total	68.6	105.1	119.0	113.0	233.7	496	3584	1911	1418	536.5	98.5	84.3
Mean	2.21	3.50	3.84	3.65	8.06	16.0	119	61.6	47.3	17.3	3.18	2.81
Max	4.0	6.4	5.0	6.5	21	26	315	135	63	36	5.0	6.1
Min	1.2	2.4	2.9	2.0	3.7	11	11	17	23	4.7	2.2	2.1
Ac-Ft	136	208	236	224	464	984	7110	3790	2810	1060	195	167

Wtr Yr 1980 Total 8767.7 Mean 24.0 Max 315 Min 1.2 Ac-Ft 17390

Table 64 continued

Discharge in Cubic Feet per Second, Water Year Ending September, 1981
Mean Values

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.3	3.1	3.2	9.3	4.5	13	40	177	37	11	3.3	1.8
2	2.2	3.5	3.0	8.9	4.2	13	37	138	33	11	3.3	1.7
3	2.2	3.5	5.6	8.9	4.1	14	32	115	28	9.7	3.1	1.7
4	2.2	3.5	5.3	8.1	4.0	14	30	96	24	8.5	2.8	1.7
5	2.1	3.3	4.2	8.1	4.3	14	28	78	26	8.5	2.9	1.6
6	2.1	4.0	3.8	7.7	4.4	13	26	65	40	9.3	2.8	1.6
7	2.1	6.6	3.7	7.3	4.3	13	24	55	40	11	2.4	1.5
8	2.1	5.8	3.7	6.9	4.0	12	23	47	55	9.7	2.3	1.4
9	1.9	4.0	3.7	6.6	4.0	12	22	43	53	8.5	2.2	1.3
10	1.9	3.7	3.7	6.5	3.6	13	20	40	57	7.3	2.1	1.3
11	2.1	3.5	4.0	6.5	3.7	15	20	37	65	7.3	1.9	1.3
12	2.2	2.9	4.1	6.4	4.0	18	19	33	72	6.6	1.9	1.3
13	2.6	1.8	3.9	5.5	7.0	22	17	30	72	6.6	1.9	1.3
14	3.1	1.8	4.0	4.5	12	24	17	35	72	6.4	2.1	1.3
15	3.3	1.8	4.4	3.6	18	28	21	48	67	6.1	1.9	1.3
16	3.5	2.6	4.5	3.6	41	31	30	53	69	5.8	1.7	1.3
17	3.3	2.9	4.5	4.0	67	29	43	48	67	5.6	1.7	1.3
18	2.9	2.8	4.2	5.0	44	27	60	51	67	5.3	1.7	1.3
19	2.9	2.6	4.2	5.0	37	25	96	48	67	5.0	2.1	1.5
20	2.9	2.6	4.2	4.0	31	23	149	62	72	4.7	2.3	1.7
21	2.9	2.6	4.8	3.7	20	22	162	72	65	4.7	2.1	1.8
22	2.9	2.8	6.0	4.0	15	23	159	67	60	4.2	1.9	1.9
23	2.8	2.6	7.3	4.7	15	23	189	63	57	4.2	1.8	2.1
24	2.8	2.4	5.8	5.0	15	22	225	62	51	4.2	1.7	2.1
25	2.8	2.4	8.1	5.0	14	33	183	63	47	4.0	1.8	2.2
26	2.9	2.4	20	4.5	13	51	150	58	45	4.0	1.9	2.6
27	2.8	2.5	31	4.4	13	50	128	53	26	3.8	1.7	3.8
28	2.6	3.3	21	5.0	13	50	120	47	14	3.7	1.7	4.2
29	2.8	3.3	13	5.0	---	53	125	47	13	3.7	1.7	2.9
30	2.9	3.7	11	5.0	---	48	150	48	12	3.7	1.8	2.3
31	3.1	---	9.7	4.7	---	44	---	41	---	3.5	1.8	---
Total	81.2	94.3	219.6	177.4	424.1	792	2345	1920	1473	197.6	66.3	55.1
Mean	2.62	3.14	7.08	5.72	15.1	25.5	78.2	61.9	49.1	6.37	2.14	1.84
Max	3.5	6.6	31	9.3	67	53	225	177	72	11	3.3	4.2
Min	1.9	1.8	3.0	3.6	3.6	12	17	30	12	3.5	1.7	1.3
Ac-Ft	161	187	436	352	841	1570	4650	3810	2920	392	132	109

Wtr Yr 1981 Total 7845.6 Mean 21.5 Max 225 Min 1.3 Ac-Ft 15560

Table 64 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1981 TO Sep 1982

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.2	3.2	5.4e	3.8e	10	13	28	247	96	64	9.9	3.4
2	2.4	3.0	4.9e	4.0e	9.1	15	25	259	99	61	8.8	3.2
3	2.6	2.8	4.2e	4.3e	7.7	14	23	244	100	67	8.8	3.1
4	2.4	2.9	4.3e	4.4e	6.2e	14	20	237	107	62	8.3	3.6
5	2.6	2.6	4.7	4.4e	4.0e	13	18	229	120	60	7.7	3.3
6	2.4	2.6	5.3	3.5e	3.6e	13	17	227	110	59	7.0	3.1
7	2.8	2.6	5.3	2.8e	3.7e	14	16	206	103	61	6.4	3.0
8	3.3	2.5	5.0	3.3e	3.7e	15	15	192	96	62	6.1	2.7
9	3.2	2.5	5.1	3.2e	3.8e	15	17	178	92	62	6.0	2.7
10	3.8	2.5	4.7e	3.2e	3.8e	18	21	182	91	58	6.8	3.0
11	3.8	2.6	4.0e	3.5e	3.9e	22	67	166	91	57	7.6	3.4
12	3.1	2.9	4.0e	3.9e	4.4e	21	104	167	97	54	6.6	6.1
13	2.9	3.9	4.2e	4.1e	5.8	21	100	184	97	53	5.8	5.4
14	5.2	7.3	4.5e	4.1e	9.0	20	109	215	93	53	5.3	4.6
15	6.1	4.4	4.8e	4.8e	15	19	91	250	88	51	5.0	4.1
16	6.7	6.0	5.3e	7.6	24	18	79	333	80	49	4.9	3.7
17	6.6	7.1	4.8e	9.5	17	17	75	368	66	48	4.6	3.5
18	6.5	5.3	6.6	6.7	12	17	70	316	58	46	4.5	3.3
19	6.6	4.2	6.9	5.4	10	16	61	256	53	43	4.3	4.8
20	6.6	3.8	6.2	4.5e	13	15	57	231	46	41	4.3	5.2
21	5.2	5.0	6.0	4.2e	16	14	64	228	33	37	4.6	3.7
22	3.1	5.4	5.5	4.2e	17	14	86	236	37	31	4.1	3.3
23	3.3	5.1	4.5e	5.0e	16	16	134	231	38	15	3.8	3.0
24	4.6	4.6	4.5e	7.0e	15	21	185	238	43	14	3.7	2.9
25	5.8	4.1	4.3e	8.6e	16	29	193	226	41	12	3.7	2.9
26	8.2	4.3	3.9e	10 e	14	37	176	211	52	12	3.3	3.3
27	3.3	4.0	3.7e	12 e	13	41	181	172	50	12	3.2	3.0
28	3.0	3.6e	3.3e	12 e	12	41	214	152	52	11	3.1	3.6
29	2.9	4.3e	3.2e	12 e	------	40	230	131	53	10	3.6	4.2
30	3.0	4.0e	3.2e	12 e	------	36	228	104	51	11	5.6	3.7
31	3.4	------	3.2e	12	------	32	------	96	------	11	3.9	------
TOTAL	127.6	119.1	145.5	190.0	288.7	651	2,704	6,712	2,233	1,287	171.3	108.8
MEAN	4.12	3.97	4.69	6.13	10.3	21.0	90.1	217	74.4	41.5	5.53	3.63
MAX	8.2	7.3	6.9	12	24	41	230	368	120	67	9.9	6.1
MIN	2.2	2.5	3.2	2.8	3.6	13	15	96	33	10	3.1	2.7
AC-FT	253	236	289	377	573	1,290	5,360	13,310	4,430	2,550	340	216

CAL YEAR 1981	TOTAL	7,842.70	MEAN	21.5	MAX	225	MIN	1.3	AC-FT	15,560
WTR YEAR 1982	TOTAL	14,738.00	MEAN	40.4	MAX	368	MIN	2.2	AC-FT	29,220

Table 64 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1982 TO Sep 1983

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.4	6.6	5.5	4.0e	6.0e	27	54	232	86	42	4.3	3.5
2	3.2	5.3	6.0	4.4e	5.8e	43	60	239	76	42	4.0	3.4
3	3.7	6.0	9.1	5.0e	5.2e	58	60	221	64	39	3.6	3.1
4	3.8	6.1	7.0	8.0e	5.0e	86	56	231	56	37	3.6	2.9
5	3.7	6.1	7.3	10 e	5.2e	85	56	288	50	35	3.2	2.7
6	3.6	5.8e	7.1	10 e	5.6e	73	56	263	46	34	3.1	2.6
7	3.9	5.4e	6.2e	10 e	5.6e	72	59	234	43	33	3.0	2.5
8	4.3	5.1e	5.8e	9.4e	5.5e	79	63	198	43	33	3.2	2.5
9	4.6	5.0e	5.6e	7.8e	5.5e	126	64	164	40	31	4.8	2.4
10	4.3	5.0e	5.6e	7.0e	5.8e	153	61	150	40	31	12	2.6
11	3.8	5.0e	5.5e	6.6e	6.0	161	58	131	40	28	6.8	3.0
12	3.5	4.8e	5.5e	6.6e	6.1	143	55	117	39	23	4.9	2.6
13	3.4	4.5e	5.5e	6.5e	6.9	173	51	120	33	16	4.4	2.5
14	3.2	4.0e	6.5e	6.5e	6.4	178	50	130	30	7.5	4.1	2.4
15	3.2	4.2e	6.8e	7.2e	6.4	149	53	137	26	7.1	3.7	2.4
16	3.6	5.4e	6.9	7.6e	6.5	124	62	132	21	6.6	3.5	2.3
17	3.9	6.6e	7.0	7.1e	7.3	103	78	131	36	6.6	3.1	2.2
18	4.5	7.4e	6.4	7.3e	12	91	100	146	45	6.5	2.9	2.6
19	4.2	7.0e	6.2	8.2e	14	81	131	156	42	6.1	2.8	3.7
20	4.2	5.8e	6.3	8.0e	13	72	166	174	40	5.8	3.0	3.0
21	4.5	5.2e	6.7	7.8e	13	65	223	200	38	5.5	4.3	2.8
22	4.5	5.1e	6.7	7.8e	15	62	248	210	36	5.0	4.5	2.7
23	4.7	5.1e	6.5	7.6e	18	60	248	213	36	6.7	6.3	2.5
24	4.5	5.1e	5.1e	7.5e	20	57	289	214	35	8.0	6.6	2.4
25	4.2	5.2e	4.8e	7.6e	23	52	250	209	33	6.4	5.0	2.4
26	5.1	5.8e	4.8e	8.0e	24	49	231	191	33	5.5	4.4	3.3
27	4.9	6.2e	4.1e	7.9e	24	49	190	169	35	5.0	4.0	3.1
28	4.5	6.5	4.2e	7.0e	23	45	176	157	34	4.8	3.5	2.6
29	6.2	6.2	4.4e	6.8e	------	43	185	136	42	4.5	3.3	2.5
30	8.4	5.8	4.4e	6.6e	------	48	197	109	41	4.3	3.1	2.5
31	7.0	------	4.3e	6.4e	------	52	------	94	------	4.3	3.0	------
TOTAL	134.5	167.3	183.8	228.2	299.8	2,659	3,630	5,496	1,259	530.2	132.0	81.7
MEAN	4.34	5.58	5.93	7.36	10.7	85.8	121	177	42.0	17.1	4.26	2.72
MAX	8.4	7.4	9.1	10	24	178	289	288	86	42	12	3.7
MIN	3.2	4.0	4.1	4.0	5.0	27	50	94	21	4.3	2.8	2.2
AC-FT	267	332	365	453	595	5,270	7,200	10,900	2,500	1,050	262	162

CAL YEAR 1982	TOTAL	14,831.4	MEAN	40.6	MAX	368	MIN	2.7	AC-FT	29,420
WTR YEAR 1983	TOTAL	14,801.5	MEAN	40.6	MAX	289	MIN	2.2	AC-FT	29,360

Table 64 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1983 TO Sep 1984

D Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.5	4.1	4.0e	4.3e	9.4e	6.7	33	86	284	33	6.9	9.7
2	2.5	4.1	3.8e	3.5e	9.3e	6.7	34	108	223	34	8.2	6.9
3	2.4	3.9	3.8e	4.5e	9.3e	6.4	34	129	200	31	6.7	5.9
4	2.4	3.8	3.8e	6.4e	9.8e	6.5	34	146	190	31	6.0	5.5
5	2.3	3.5	3.7e	12 e	10 e	7.1	39	138	195	35	6.7	5.0
6	2.1	4.4	4.0e	11 e	9.8e	7.2	46	119	195	33	6.8	5.1
7	2.2	4.1	4.8e	10 e	9.5e	8.6	46	121	190	34	5.6	6.0
8	2.5	3.4	6.3	8.6e	9.5e	10	49	160	180	35	5.3	6.3
9	2.7	3.1	6.9	7.0e	11 e	13	48	200	167	34	4.9	5.7
10	2.5	3.9	6.9	6.0e	12 e	18	45	223	149	34	4.7	5.1
11	2.4	8.4	5.7	4.9e	11 e	23	43	273	147	33	4.5	4.9
12	2.3	6.7	5.8	4.4e	11 e	25	45	451	146	32	4.3	4.7
13	2.3	5.8	5.9	4.0e	13 e	26	48	892	138	31	4.2	4.6
14	2.3	4.9	6.0	3.5e	14 e	26	73	643	126	30	4.1	4.3
15	2.3	5.0	5.9	3.1e	13 e	28	144	356	122	30	4.0	4.3
16	2.5	6.0	3.5e	3.0e	12 e	29	242	227	117	31	3.9	4.2
17	2.6	7.7	3.2e	3.0e	13 e	31	390	183	101	31	3.8	4.1
18	2.5	6.4	3.2e	2.9e	11 e	29	358	184	90	31	3.7	3.9
19	2.6	3.9	3.2e	2.9e	8.6e	29	327	217	87	30	3.5	3.7
20	2.5	5.8	2.7e	3.0e	7.6e	37	307	269	90	29	3.4	4.0
21	2.8	4.9e	2.3e	4.0e	8.3e	47	299	260	82	28	3.3	4.7
22	3.1	4.5e	2.0e	4.2e	8.2e	46	334	232	70	28	3.4	4.6
23	2.8	4.7e	1.8e	5.4e	8.0e	47	341	260	63	21	3.3	5.8
24	2.8	5.3e	2.1e	7.5e	7.6	46	288	243	57	10	3.3	5.3
25	2.7	5.2e	3.7e	33 e	7.6	43	229	213	51	8.7	3.3	4.9
26	2.7	5.1e	3.2e	25 e	9.0	39	187	305	47	7.4	3.2	4.7
27	2.5	5.2e	2.9e	20 e	6.6	35	144	400	43	7.5	3.0	4.6
28	2.5	5.6e	2.9e	17 e	6.6	32	126	382	40	8.0	2.9	4.4
29	2.7	4.9e	3.5e	11 e	6.5	30	107	442	36	10	2.9	4.2
30	2.9	4.0e	4.5e	10 e	------	29	90	458	32	7.7	4.6	4.2
31	3.9	------	4.6e	9.7e	------	31	------	371	------	6.9	25	------
TOTAL	79.8	148.3	126.6	254.8	282.2	798.2	4,530	8,691	3,658	785.2	159.4	151.3
MEAN	2.57	4.94	4.08	8.22	9.73	25.7	151	280	122	25.3	5.14	5.04
MAX	3.9	8.4	6.9	33	14	47	390	892	284	35	25	9.7
MIN	2.1	3.1	1.8	2.9	6.5	6.4	33	86	32	6.9	2.9	3.7
AC-FT	158	294	251	505	560	1,580	8,990	17,240	7,260	1,560	316	300

CAL YEAR 1983	TOTAL	14,670.6	MEAN	40.2	MAX	289	MIN	1.8	AC-FT	29,100
WTR YEAR 1984	TOTAL	19,664.8	MEAN	53.7	MAX	892	MIN	1.8	AC-FT	39,010

Table 64 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1984 TO Sep 1985

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.8	5.7	5.6e	4.9e	4.1e	4.4e	30	132	72	7.8	6.9	2.1
2	3.6	8.4	4.5e	4.7e	4.1e	4.4e	54	172	74	7.6	8.4	2.2
3	3.6	9.5	4.5e	4.4e	3.6e	4.4e	72	195	74	7.1	6.1	2.3
4	3.7	7.7	4.5e	4.4e	3.6e	4.4e	77	160	71	6.8	5.6	2.2
5	3.8	7.2	4.5e	4.4e	3.6e	4.5e	95	133	71	6.6	5.5	2.3
6	3.7	7.3	4.5e	4.5e	4.0e	4.5e	119	119	70	6.5	4.3	2.9
7	3.6	7.3	4.5e	4.7e	4.4e	4.5e	139	112	68	6.3	3.9	3.4
8	3.6	7.2	4.5e	5.2e	4.4e	4.6e	168	106	67	6.4	3.8	4.8
9	3.6	6.8	5.8e	5.0e	4.4e	4.6e	206	99	62	6.7	3.8	4.7
10	3.4	6.6	6.2e	4.3e	4.5e	5.1	237	98	59	6.3	3.8	3.8
11	5.8	8.3	5.2e	4.3e	4.5e	5.9	292	91	57	5.9	3.8	3.9
12	5.8	11	5.1e	4.3e	4.5e	6.4	283	80	55	5.2	3.6	4.0
13	10	10	5.1e	4.3e	4.3e	7.3	308	73	48	5.0	3.2	3.2
14	7.3	9.3	5.1e	4.3e	4.1e	8.5	366	74	47	4.8	3.2	3.3
15	6.2	8.2	4.8e	4.3e	4.0e	9.7	390	68	45	4.6	3.0	3.9
16	5.6	8.7	4.0e	4.3e	3.8e	14	375	73	43	4.5	3.0	3.4
17	5.4	7.7	3.4e	4.3e	3.7e	14	325	76	40	4.4	2.9	4.7
18	5.4	7.9	3.4e	4.3e	3.7e	17	288	75	39	4.1	2.9	4.4
19	5.3	7.3	3.3e	4.4e	3.7e	23	229	80	37	3.9	3.0	3.5
20	5.0	7.5	3.3e	4.4e	3.9e	26	179	93	27	3.7	3.1	3.1
21	4.7	6.9	3.3e	4.4e	4.0e	28	146	86	14	3.6	3.0	3.0
22	4.4	5.8	3.5e	4.4e	4.0e	26	117	80	12	3.6	2.8	2.8
23	4.7	7.4	4.7e	4.2e	4.0e	24	96	74	11	3.5	2.6	2.6
24	5.5	6.2	4.8e	4.2e	4.0e	22	82	71	11	3.4	2.5	2.5
25	5.7	6.1e	4.8e	4.0e	4.2e	22	71	64	11	3.4	2.4	2.5
26	6.9	6.1e	4.9e	4.0e	4.0e	23	63	59	10	3.2	2.3	2.4
27	6.6	6.2e	4.9e	4.1e	4.0e	23	58	54	9.8	3.1	2.2	2.3
28	6.6	6.6e	4.9e	4.2e	4.0e	17	62	53	9.3	3.0	2.1	2.3
29	6.3	6.9e	4.9e	4.2e	------	16	75	55	8.7	3.0	2.1	2.4
30	5.6	6.9e	4.9e	4.3e	------	15	93	53	8.8	5.2	2.1	2.4
31	5.7	------	4.9e	4.2e	------	16	------	53	------	13	2.1	------
TOTAL	160.9	224.7	142.3	135.9	113.1	409.2	5,095	2,811	1,231.6	162.2	110.0	93.3
MEAN	5.19	7.49	4.59	4.38	4.04	13.2	170	90.7	41.1	5.23	3.55	3.11
MAX	10	11	6.2	5.2	4.5	28	390	195	74	13	8.4	4.8
MIN	3.4	5.7	3.3	4.0	3.6	4.4	30	53	8.7	3.0	2.1	2.1
AC-FT	319	446	282	270	224	812	10,110	5,580	2,440	322	218	185

CAL YEAR 1984	TOTAL	19,838.0	MEAN	54.2	MAX	892	MIN	2.9	AC-FT	39,350
WTR YEAR 1985	TOTAL	10,689.2	MEAN	29.3	MAX	390	MIN	2.1	AC-FT	21,210

Table 64 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1985 TO Sep 1986

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.4	4.3	5.0e	4.8e	5.0	88	161	60	53	5.5	2.7	2.3
2	2.3	4.9	5.0	4.1e	5.4	97	138	62	53	5.4	2.5	2.2
3	2.3	5.4	5.1	3.9e	5.3	101	127	70	52	5.3	2.5	2.1
4	2.3	4.8	5.0	3.9e	5.2	106	123	72	53	5.8	2.4	1.9
5	2.3	4.9	4.7	3.7e	5.1	125	130	71	49	6.7	2.3	1.8
6	2.4	5.1	4.7	3.5e	4.9e	157	144	69	48	5.6	2.3	1.8
7	3.9	19	4.8	3.7e	4.4e	256	168	65	47	5.2	2.3	1.9
8	3.3	15	4.8	4.2e	4.1e	236	206	62	43	5.5	2.2	2.7
9	2.6	10	4.7	4.5e	4.0e	181	222	63	41	5.5	2.1	2.4
10	3.1	5.3	5.0e	4.5e	4.0e	147	204	62	40	5.3	2.0	2.3
11	3.2	5.3e	5.0e	4.5e	4.0e	123	172	58	38	5.7	2.1	2.3
12	3.4	6.0e	4.5e	4.4e	4.2e	103	143	55	36	5.0	2.0	2.4
13	3.0	5.6e	3.9e	4.4e	4.4e	86	115	55	35	4.9	2.1	2.4
14	2.8	5.6e	3.7e	4.4e	4.4e	72	97	55	29	4.5	2.0	2.5
15	2.9	5.6e	3.7e	4.4e	4.8	64	87	52	16	4.3	1.9	3.5
16	3.0	6.5e	3.7e	5.2e	5.4	57	81	49	9.3	4.5	1.9	3.9
17	3.0	7.3e	3.7e	5.8e	6.5	51	76	49	8.9	4.7	2.0	3.7
18	2.9	6.0e	3.7e	5.8e	6.7	49	69	51	8.7	4.4	2.1	4.3
19	2.8	4.8e	3.7e	5.8e	6.6	55	66	53	8.2	4.0	2.1	3.7
20	2.8	4.8e	3.7e	5.8e	6.3	71	75	57	7.8	3.8	1.9	3.6
21	3.1	4.8e	3.7e	5.6e	6.0	78	107	60	7.5	3.6	2.6	3.7
22	4.0	4.1e	3.7e	5.2e	6.8	81	163	50	7.2	3.3	3.7	3.3
23	6.1	3.8e	3.7e	5.2e	13	96	151	45	6.9	3.2	3.1	3.0
24	7.8	3.3e	3.7e	4.9	33	96	123	41	6.4	3.3	2.7	4.3
25	7.3	3.5e	3.7e	4.5	50	98	107	39	6.3	3.1	2.3	4.7
26	6.2	4.4e	3.7e	4.4	68	115	89	38	6.3	3.1	2.2	3.7
27	5.4	5.0e	3.7e	4.3	71	155	81	37	6.1	3.0	2.1	3.4
28	5.0	5.0e	3.7e	4.1	77	215	73	34	6.2	2.9	1.9	3.4
29	4.4	5.0e	3.7e	4.3	------	251	67	31	6.5	3.0	2.1	3.7
30	4.1	5.0e	3.7e	4.4	------	230	62	40	6.0	2.8	2.3	4.8
31	4.1	------	4.5e	4.7	------	197	------	55	------	2.8	2.4	------
TOTAL	114.2	180.1	129.6	142.9	425.5	3,837	3,627	1,660	741.3	135.7	70.8	91.7
MEAN	3.68	6.00	4.18	4.61	15.2	124	121	53.5	24.7	4.38	2.28	3.06
MAX	7.8	19	5.1	5.8	77	256	222	72	53	6.7	3.7	4.8
MIN	2.3	3.3	3.7	3.5	4.0	49	62	31	6.0	2.8	1.9	1.8
AC-FT	227	357	257	283	844	7,610	7,190	3,290	1,470	269	140	182

CAL YEAR 1985	TOTAL	10,585.2	MEAN	29.0	MAX	390	MIN	2.1	AC-FT	21,000
WTR YEAR 1986	TOTAL	11,155.8	MEAN	30.6	MAX	256	MIN	1.8	AC-FT	22,120

Table 64 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1986 TO Sep 1987

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.7	4.2	3.9e	3.5	3.9	4.9	34	92	11	4.2	2.1	1.4
2	3.2	3.8	3.9e	3.6e	3.9	4.7	48	78	9.5	5.5	2.1	1.3
3	2.9	3.6	3.8e	3.5e	3.6	5.2	64	68	8.8	5.1	2.0	1.4
4	2.8	3.6	3.7e	3.3e	3.5e	6.6	84	61	8.3	4.4	2.0	1.4
5	2.7	3.5	4.7e	3.2e	3.5	11	93	55	7.8	4.4	1.9	1.5
6	2.7	4.4	4.8e	3.2e	3.5	25	99	50	7.2	4.1	1.9	1.4
7	2.7	4.5	4.5e	3.1e	3.5	29	108	45	7.2	3.9	1.8	1.4
8	2.5	4.6	4.1e	3.3e	3.6	26	106	41	21	3.8	1.9	1.4
9	2.5	4.4	3.7e	3.4e	3.6	30	93	37	13	4.1	1.7	1.4
10	2.6	3.3	3.6e	3.4e	3.7	32	93	33	11	4.7	1.6	1.4
11	2.7	7.0	3.6e	3.2e	3.9	34	92	30	9.5	4.2	1.6	1.4
12	2.7	6.7	4.0e	3.2e	4.0	40	79	27	8.6	3.7	1.5	1.4
13	2.7	5.3	4.3e	3.2e	5.9	48	72	25	7.9	3.3	1.9	1.4
14	2.7	4.9	4.3e	3.2e	7.2	51	74	23	7.4	3.0	2.7	1.4
15	2.7	4.7	4.3e	3.2e	6.3	51	86	21	8.2	2.8	2.3	1.5
16	2.7	4.8	3.9e	2.8e	5.6	48	104	19	8.5	2.7	2.1	1.5
17	2.7	6.1	4.3	3.0e	5.4	45	124	17	8.8	2.9	1.9	1.6
18	2.7	6.2	4.4	3.0e	5.2	41	120	16	7.5	3.2	1.9	1.6
19	2.7	6.3	4.5	2.9e	5.0	36	99	15	7.1	3.1	1.7	1.6
20	2.7	6.0	4.4	2.7e	4.7e	32	85	14	7.5	2.9	1.6	1.6
21	2.8	6.5	4.4	2.8e	4.9e	29	80	13	7.5	2.8	1.5	1.5
22	2.9	5.9	4.2	3.0e	5.1	26	88	13	6.7	5.0	1.5	1.5
23	2.9	5.3	4.2	3.3e	5.8	25	103	12	6.3	4.2	1.5	1.4
24	3.0	5.7	4.2	3.6	6.9	24	109	13	6.1	3.6	1.6	1.5
25	3.0	4.5	4.0	3.7	5.9	25	106	12	5.7	3.3	1.5	1.6
26	3.0	6.4	4.0	4.4	5.3e	26	100	11	5.4	3.1	1.5	1.7
27	3.6	5.2	3.8	4.2	5.0e	26	100	13	5.0	2.9	1.5	1.8
28	3.8	5.0	3.8	3.6	5.0e	24	102	11	4.8	2.5	1.5	1.8
29	3.6	4.7	3.7	3.4	------	24	102	10	4.7	2.4	1.4	1.8
30	5.6	3.4	3.5	3.4	------	23	106	10	4.4	2.3	1.4	1.8
31	4.5	------	3.5e	3.6	------	25	------	13	------	2.1	1.4	------
TOTAL	94.0	150.5	126.0	102.9	133.4	877.4	2,753	898	242.4	110.2	54.5	45.4
MEAN	3.03	5.02	4.06	3.32	4.76	28.3	91.8	29.0	8.08	3.55	1.76	1.51
MAX	5.6	7.0	4.8	4.4	7.2	51	124	92	21	5.5	2.7	1.8
MIN	2.5	3.3	3.5	2.7	3.5	4.7	34	10	4.4	2.1	1.4	1.3
AC-FT	186	299	250	204	265	1,740	5,460	1,780	481	219	108	90

CAL YEAR 1986	TOTAL	11,102.4	MEAN	30.4	MAX	256	MIN	2.5	AC-FT	22,020
WTR YEAR 1987	TOTAL	5,587.7	MEAN	15.3	MAX	124	MIN	1.3	AC-FT	11,080

Table 64 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1987 TO Sep 1988

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.6	2.6	3.0e	1.8e	2.4e	16	29	79	18	7.2	1.9	1.1
2	1.5	4.5	3.8	1.7e	2.4e	19	35	69	17	6.7	2.0	1.1
3	1.5	3.1	4.2	1.9e	2.3e	23	41	63	15	6.6	2.0	1.1
4	1.5	2.3	4.2	2.4e	2.5e	24	43	57	15	6.5	1.9	1.1
5	1.6	2.3	3.7	2.6e	2.7e	22	41	54	21	6.3	1.9	1.1
6	1.6	2.1	4.9	2.8e	3.0e	21	42	51	18	6.1	1.9	1.1
7	1.6	2.1	4.4	2.9	3.3e	20	49	48	18	5.6	1.9	1.2
8	1.6	2.1	2.7	2.9	3.8	19	46	47	18	5.0	1.9	1.2
9	1.8	2.3	2.7e	2.9	7.1	19	41	49	17	4.7	1.8	1.2
10	5.3	2.4	2.9e	3.5	9.1	18	43	50	17	4.6	1.7	1.2
11	5.8	2.4	2.5e	3.4	7.2	17	51	55	16	4.3	1.6	1.2
12	6.3	3.5	2.5e	2.9	5.5	16	71	61	15	4.4	1.8	1.3
13	6.3	4.0	2.3e	2.9	4.9	16	109	64	14	4.3	2.1	1.3
14	5.8	4.4	2.3e	3.1	4.7	15	138	59	13	4.1	2.3	1.3
15	2.3	3.1	2.4e	3.3	4.5	15	156	53	13	4.0	1.9	1.2
16	2.0	3.1	2.4e	3.2	4.4	14	166	49	13	3.7	1.7	1.2
17	2.1	1.8	2.4e	3.1	4.3e	14	171	44	12	3.6	1.7	1.3
18	1.9	2.6	2.4e	2.3e	4.2e	15	148	40	11	3.3	1.6	1.3
19	1.9	3.0	2.3e	2.0e	4.1e	18	127	36	10	3.1	1.6	1.6
20	1.9	2.8	2.2e	2.5e	4.5e	24	118	32	9.3	3.1	1.6	2.2
21	2.0	2.8	2.2e	2.8e	5.0e	30	153	30	9.0	2.9	1.4	1.9
22	1.9	2.7	2.2e	2.8e	5.4e	30	168	27	8.7	2.7	1.4	1.7
23	1.9	2.9	2.2e	2.8e	5.8e	28	152	25	8.1	2.8	1.4	1.7
24	1.9	2.8	2.1e	3.1e	6.3e	26	134	23	7.5	2.7	1.3	1.7
25	2.0	2.8	2.1e	3.3e	6.7e	26	115	22	8.2	2.4	1.3	1.7
26	2.1	2.4e	2.0e	3.3e	7.9	28	100	20	12	2.3	1.3	1.7
27	2.0	2.5e	2.2e	3.3e	9.4	34	92	19	15	2.3	1.3	2.6
28	2.0	2.5e	2.3e	3.2e	11	33	92	20	9.7	2.3	1.3	2.4
29	2.0	2.3e	2.3e	3.2e	13	32	98	20	8.5	2.2	1.2	1.8
30	2.0	2.5e	2.1e	3.1e	------	30	92	18	7.9	2.2	1.2	1.7
31	2.0	------	2.0e	2.8e	------	28	------	17	------	2.0	1.2	------
TOTAL	77.7	82.7	83.9	87.8	157.4	690	2,861	1,301	394.9	124.0	51.1	44.2
MEAN	2.51	2.76	2.71	2.83	5.43	22.3	95.4	42.0	13.2	4.00	1.65	1.47
MAX	6.3	4.5	4.9	3.5	13	34	171	79	21	7.2	2.3	2.6
MIN	1.5	1.8	2.0	1.7	2.3	14	29	17	7.5	2.0	1.2	1.1
AC-FT	154	164	166	174	312	1,370	5,670	2,580	783	246	101	88

CAL YEAR 1987	TOTAL	5,461.5	MEAN	15.0	MAX	124	MIN	1.5	AC-FT	10,830
WTR YEAR 1988	TOTAL	5,955.7	MEAN	16.3	MAX	171	MIN	1.1	AC-FT	11,810

Table 64 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1988 TO Sep 1989

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.7	1.9	2.3e	2.8e	3.9e	4.0e	33	248	38	8.0	2.8	3.4
2	1.7	2.0	2.5e	3.0e	3.2e	3.5e	33	289	38	7.3	2.9	3.1
3	1.7	2.3	2.4e	3.3e	2.5e	3.5e	32	289	37	6.6	2.9	3.0
4	1.6	2.5	2.2e	3.3e	2.2e	3.6e	32	298	38	6.1	2.7	2.8
5	1.6	2.4	2.6e	3.3e	2.2e	4.0e	33	342	36	5.8	2.7	2.7
6	1.6	3.7	2.9e	2.7e	2.2e	4.8e	59	445	34	5.6	2.6	2.7
7	1.6	3.3	3.0e	2.6e	2.3e	4.8e	99	506	32	5.2	2.6	2.6
8	1.5	2.9	3.3e	2.6e	2.5e	4.8e	133	434	28	5.0	5.1	2.5
9	1.5	2.9	3.7e	2.5e	2.9e	6.0	127	369	25	4.8	7.2	2.5
10	1.5	3.1	3.8e	2.5e	2.9e	8.8	122	405	23	4.8	4.1	2.5
11	1.6	3.8	3.9e	2.8e	2.9e	14	116	303	22	4.7	3.4	2.5
12	1.6	3.5	3.7e	2.9e	2.9e	18	164	234	20	4.6	3.1	2.5
13	1.7	2.5	3.5e	2.9e	2.9e	19	208	192	18	4.4	2.9	2.5
14	1.7	3.2	3.2e	2.9e	2.8e	17	253	161	18	4.3	2.7	2.5
15	1.7	3.0	3.0e	2.9e	2.8e	15	322	140	24	4.3	2.6	2.5
16	1.8	3.4	3.0e	3.0e	3.0e	14	389	128	23	4.4	2.6	2.5
17	2.0	3.2	3.0e	3.2e	3.9e	13	385	121	29	5.0	2.5	3.3
18	2.1	3.3	3.3e	3.2e	4.1e	13	436	117	36	4.5	2.4	4.8
19	2.4	3.4	4.0e	3.2e	3.7e	15	524	97	35	4.0	2.4	3.2
20	2.4	3.3	4.3e	3.3e	3.4e	16	493	85	39	3.8	2.5	2.6
21	2.4	3.1	4.2e	3.4e	3.8e	19	550	77	35	3.6	2.6	2.2
22	2.3	3.8	4.0e	3.3e	3.8e	18	450	70	33	3.4	3.4	2.0
23	2.3	6.8	3.8e	2.9e	3.7e	18	322	67	30	3.2	4.3	1.9
24	2.3	4.7	3.8e	2.6e	3.3e	18	241	62	23	3.1	4.6	1.9
25	2.1	2.1	3.8e	2.7e	3.5e	24	222	55	21	3.0	5.1	1.9
26	2.1	2.2e	3.3e	2.7e	3.7e	32	185	50	20	3.0	4.3	2.0
27	2.1	2.2e	2.7e	2.8e	4.1e	35	172	50	19	3.1	4.0	2.0
28	2.1	2.7e	2.7e	2.8e	4.0e	38	172	47	16	2.9	3.5	2.0
29	1.9	2.4e	2.7e	3.2e	------	40	173	43	9.8	2.8	5.1	2.0
30	1.9	2.2e	2.7e	3.4e	------	35	196	41	7.4	2.7	6.8	2.1
31	1.9	------	2.7e	3.9e	------	33	------	40	------	2.8	6.9	------
TOTAL	58.4	91.8	100.0	92.6	89.1	511.8	6,676	5,805	807.2	136.8	113.3	76.7
MEAN	1.88	3.06	3.23	2.99	3.18	16.5	223	187	26.9	4.41	3.65	2.56
MAX	2.4	6.8	4.3	3.9	4.1	40	550	506	39	8.0	7.2	4.8
MIN	1.5	1.9	2.2	2.5	2.2	3.5	32	40	7.4	2.7	2.4	1.9
AC-FT	116	182	198	184	177	1,020	13,240	11,510	1,600	271	225	152

CAL YEAR 1988	TOTAL	5,961.6	MEAN	16.3	MAX	171	MIN	1.1	AC-FT	11,820	
WTR YEAR 1989	TOTAL	14,558.7	MEAN	39.9	MAX	550	MIN	1.5	AC-FT	28,880	

Table 65. Powder River Flows

13284900 POWDER RIVER ABOVE THIEF VALLEY RESERVOIR NEAR POWDER RIVER, OREGON

LOCATION--Lat 45°03'27". long 117°50'27", in SENW sec.8, T.6 S., R. 40 E., Baker County, on left bank about 2 mi upstream from Thief Valley Reservoir and 4.5 mi northeast of North Powder.

PERIOD OF RECORD--November 1969 to September 1, 1981, station discontinued. From December 1980 to September 1981 (irrigation season only).

GAGE--Water stage recorder.

AVERAGE DISCHARGE--9 years (water years 1971-79) 228 ft^3/s; 165,200 acre-ft/yr.

EXTREMES--Period of record: Maximum discharge, 2,130 ft^3/s January 18, 1971, gage height 5.22 ft; minimum discharge 0.1 ft^3/s August 24, 1973.

YEAR	DATE	MAX. Q	GH.	DATE	MIN. Q
1979	May 24	863	3.43	Aug 2,3,7-9	
1980	Jun 13	848	3.40	Aug 17,18	
1981	Jun 9	1020	3.73	July 30	9.7 daily

REMARKS--Records are: 1979, good except for December 7 - February 20 which are poor, March 22,24,26-29, April 4-6,22,28,29, May 3,4,14,19,20,22,25, June 3,6,9,10,12,16,17, and July 3,4, which are fair; 1980, good; 1981, good except October 1 - 27, good May 13 - June 30, and fair thereafter.

Table 65 continued

Discharge in Cubic Feet per Second, Water Year Ending September, 1979
Mean Values

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	66	60	112	80	55	421	305	380	356	87	6.2	33
2	59	65	116	90	50	356	299	374	383	96	6.2	29
3	58	67	112	60	60	299	284	359	417	86	9.5	27
4	63	65	139	50	80	275	269	470	480	73	8.0	35
5	86	63	165	50	95	293	275	548	473	78	6.2	30
6	72	63	159	50	100	383	290	544	445	63	6.2	22
7	66	67	150	70	110	540	302	536	414	54	5.5	22
8	65	70	120	100	160	641	302	516	374	37	5.5	23
9	59	69	110	110	200	569	299	496	350	27	5.5	25
10	65	62	95	110	250	463	293	449	341	24	7.5	21
11	58	58	80	95	350	470	296	395	347	33	6.8	21
12	51	89	75	80	550	492	290	383	290	33	31	25
13	53	103	75	95	900	492	284	299	320	33	10	40
14	51	108	70	100	1400	456	278	296	250	30	18	40
15	51	108	80	80	1200	470	272	302	183	28	19	28
16	50	103	120	65	900	665	269	389	143	27	18	18
17	47	106	80	65	750	601	278	374	240	27	48	15
18	47	108	80	65	600	480	275	356	323	24	50	11
19	50	104	90	100	500	421	263	428	323	22	37	11
20	51	110	100	90	450	398	253	421	296	19	30	11
21	50	120	100	70	400	383	240	452	284	22	33	11
22	48	118	95	65	350	359	250	516	233	17	45	9.5
23	55	112	95	100	300	344	287	670	205	13	45	9.5
24	58	108	80	90	275	326	353	815	179	9.5	70	11
25	55	110	75	70	320	323	347	760	163	7.5	62	12
26	54	96	75	70	445	311	320	760	153	7.5	53	18
27	54	114	55	70	508	335	311	830	147	7.5	42	19
28	56	133	45	50	473	424	317	700	129	6.8	39	31
29	60	103	40	50	---	421	359	532	120	6.8	33	45
30	65	106	40	55	---	368	380	463	94	6.2	32	48
31	66	---	45	60	---	329	---	383	---	6.2	28	---
Total	1789	2768	2873	2355	11831	13108	8840	15196	8455	1011.0	816.1	701.0
Mean	57.7	92.3	92.7	76.0	423	423	295	490	282	32.6	26.3	23.4
Max	86	133	165	110	1400	665	380	830	480	96	70	48
Min	47	58	40	50	50	275	240	296	94	6.2	5.5	9.5
Ac-Ft	3550	5490	5700	4670	23470	26000	17530	30140	16770	2010	1620	1390

Wtr Yr 1979 Total 69743.1 Mean 191 Max 1400 Min 5.5 Ac-Ft 138300

Table 65 continued

Discharge in Cubic Feet per Second, Water Year Ending September, 1980
Mean Values

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	66	55	188	---	---	---	---	---	299	449	9.0	37
2	69	53	163	---	---	---	---	---	344	583	12	31
3	75	54	120	---	---	---	---	---	338	700	35	24
4	83	59	121	---	---	---	---	---	344	660	24	20
5	54	62	133	---	---	---	---	---	362	637	24	20
6	44	63	133	---	---	---	---	---	374	641	25	17
7	40	63	125	---	---	---	---	---	401	556	22	32
8	37	65	137	---	---	---	---	---	431	477	16	39
9	33	63	139	---	---	---	---	---	456	438	21	28
10	33	62	135	---	---	---	---	---	484	374	18	29
11	33	60	---	---	---	---	---	---	587	299	19	37
12	31	60	---	---	---	---	---	---	745	223	15	45
13	32	59	---	---	---	---	---	---	825	181	11	93
14	31	62	---	---	---	---	---	---	795	173	9.0	147
15	33	62	---	---	---	---	---	---	725	159	8.5	153
16	35	65	---	---	---	---	---	---	680	116	8.5	173
17	37	79	---	---	---	---	---	---	641	93	10	171
18	35	91	---	---	---	---	---	---	646	69	31	153
19	39	87	---	---	---	---	---	---	646	51	45	139
20	41	81	---	---	---	---	---	---	574	42	23	131
21	42	78	---	---	---	---	---	---	508	56	54	135
22	42	96	---	---	---	---	---	---	488	51	62	135
23	45	93	---	---	---	---	---	---	548	36	39	118
24	51	86	---	---	---	---	---	---	492	25	36	108
25	59	81	---	---	---	---	---	---	459	16	53	101
26	72	87	---	---	---	---	---	---	410	20	93	93
27	65	79	---	---	---	---	---	---	438	18	100	87
28	60	93	---	---	---	---	---	---	463	14	96	83
29	56	159	---	---	---	---	---	---	470	11	69	62
30	58	193	---	---	---	---	---	311	477	10	62	59
31	56	---	---	---	---	---	---	320	---	9.0	48	---
Total	1487	2350	---	---	---	---	---	---	15450	7187.0	1098.0	2500
Mean	48.0	78.3	---	---	---	---	---	---	515	232	35.4	83.3
Max	83	193	---	---	---	---	---	---	825	700	100	173
Min	31	53	---	---	---	---	---	---	299	9.0	8.5	17
Ac-Ft	2950	4660	---	---	---	---	---	---	30650	14260	2180	4960

Table 65 continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR Oct 1980 TO Sep 1981

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	61								538	89	13	
2	63								426	61	13	
3	69								374	54	18	
4	78								335	57	18	
5	83								329	54	16	
6	84								524	58	29	
7	80								562	123	26	
8	77								801	142	25	
9	74								975	127	23	
10	72								869	107	20	
11	67								738	90	20	
12	52								720	74	17	
13	57								696	66	14	
14	71							136	730	56	13	
15	81							135	709	46	17	
16	86							123	670	32	21	
17	90							104	751	24	19	
18	91							99	715	45	16	
19	91							167	727	30	17	
20	91							271	793	36	18	
21	91							395	778	57	26	
22	91							368	684	39	22	
23	90							405	585	25	24	
24	88							432	509	33	41	
25	87							564	414	36	44	
26	87							702	305	23	46	
27	90							633	224	22	33	
28								558	176	21	22	
29					------			495	153	13	20	
30					------			578	124	9.7	18	
31		------			------		------	616	------	12	17	------
TOTAL	2,142							6,781	16,934	1,661.7	686	
MEAN	79.3							377	564	53.6	22.1	
MAX	91							702	975	142	46	
MIN	52							99	124	9.7	13	
AC-FT	4,250							13,450	33,590	3,300	1,360	

CAL YEAR 1980	TOTAL*	2,142.0	MEAN	79.3	MAX	91	MIN	52	AC-FT	4,250	
WTR YEAR 1981	TOTAL*	28,204.7	MEAN	206	MAX	975	MIN	9.7	AC-FT	55,950	

* Incomplete Record

Figure 13 is a long-term (1905-64) annual runoff graph for

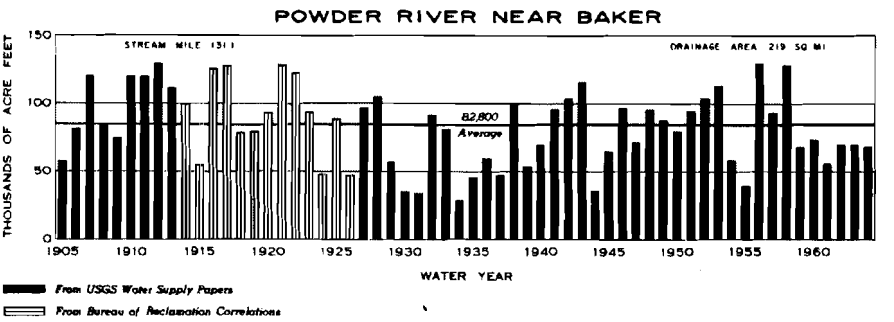

FIGURE 13. Long-Term Annual Runoff of Powder River near Baker

POWDER RIVER ABOVE THIEF VALLEY, NEAR NORTH POWDER, OREGON—STATION No. 1513

Location—Three miles northeast of North Powder, in NE¼ Sec. 12, T. 6 S., R. 39 E., below all tributaries and return waters from irrigation in the North Powder Valley and above the backwater of the proposed Thief Valley reservoir.

Drainage Area—775 square miles.

Monthly Discharge of Powder River near North Powder, Oregon, for 1913-1914

Month	Discharge in Second-Feet			Run-Off	Accuracy
	Maximum	Minimum	Mean	Total in acre-feet	
1913					
May 20-31	2,020	640	1,090	25,900	C.
June	2,090	336	1,120	66,600	C.
July	884	39	378	23,200	A.
August	96	27	38.3	2,360	A.
September	32	3	16.6	988	A.
The period				119,000	
1913-14					
October	128	25	79.8	4,910	A.
November	128	104	111	6,600	A.
December	120	83	96.5	5,930	B.
January	180		122	7,500	C.
February	648		258	14,300	C.
March	1,180	601	785	48,300	B.
April	1,240	512	961	57,200	B.
May	1,570	409	674	41,400	B.
June	774	258	512	30,500	B.
July	429	17	115	7,070	A.
August	25	13	16.6	1,020	A.
September	90	21	44.7	2,660	A.
The year	1,570	13	314	227,000	

POWDER RIVER AT THIEF VALLEY, NEAR NORTH POWDER, OREGON—STATION No. 153

Location—In NW¼ Sec. 26, T. 6 S., R. 40 E., at proposed damsite for Thief Valley reservoir, 7 miles east of North Powder and about 8 miles southeast of Telocaset.

Drainage Area—826 square miles.

Monthly Discharge of Powder River near North Powder, Oregon, for 1909-1912

Month	Discharge in Second-Feet			Run-Off	Accuracy
	Maximum	Minimum	Mean	Total in acre-feet	
1909					
March 9-31	317	163	224	10,200	A.
April	356	115	229	13,600	A.
May	544	43	108	6,640	A.
June	1,100	151	549	32,700	A.
July	115	21	48.2	2,960	A.
August	27	12	16.4	1,010	A.
September	29	12	21.4	1,270	A.
The period	.....	.....	.....	68,400	
1909-10					
October	45	19	36.3	2,230	A.
November	398	31	95.7	5,690	C.
March 8-31	2,860	750	1,330	63,300	A.
April	1,340	798	1,060	63,100	A.
May	1,100	239	611	37,600	A.
June	252	10	53.2	3,170	B.
July	9	5.4	6.77	416	C.
August	3.3	.0	.43	27	D.
September	17	.0	8.68	516	C.
1910-11					
October	24	17	21.3	1,310	A.
November	76	24	42.9	2,550	A.
December	115	43	68.3	4,200	C.
January	.....	.....	a70	4,300	
February	.....	.....	a56	2,780	
March	.....	239	374	23,000	D.
April	426	61	163	9,700	A.
May	115	24	62.0	3,810	A.
June	544	37	227	13,500	A.
July	115	5.4	30.9	1,900	B
August	5.4	1.6	3.65	224	C.
September	9.5	1.6	5.52	328	C
The year	.....	1.6	93.4	67,600	
1911-12					
October	22	9.5	15.7	965	B.
November	96	.....	a53.1	3,160	B.
December	.....	.....	a30.0	1,840	D.
January	.....	.....	a50.0	3,070	D.
February	514	.....	a230	13,200	C.
March	606	127	319	19,600	A.
April	864	454	632	37,600	A.
May	1,310	370	772	47,500	A.
June	1,840	514	1,280	76,200	A.
The period	.....	.....	.....	203,000	

a Estimated.

APPENDIX G

STREAM FLOW OBSERVATIONS

Tom Rudolph
Baker County Assistant Water Master

Figure 72. Tom Rudolph Observations

Notes from Tom Rudolph relative to the stream improvements, water conservation efforts, and voluntary efforts of the local water users and organizations.

I have finished my fifteenth year as the Deputy Watermaster for Baker County. My primary field efforts have been directed at the areas served by Rock Creek, Anthony Creek, Muddy Creek and North Powder River. I have been involved in other Elkhorn Mountains drainage including Washington Gulch, Rouen Gulch, Hibbard Gulch, Salmon Creek, Marble Creek, Mill Creek, Goodrich Creek, Gee Creek, Pine Creek, Hunt Creek, Willow Creek, Big and Little Muddy Creeks, Warm Springs Creek, Wolf Creek, Jimmy Creek and Powder River. Some of these streams have become more intimate to me than others. I have had some involvement in the Pine and Eagle Valleys' and Burnt River systems.

Most of my involvement with these streams and systems has been with crop irrigation. I find water users have an interest in water conservation. Most times conservation of water is selfish. Irrigation methods are changed to improve coverage and give more consistent water depth on their crops. The process of doing this has caused most water users to install water transmission pipelines and various sprinkler and gated pipe distribution systems.

Water is distributed more equitably over the land and the crops are improved. The byproduct of this conservation is the inadvertent restoration of stream flows. Most times this water is taken up by the next junior water user, but it remains instream for longer. The instream flows are lasting longer due to conservation efforts by water users.

Early in the season while the flows are high, most of the stream systems flow to their confluence with the larger streams. Later in the season, streams are dried up before the confluence with the larger streams. Stream flows drop below the needs of the water users. I have observed over the years that where water conservation practices are utilized, the streams are flowing later into the season. The water use efficiency has greatly improved in the basins I regulate for water use.

There have been many changes in the management of water flows in the time I have been regulating streams. Most of the management has come from a cooperative effort amongst the water users, the district personnel, myself and the various county, state and federal agencies. The water users are very intimate and knowledgeable with their stream systems. They see day to day intricacies where management can be changed to minimize the use of water. County, state and federal agencies provide the necessary technical expertise, permitting and funding for the variety of projects.

Most of the projects are in the form of improved irrigation and conveyance systems.

Many of the diversion project improvements include fish passage and screening. There are three major gravity pressurized pipeline systems on the Rock Creek and North Powder River systems. There many individual improved conveyance and irrigation systems. I estimate there are about 30,000 acres in these groups of improved conveyance and irrigation systems. Streams involved are Washington Gulch, Rouen Gulch, Hibbard Gulch, Salmon Creek, Marble Creek, Mill Creek, Goodrich Creek, Pine Creek, Hunt Creek, Willow Creek, Rock Creek, Big and Little Muddy Creeks, Wolf Creek, Jimmy Creek and North Powder River. The total irrigation in these areas is between 65,000 and 70,000 acres. Each of these pipeline systems are screened to prevent fish and trash from entering the system. This pipeline conveyance provide water for irrigation at a much reduced rate. There is very little transmission loss and application is controlled to the need of each plant.

I observe riparian management and stream side and stream bed improvements during my travels. Rock Creek seems to be maintaining on its own. The land owners of Rock Creek take personal pride in preserving the riparian zone along their stream.

Along the lower elevations of the North Powder River, much of the riparian area has been fenced. There has been erosion controls and weirs installed with vegetation planted on the streambanks erosion in areas where the stream channel was straightened. The flows in North Powder River and Anthony Creek, in cooperation with the Pilcher Creek Reservoir project, are managed to create maximum flows full length of both streams as often as is possible.

All of the above listed achievements have been voluntary and sometimes in cooperation with various state and federal agencies. One of the biggest problems with these conservation steps achieved is the lack of publicity. The folks involved think there is little need for publicity.

Statement from Thomas L. Rudolph Pertaining to the Stream Flows from the Elkhorn Mountains.

The Elkhorn Mountains contains streams most of which contribute to the Powder River during the Spring Freshets. The flows are high generally from mid to late April into mid to late June. During this time most streams may maintain connectivity with Powder River. Some streams have a much shorter period of connectivity than others. One of the factors limiting connectivity is the irrigation of thousands of acres of pasture and farmland. Another factor is the porosity of the ground.

Assume that there is no irrigation from the streams of the Elkhorn Mountains. The following information is my observation and prediction of the possible flow of the stream named.

The first of the group of streams beginning in the southerly end of the Elkhorn Mountains is Washington Gulch. Washington Gulch tributaries Powder River. My experience with this stream is that it is small. High flows may reach 15 cfs (cubic feet per second). By the first of July the stream is stressed to produce O.5 to 1.0 cfs at a point where it comes into the flats of the valley. This will not reach Powder River.

Rouen Gulch and Hibbard Gulch may feed Salmon Creek until late May. The flow will not reach passed the high end of the valley after that.

Salmon Creek may have, at one time, flowed into Powder River until early or mid July. Salmon Creek produces significant flows until late May. Past that date, there is a struggle amongst water right holders over who is entitled to the remaining flow. The small tributary streams will have ceased any flow to Salmon Creek before July begins. If there is a flow it will be so insignificant as to make very little difference.

Just around the ridge is Marble Creek. Made up mostly of springs at the beginning, there is a small basin for it to draw from and a short streambed before it tributaries Mill Creek. Marble Creek never has great flows. Mill Creek during the freshets may produce enough flow to run into Salmon Creek. The upper streambed is open graded rock and gravel with a thirst for the water that reaches this point. This stream will not pass Pocohontus Road on the upper end of the valley floor after early June of each year. This stream is regulated annually due to the lack of flow, or futile call, at Pocohontus Road.

The lower streambed for Goodrich Creek is nearly impossible to distinguish. It has not had any significant stream flow near Pocohontus Road. There is a channel cut near a fence line on the edge of a pasture. I believe that is all that remains of the Goodrich Creek Channel. This is a very small stream and if there were no diversions from the stream, the possible connectivity to Salmon Creek and Powder River would be only in the highest flow spring freshet month.

Gee Creek will make it to Spring Creek for a very short period with the highest flow.

Spring Creek is what it says it is and later in the season flows only from springs, most likely

caused from irrigation returning to the surface. The natural flows are very small in late June and will not likely connect with Salmon Creek.

Pine Creek has large flows. There is much irrigation from Pine Creek, an estimated 8000 acres. This mean that Pine Creek must flow a rate of about 200 cfs. This will happen near its peak flow. There is a rotation between the upper irrigators and the lower irrigators. The reason for this rotation is that there is not enough water in the stream to serve the oldest rights from Pine Creek when the flows begin to taper down. Generally, the rotation allows the Lower Users to call the rotation when they think the flows are becoming critical. The Lower Users have the whole stream for two weeks. The Upper Users then get for two weeks. The rotation is ended when the stream flow drops below 600 inches, miners measurement, or 15 cubic feet per second. The reason for this flow dimension is that the 15 cfs will not reach the lower ditch, the Cartmill, in sufficient quantity to irrigate from this ditch of the Upper Users. 15 cubic feet pers second disappears into the ground of the channel before the creek is one mile into the valley. Under normal conditions, Pine Creek would not reach Salmon Creek and the Powder River for connectivity after late June until mid April of the next year.

Hunt Creek is another stream where the channel has literally disappeared. The line shown on the map lie in fields farmed for alfalfa, grain and potatoes. Hunt Creek would not have contributed any significant flow in its best days, which must be in May or June.

Willow Creek is a small stream which is primarily fed by return flow of irrigation water brought from Rock Creek and Pine Creek. Late in the Season connectivity with Powder River does not seem likely after July First in the natural order of streams.

Rock Creek is the first stream which may have connectivity to Powder River during the full year if there were no irrigation water diverted from the stream. Rock Creek irrigates about 24,000 acres. The stream is regulated by the water master from the beginning of the flow through the peak and until it drops to a minimum flow of around 5 to 7 cfs in August or September. Rock Creek late flows are augmented by releases from Rock Creek and Killamaque Creek Reservoirs. The storage of these two reservoirs is about 800 acre feet. This is released in cautiously calculated flows to serve the reservoir owners land. There would be no reservoir releases if the irrigators were not involved on Rock Creek. The stream flows may be boosted beyond normal flows due to irrigation. The land will return some of the flow to the creek once it goes past the root zone. There is still a significant portion of irrigation done by the flood irrigation method. Rock creek may not be able to produce the normal 5 to 7 cfs of late flow without these irrigation induced factors.

Muddy Creeks are the next flows into the valley. This flow is augmented by flows from North Powder River. The Mansfield Ditch system uses the channel of Muddy Creek as a part of its conveyance. The flows of Muddy Creeks will be minimal. The peak of the season will allow irrigation on about 800 acres. This call is for 20 cfs, more or less. 20 cfs will be a maximum of the natural flow and the low flow in the upper stream will be 1 to 2 cfs. This is a difficult number to call because of the changed channel due to the miners using the streams for slumming their hydraulic mining efforts. Huge sand deposits make the flows disappear under ground and

rise further downstream, only to disappear again.

Warm Springs Creek heads low on the foothills at Fisher Hot Springs. The channel runs through irrigated ground to its confluence with Powder River. The natural flow of this stream is like the many others, minimal. When it does run any significant amount, the irrigators are using it as a part of their ditch system conveyance. The stream would only reach Powder River during years of low snow melting off rapidly under non irrigation influenced water years. And then only for a very short period of the early spring.

North Powder River has a tributary, Anthony Creek, or sometimes called the North Fork of the North Powder River. North Powder River flows more than Anthony Creek. North Powder River and Anthony Creek will likely tributary Powder River year around. The flows will be small in August and September. I would estimate the minimum flows will be near seven cubic feet per second on the low flows of a normal year at the confluence of North Powder River and Anthony Creek. The flows should be less at the confluence with Powder River. I charge a 5% to 15% delivery loss for the water sent to the stream for delivery from Pilcher Reservoir. The amount of loss depends on the distance to delivery and the amount of flow in the delivery stream. The further the distance and the less the flow, the more loss is charged.

Wolf Creek has a gaging station above Wolf Creek Reservoir. The gaging station recorded low flows at 1 and 2 cubic feet per second. There are no tributaries to Wolf Creek except Parker Springs which may contribute 1 to 1 ½ cubic feet per second at a point 2 mile above the confluence with Powder River. August, September flows to Powder River may approach 1 to 2 cubic feet per second. There may be years the Wolf Creek channel is dry in its lower reaches without the influence of the irrigation. Most of the Wolf Creek drainage basin is south facing slope which drains during the earliest part of the irrigation season. The runoff from Wolf Creek is two to three weeks earlier than other Elkhorn Mountain Steams.

The streams which do not disappear into the porous sandy, gravelly soil of the upper valleys will normally drop to the minimum flows indicated or the no flows indicated and usually flow again in November only to freeze up in late November or December. There are usually small flows during the winter months.

End of Rudolph Statements

APPENDIX H

CHANNEL CHANGES AND LAND USES AFFECTING STREAMS IN THE ASSESSMENT AREA

Examples of channel changes and land uses that have affected streams in the assessment area. Unless otherwise noted all information comes from the Draft 2 of the watershed assessment prepared by James Kerns

Creek	Activity
Powder River watershed	1819–1820 or 1820-1821: The North West Company traps the Snake Country. Limited information exists on the routes taken during these expeditions but it is known that the expedition trapped the lower portion of the Owyhee River and took 500 beavers (Williams et al. 1971, p. 8). 1826 to 1829: The river and its tributaries in the vicinity of North Powder, Haines and Baker City (as well as all the rivers in the Snake River country) are repeatedly trapped by Peter Skene Ogden's group for Britain's Hudson Bay Company and by American trappers (Williams et al. 1971). 1828: Ogden's journals indicate that the Powder, Burnt and Malheur Rivers are unlikely to yield additional beaver because "those streams had already been 'ruined'." By ruined he was referring to the destruction of the beaver supply due to intensive trapping by both the British and American trappers (Williams et al. 1971). Late 1850s: Cattle arrive in the Powder River valley. Cattle are reported dying in the Powder River valley during the winters of 1865-1866 and 1866-67 (Oliphant 1968). 1860 to early 1900s. Intensive and extensive sheep and cattle grazing took place in the Elkhorns (Hudson 1983). Sheep numbers peaked in 1884 with an estimated 200,000 mature sheep present in the county. Up to 33 bands of sheep were present in the Elkhorns at one time. Sheep grazing began as early as mid-June and continued until it began to snow. Vegetation conditions deteriorated and some high elevation areas were left devoid of grasses and shrubs (Hudson 1983). 1872: Editor of the Bedrock Democrat described the scene from his office door as "a view of vast herds of cattle and sheep feeding upon rich and luxuriant grasses of the valley and surrounding hills... (Hudson 1983)."
Powder River north of Baker City	Prior to the 1930s -- Baldock slough and Powder River are one and the same. 1930s -- the Powder River is straightened for about 6 to7 miles north of Baker City so that the river water could be used to irrigate land located on either side of the new channel (D. Fleming, City Public Works director, pers. comm., 2004). The result was a reduction of the length of the Powder River, channel incision and the isolation of the Baldock Slough area from yearly river flows, flooding, and water table recharge.
Powder River in the vicinity of Haines	1884: Marshy areas around Haines are drained. Haines was established in 1884, the same year that the railroad was constructed through the valley. The area was an uninhabitable marsh until that year. Agricultural practices upstream diverted the water, and enabled the establishment of stockyards and a gathering place for livestock prior to their shipment aboard trains (W. Henner, pers. comm., 2002) A portion of the Powder River upstream from Haines was diked. Dikes in this area were recently removed.

Creek	Activity
Powder River Basin	There are more than 800 irrigation and domestic wells that withdraw groundwater in the Powder River Basin. The total amount of water withdrawn via irrigation and domestic wells is unknown but is greatest during the summer months. Of the > 800, it was estimated that at least 712 were domestic wells. Unlike irrigation wells, domestic wells do not have to file for water rights (Rick Lusk, Baker County Watermaster, pers. com. 2004) and therefore the amount of groundwater being withdrawn is unknown. Irrigation wells are concentrated in two main areas: 1) Around Baker City and just north of Baker City along the Powder River and Baldock Slough and 2) near the mountain front in the vicinities of Marble, Spring, Pine, Williams and Willow Creeks. There are also irrigation wells in the town of North Powder and scattered along North Powder River, Hot Creek, and on the alluvial fan below Wolf Creek reservoir.
Powder River aquifer	Baker City has withdrawn 580 million gallons of groundwater from the valley aquifer since 1978 (D. Fleming, pers. comm., Jan. 2004). The pumping station is outside the watershed assessment area. The pumping station is located in the NW ¼ of the SE ¼ of section 19, T9S and R40E. The pump, and therefore center of the groundwater drawdown cone, is 1.23 to 1.8 miles from the Powder River and 0.62 to 0.72 miles from Old Settlers Slough. The amount of groundwater withdrawn varies from year to year. For example, in 2001, 2002, and 2003 the amounts withdrawn were 104.27 MG, 68.942 MG, and 28.094 MG respectively. Groundwater withdrawals are usually greatest between April and August. In the month of July the amount of groundwater withdrawn was 31.67 MG (2001), 5.672 MG (2002) and 14.24 MG (2003). In contrast, in October the amount of groundwater withdrawn was 1.643 MG (2001), 1.36 MG (2002), and 2.336 MG (2003). Groundwater pumping is not continuous through any given month. Instead, it is used as needed and may only be turned on for a couple of days in a month. MG = million gallons
Powder River valley	The vegetation in this watershed at the time of European settlement ranged from conifer forests on the mountains to the west, to dry sagebrush hills on the east. Greasewood and salt grass were the characteristic plants on the alkali soils along the Powder River. Willows and cottonwoods lined the streams. Bluebunch wheatgrass, sagebrush, giant wildrye and rushes were dominant plants in the valley (Baker County Historical Society, 1986). It would seem that the western side of this valley with its streams, abundant wood, and fertile soils might have been a temptation to and an invitation for the pioneers to stop and settle. None did so, however, because of the isolation from other settlers and the possibility of Indian attack. In addition, pioneer diaries give no indication that the emigrants even ventured over to the west side of the valley. The wagon trains passed through the lowest part of the valley where the soils were white with alkali. The rest of the valley floor at that season of the year [summer] was either marsh or desert. In the spring of 1862, it was impossible to cross the Powder River "anywhere in the valley nor cross the valley either for that matter (Hiatt 1893)." This suggests that the entire valley is flooded.
Powder River near Baker City	Before stored water from the Mason Dam/Phillips Reservoir reclamation project, diversions typically dewater the Powder River below Hughes Lane at Baker City. Seepage restores the flow two miles downstream before the river enters this watershed.

Creek	Activity
Area between city of Haines and North Powder	There are about 20 domestic wells between Haines and North Powder. The estimate is based on the number of dwellings in the area. Streams that flow through this area and may be impacted by groundwater withdrawals from the domestic wells Rock Creek, Muddy Creek, Warm Spring Creek, North Powder River, Powder River. An additional 286 domestic wells are estimated based on the number of dwellings that receive rural mail delivery from Haines/North Powder. Their locations, and therefore the streams that they may impact, is unknown.
Streams tributary to the Powder River	
Anthony Creek	Water from Anthony Creek is diverted from the creek via the Shaw-Carnes ditch to fill the Pilcher Creek reservoir. 2004 -- 7 currently diversions remove water from Anthony Creek (Baker County Watermaster's office 2004)
Antone Creek	Lode claims near headwaters are active
Big Muddy Creek	Channel has shifted to new areas because of placer mining that took place a century ago. The mining activities washed large amounts of sand down the creek. The sand filled a 3/4-mile long low area with four feet of sand. The affected area covered 15-20 acres, and caused the creek to find new channels. Some sand still washes down the creek from these old mining activities.
Clover Creek	Channel has been straightened where it passes through agricultural lands.
Dutch Flat Creek	Pre-1922 -- Dam built at Dutch Flat meadow to capture flow from Dutch Flat Creek. 1922 – Dam fails (Baker County Historical Society, 1986) 1930s – A second dam was built lower on the creek and shortly thereafter failed. Improper provisions had been made for a spillway. The dam washed out as soon as the reservoir filled the first time (B. Vanderwall, pers. comm., 2003). Neither dam on Dutch Flat Creek has been rebuilt. Van Patten Lake was dammed to form an irrigation reservoir. Van Patten Creek is a tributary to Dutch Flat Creek.
Goodrich Creek	1862 on -- Water from Goodrich Creek was diverted into the Auburn ditch for use at Griffin Gulch and other placer mines southwest of Baker City. Early 1900s -- Baker City purchased Auburn ditch water rights. These water rights carry a priority date of 1862, and give Baker City the best water rights on 14 streams. A 15-mile long concrete pipe, made entirely of 2-foot long joints, was laid along the Auburn Ditch right-of-way. The pipeline feeds the city's two concrete reservoirs located on the hill west of Baker City. The main streams are **Goodrich,** Little Mill, Mill, Marble, Little Marble, and Salmon Creeks within the assessment area and Elk Creek, which is outside the assessment area. The City taps into other small springs and drainages tributary to these main creeks.

Creek	Activity
	Early 1900s to 2004 – Water is diverted from Goodrich Creek into pipeline for City use. 1860's -- Goodrich Lake is dammed for the first time to form a reservoir to supply water for mines served by the Auburn Ditch. 1896 – Earthen dam fails just before 11 p.m. June 15, 1896 (G. Dielman, pers. comm., Apr. 2003). Sometime between 1896 and 1956 – Dam is rebuilt. 1956 -- The second failure occurred in June 1956 (G. Dielman., pers. comm., Apr. 2003). This washout covered the creek's entire alluvial fan with rock, and ruined 100 acres. 1962 -- The dam was rebuilt. Creek shows evidence pf having had some reaches straightened. Creek has entirely lost its channel below Brown Road because its flow no longer reaches that far. The flow of Goodrich Creek is used by Baker City for its municipal water supply. There are about 386 domestic wells between Pole Line Lane and the Salmon Creek area. The estimate is based on the number of dwellings in the area. Streams that flow through this area and may be impacted by groundwater withdrawals from domestic wells include **Goodrich**, Marble, Mill, Pine and Salmon Creeks.
Jimmy Creek	Privately owned reservoir located five miles from its headwaters.
Killamacue Creek	About 1900 – Lake dammed to form a reservoir and fails during construction as a tunnel was being drilled under the lake. Water broke through into the tunnel, and caused a roaring flood down Killamacue and Rock Creek canyons. The flood only did a small amount of damage to the town of Rock Creek (G. Fisher, unpub. data). 1902 -- A second dam is built at the outlet of Killamacue Lake. The dam is an earth-fill dam. 1917 -- One morning in June 1917, with the reservoir full, a strong westerly wind whipped up waves and crowded water over the dam. Residents of the town of Rock Creek, which was situated at the mouth of Rock Creek canyon, heard the flood coming, ran for higher ground, and watched as their community was washed away (G. Fisher, unpub. data). 1929 -- The dam is rebuilt
Little Muddy Creek	Stream flow is augmented by the Mansfield Ditch waters. The Mansfield Ditch removes water from the North Powder River, and dumps its water into Little Muddy Creek above Bulger Flat. Older residents of the area believe that the stream is within its original channel.
Marble Creek and tribs	1862 or 1863 – Gold discovered on Marble Creek and the creek is placer mined. 1862 on -- Water from Marble Creek and tributaries diverted into the Auburn ditch for use at Griffin Gulch and other placer mines southwest of Baker City.

Creek	Activity
	Early 1900s -- Baker City purchases Auburn ditch water rights. These water rights carry a priority date of 1862, and give Baker City the best water rights on 14 streams. A 15-mile long concrete pipe, made entirely of 2-foot long joints, is laid along the Auburn Ditch right-of-way. The pipeline feeds the city's two concrete reservoirs located on the hill west of Baker City. The main streams are Goodrich, Little Mill, Mill, **Marble, Little Marble**, and Salmon Creeks within the assessment area and Elk Creek, which is outside the assessment area. The City taps into other small springs and drainages tributary to these main creeks. Early 1900s to present – Water is diverted from Marble Creek and its tributaries into the pipeline for City use. About 10 diversions currently remove water from creek (Baker County Watermaster's office, pers. comm., 2004) Creek shows evidence having had some reaches straightened. Marble Creek limestone quarry present on creek. Mine left a sizeable tailings pile and material from the stockpile washed down the creek to the valley. Baker County cleaned up the tailing pile and reestablished the channel and reclaimed the riparian area. Irrigation wells present in stream basin (Baker County Watermaster's office 2004) There are about 386 domestic wells between Pole Line Lane and the Salmon Creek area. The estimate is based on the number of dwellings in the area. Streams that flow through this area and may be impacted by groundwater withdrawals from domestic wells include Goodrich, **Marble**, Mill, Pine and Salmon Creeks.
Mill Creek and tribs	1862 on -- Water from Mill Creek and tributaries diverted into the Auburn ditch for use at Griffin Gulch and other placer mines southwest of Baker City. Early 1900s -- Baker City purchases Auburn ditch water rights. These water rights carry a priority date of 1862, and give Baker City the best water rights on 14 streams. A 15-mile long concrete pipe, made entirely of 2-foot long joints, is laid along the Auburn Ditch right-of-way. The pipeline feeds the city's two concrete reservoirs located on the hill west of Baker City. The main streams are Goodrich, Little Mill, Mill, Marble, Little Marble, and Salmon Creeks within the assessment area and Elk Creek, which is outside the assessment area. The City taps into other small springs and drainages tributary to these main creeks. Early 1900s to present – Water is diverted from Mill Creek and its tributaries into the pipeline for City use. Creek shows evidence having had some reaches straightened About 15 diversions currently remove water from Mill Creek (Baker County Watermaster's office, pers. comm.. 2004)

Creek	Activity
	There are about 386 domestic wells between Pole Line Lane and the Salmon Creek area. The estimate is based on the number of dwellings in the area. Streams that flow through this area and may be impacted by groundwater withdrawals from domestic wells include Goodrich, Marble, **Mill**, Pine and Salmon Creeks.
North Powder River	1930's -- Extensive work is done by the Army Corps of Engineers to straighten the channel and eliminate loops that gave adjacent fields irregular, hard-to-work shapes. Riparian areas where channel modification took place now have large trees and stable stream slopes. 23 diversions currently remove water from North Powder River (Baker County Watermaster's office, pers. comm., 2004) The Mansfield Ditch and Upper Bulger Ditch remove water from the North Powder River. The river, from its confluence with Anthony Creek to its mouth on Powder River, has had much of its original channel modified. Irrigation wells present. (Baker County Watermaster's office 2004)
Peach Creek	Channel has been straightened where it passes through agricultural lands. Water is removed from Peach Creek via the Shaw-Brant ditch. About 1.5 miles below the Shaw-Brant ditch, the creek ceases to flow and no longer contributes water into Clover Creek. Privately-owned reservoir, Shaw Reservoir, is located on creek below Shaw Mountain.
Pilcher Creek	1983 -- Dam and reservoir that were constructed on Pilcher Creek. The reservoir is largely filled by water removed from Anthony Creek via the Shaw-Carnes Ditch.
Pine Creek drainage	1862 -- Water withdrawn by the Auburn ditch for use at Griffin Gulch and other placer mines southwest of Baker City. Early 1900s -- Water no longer goes into the Auburn ditch and does not become part of the city's water supply About 20 diversions currently remove water from Pine Creek (Baker County Watermaster's office, pers. comm.. 2004) Irrigation wells present in the Pine Creek drainage. (Baker County Watermaster's office 2004) Pine Lake has been dammed to form an irrigation reservoir. Baisley-Elkhorn mine is located high in the drainage. Hard rock mining has occurred and left a sizeable tailings pile. Pine Creek appears to be in its original channel.

Creek	Activity
	Approximately 4 miles of Pine Creek go dry during a portion of the summer below the Williams ditch as a result of the complete diversion of Pine Creek water into the ditch. Near Wingville the water resurfaces in Pine Creek (T. Rudolph, Baker County Watermaster's office, pers. comm., 2004). The portion of Pine Creek, between where it exits the mountains to some distance downstream of Spring Creek, has been known to go abruptly dry during other portions of the summer as a result of the entire flow of Pine Creek being diverted into the Williams ditch (J. Dougan, Baker BLM office, pers. comm., 2004). There are about 386 domestic wells between Pole Line Lane and the Salmon Creek area. The estimate is based on the number of dwellings in the area. Streams that flow through this area and may be impacted by groundwater withdrawals from domestic wells include Goodrich, Marble, Mill, **Pine** and Salmon Creeks.
Rock Creek	1862 or 1864 – A landslide occurs which fills the creek with sand and debris. July 3, 1862 – Rock Creek was flowing high. "Returning from Walla Walla with provisions and hay making implements, on the third of July (1862) their animals had to swim Rock Creek, which indicates a greater amount of water than has ever been known in the stream since (Hiatt 1893)". 1868 – Ditch is dug from creek to mines. Digging starts from the point where the landslide occurred. About 1900 -- The dam at Killamacue Lake failed as a tunnel was being drilled under the lake in about 1900. Water broke through into the tunnel, and caused a roaring flood down Killamacue Creek and into Rock Creek below the confluence of the two creeks. The flood only did a small amount of damage (G. Fisher, unpub. data). 1902 -- A second dam is built (earth-fill dam) at the outlet of Killamacue Lake. 1917 -- One morning in June 1917, with the reservoir full, a strong westerly wind whipped up waves and crowded water over the dam. Residents of the town of Rock Creek, which was situated at the mouth of Rock Creek canyon, heard the flood coming, ran for higher ground, and watched as their community was washed away. (G. Fisher, unpub. data). 1929 -- The dam is rebuilt. Maxwell Mine is located high in the drainage. Hard rock mining occurred and left a sizeable tailings pile. Western Union Mine and Jim Blaine/Platt Group mines present in drainage. Rock Creek Lake outlet has been built up and dammed for irrigation. Rock Creek is channelized through Haines; the old channel is north of the current channel (T. Bliss, USFS, pers. comm., 2004).

Creek	Activity
Salmon Creek	1862 or 1863: Gold was discovered on Salmon Creek and the creek is placer mined. Salmon Creek received its name from the abundance of salmon fish found in the stream (Hiatt 1893). The historic placer mining results in tailing piles present along the creek heading upstream from the mountain front. Downstream of the mountain front is a large area of rocky ground that is composed of fines and boulders from the historic mining operations. The rocky area forms a low rise with a high infiltration capacity. This area is referred to locally as the Slum Dam (C. Howard, pers. comm., 3/4/04). 1862 on -- Water from Salmon Creek and tributaries diverted into the Auburn ditch for use at Griffin Gulch and other placer mines southwest of Baker City. Early 1900s -- Baker City purchased Auburn ditch water rights. These water rights carry a priority date of 1862, and give Baker City the best water rights on 14 streams. A 15-mile long concrete pipe, made entirely of 2-foot long joints, was laid along the Auburn Ditch right-of-way. The pipeline feeds the city's two concrete reservoirs located on the hill west of Baker City. The main streams are Goodrich, Little Mill, Mill, Marble, Little Marble, and **Salmon** Creeks within the assessment area and Elk Creek, which is outside the assessment area. The City taps into other small springs and drainages tributary to these main creeks. Early 1900s to 2004 – Water is diverted from Salmon Creek and its tributaries into the pipeline for City use. Sometime between 1976 and the early 1980s -- The city tightens up the diversion on Salmon Creek so that it leaked less (C. Howard, pers. comm., 2004). Early 1980s -- Salmon Creek is dammed where it exits the mountains to form an irrigation reservoir (Salmon Creek reservoir). The reservoir is located in an old mining pit. Water from Salmon Creek is diverted into the reservoir until such time as it captures its permitted 255 acre-feet (Oregon Water Right Certificate 67810). 1976 to early 1980s -- A resident noted that during the irrigation season water flowed in Salmon Creek under Pocahontas Road and downstream for some unknown distance between 1976 when he bought the property until about early 1980s. Since the early 1980s, Salmon Creek has ceased to flow past his property during the irrigation season (C. Howard, pers. comm., 3/4/04). 2004 -- About 10 to 15 diversions currently remove water from Salmon Creek during the irrigation season (Baker County Watermaster's office, pers. comm., 2004) 2004 – Small scale placer mining is continuing to take place in the Salmon Creek drainage on National Forest lands. With a few short exceptions, Salmon Creek is in its original channel until it reaches Wingville Road. From that point to its mouth, Salmon Creek has been straightened. There is a brushy, forested reach where the creek was reportedly diverted from its original channel for mining purposes (Baker County Bull Trout Response, 2003). *(conflicting statements)*

Creek	Activity
	Most of the tributaries to Salmon Creek have been straightened. Only Pine Creek appears to be within its original channel. Starting at the confluence of Salmon Creek with the Powder River and heading upstream on Salmon Creek, about 4 to 5 miles of Salmon Creek was straightened to drain marshy areas. There are about 386 domestic wells between Pole Line Lane and the Salmon Creek area. The estimate is based on the number of dwellings in the area. Streams that flow through this area and may be impacted by groundwater withdrawals from domestic wells include Goodrich, Marble, Mill, Pine and **Salmon Creeks**.
Spring Creek	Shows evidence having had some reaches straightened. Creek was diverted into the Bowles Ditch when the Bowles Ditch was dug. The creek's natural channel below the Bowles Ditch dried up. The creek channel is now dry late in the season as far as Brown Road. About a half mile below Brown Road, however, the creek channel develops a very significant flow. The flow is enough to do late-season irrigating downslope. During the summer months, Spring Creek becomes dry from its point of departure from Pine Creek to some distance downstream, often abruptly as a result of the complete diversion of all Pine Creek into the Williams Ditch. (J. Dougan, Baker Office BLM, pers. comm., 3/4/04). Irrigation wells present in the stream basin (Baker County Watermaster's office 2004)
Warm Springs Creek drainage	Union Pacific Railroad acts as a dike along portions of Warm Springs Creek restricting stream access to its floodplain (T. Bliss, USFS, pers. comm., 2004).
Willow Creek	Prior to the early 1950's -- Willow Creek, below Quail Road, meandered through the fields along a willow-lined channel. In order to make larger fields, the landowner, with government assistance, put the creek at the base of the alluvial fan and at the edge of the field. The relocated creek cut a gash 12-feet deep and 20-feet wide. Creek is largely within its original channel except for a 2 1/4-mile reach soon after it emerges from the forest. Union Pacific Railroad acts as a dike along portions of Willow Creek restricting stream access to its floodplain (T. Bliss, USFS, pers. comm., 2004). Irrigation wells present (Baker County Watermaster's office 2004)
Wolf Creek	Small scale placer mining is currently taking place in headwaters Creek emerges from the forest as it enters Wolf Creek Reservoir. The creek is thought to be within its original channel throughout its entire reach, although an old channel can still be seen in fields south of its current channel suggesting some channel changes. Current grazing practices along the riparian areas of Wolf Creek graze a large number of cattle for a 24-hour period. Green grass sprouts back up to take the place of the older plants, which the cattle have removed. The amount of bank trampling was not

Creek	Activity
	discussed but is likely high if cattle have access to stream banks, even during a 24 hour period. If bank trampling occurring, this results in an ongoing increase in the width of Wolf Creek channel.
Blume-Zilkey Ditch	This ditch obtains its water from the Lower Bulger Ditch. The ditch flows straight east down a very steep hill, and has cut a channel 30 feet deep and 30 feet across and approximately ¾ mile long. The gully can be seen where Foothill Road crosses it one mile north of Bulger Flat Lane. Most of the water is now in a pipeline, and most of the erosion is under control. Sediment has refilled half of the former gully.
Lower Bulger Ditch	This ditch obtains its water from the Upper Bulger Ditch. It flows in a general easterly direction down a very steep hill, and has cut a 1/2-mile long gully through soft granite rock. The upper section of the gully is 60 feet deep and 30 feet wide with straight, perpendicular walls. Eight concrete structures have been installed with government assistance, which creates a series of waterfalls to abate the force of flow and catch sediment behind the dams. The uppermost structure has caught enough sediment to refill half of the original gully.
Mansfield Ditch	This ditch diverts water from the North Powder River and also receives part of its water from the Upper Bulger Ditch through an 18" pipe, which comes from the Upper Bulger Ditch gully. Part of the ditch is in the channel of Little Muddy Creek. The gully is up to 50 feet deep. Erosion continues to occur, moving large amounts of granite sand downstream.
Upper Bulger Ditch	This ditch obtains its water from the North Powder River. The Upper Bulger Ditch has created a gully 70 feet deep and 70 feet wide in places for perhaps 1/2 mile. During irrigation season a large volume of water is carried in the stream, which continues to erode the channel and banks. Banks are crumbling away, and taking large trees with them.
Creeks impacted unknown	Two decades ago there were fourteen dairies located in Baker Valley. Today only one is left, which is located just over the south boundary of this watershed.
No creek specified	Old mines required water with which to carry on their operations. Many ditches were dug to convey water to the mines. When mines fell into disuse, many ditches were converted to irrigation ditches or abandoned.

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APPENDIX I

POINTS OF DIVERSION

NORTH POWDER RIVER/ANTHONY CREEK
POINTS OF DIVERSION

Ditch Name	Twp	Range	Sect	Latitude	Longitude	Hdgt	Mmt Device	Fish Screen	Source
#1 Mansfield	7S	38E	19	44.93752	-118.10647	Y	Y	N	North Powder River
#2 Nicholson Hartung	7S	38E	19	44.94160	-118.10464	Y	N	N	North Powder River
#3 Bulger	7S	38E	18	44.95009	-118.10153	Y	Y	N	North Powder River
#4 Dutch Flat	7S	38E	18	44.95295	-118.09819	Y	Y	N	North Powder River
#5 Gardner Millrace/Hutchinson Hillside	6S	38E	32	44.99163	-118.08405	Y	Y	N	North Powder River
#6 Powers Co.	6S	38E	32	44.99487	-118.08104	Y	Y	N	North Powder River
Hunsaker	6S	38E	32	44.99829	-118.08146	N	Y	N	North Powder River
Bamburger	6S	38E	28	45.00781	-118.06812	Y	Y	N	North Powder River
NPR Gauging Station	6S	38E	27	45.01289	-118.05339	N	Y	Y	North Powder River
#7 Daley	6S	38E	27	45.01273	-118.05133	Y	Y	N	North Powder River
#8 Dodson Dalton	6S	38E	34	45.00393	-118.03700	Y	Y	N	North Powder River
#9 Davis Kelsey	6S	38E	35	45.00207	-118.02342	Y	Y	Y	North Powder River
#10 Davis Dalton	6S	38E	35	45.00140	-118.01952	Y	Y	N	North Powder River
#11 Sunnyslope Ellis	6S	38E	36	44.99886	-118.01184	Y	Y	N	North Powder River
#12 Kelsey Wilson	6S	38E	36	44.99484	-118.00402	Y	Y	N	North Powder River
#13 Kelsey	6S	38E	36	44.99503	-118.00406	Y	Y	N	North Powder River
#14 Smith-McPhee Tanner	6S	39E	32	44.99613	-117.97093	Y	Y	N	North Powder River
#14A McPhee	6S	39E	33	45.00374	-117.95167	Y	Y	N	North Powder River
#15 Jacobson	6S	39E	28	45.00696	-117.94464	Y	Y	N	North Powder River
#16 Harlan Sanders	6S	39E	28	45.00902	-117.94106	Y	Y	N	North Powder River
#17 Lun	6S	39E	28	45.01399	-117.93420	Y	Y	N	North Powder River
Lewis Pumps	6S	39E	22	45.02452	-117.91831	N	N	N	North Powder River
Peterson	6S	39E	22	45.02611	-117.91513	Y	N	N	North Powder River

Ditch Name	Twp	Range	Sect	Latitude	Longitude	Hdgt	Mmt Device	Fish Screen	Source
Holmes	6S	39E	32	45.02611	-117.91520	Y	N	N	North Powder River
#18 Carnes	6S	37E	13	45.04509	-118.13073	Y	Y	N	NF Anthony Creek
South Carnes	6S	37E	13	45.04399	-118.13250	N	N	N	Anthony Creek
Carnes @ Dutch Cr.	6S	38E	7	45.05373	-118.11331	Y	Y	N	Dutch Creek
#19 Coughanour	6S	38E	18	45.04626	-118.10674	Y	Y	N	Anthony Creek
#20 Lone Pine	6S	38E	17	45.04038	-118.09355	Y	Y	N	Anthony Creek
#21 Pilcher Dryborough	6S	38E	17	45.03649	-118.08962	Y	Y	Y	Anthony Creek
Anthony Cr. Gauging Station	6S	38E	20	45.03539	-118.08969	N	Y	N	Anthony Creek
Punch Kellogg	6S	38E	20	45.03285	-118.08852	Y	Y	Y	Anthony Creek
Mason	6S	38E	28	45.02011	-118.07349	Y	Y	N	Anthony Creek
Van Patten Lake	7S	37E	16	44.95678	-118.18308				
Dutch Flat Lake	7S	37E	30	44.93076	-118.21822				
Lost Lake	8S	37E	6	44.90398	-118.22350				
Summit Lake	8S	37E	9	44.87725	-118.19474				
Little Summit Lake	8S	37E	8	44.87783	-118.20450				
Anthony Lake	7S	37E	18	44.96088	-118.23118				
Red Mountain Lake	8S	37E	3	44.89348	-118.16867				

APPENDIX J

OVER-APPROPRIATAION

OVER-APPROPRIATION POLICY, PRINCIPLES AND DEFINTIONS

1. State Concepts

Policy

Over-appropriation policy, principles and definitions are described in Oregon Administrative Rules (OARs). Official policy is:

> "The waters of the state shall be allocated within the capacity of the resource and consistent with the principle that water belongs to the public to be used beneficially without waste. Water shall be allocated among a broad range of beneficial uses to provide environmental, economic, and social benefits. The waters of the state shall be protected from over-appropriation by new out-of-stream uses of surface water or new uses of groundwater" [OAR 690-410-070 (1); underline added for emphasis].

Principles

Several principles [OAR 690-410-070 (2)(a),(b),(c),(d)] further define the intent of this policy with respect to surface water, groundwater and storage.

Definition - Appropriation Beyond 80% Exceedence Flows

The official definition for 80% exceedence for surface water reads:

> (a) "Over-appropriated" means a condition of water allocation in which
> (A) the quantity of surface water available during a specified period is not sufficient to meet the expected demands from all water rights at least 80% of the time during that period.
> (b) The standards for determining over-appropriation described in (A) shall apply to water availability determination for permit applications submitted after July 17, 1992" [OAR 690-400-000 (11)(a)(A)&(b); underline added for emphasis].

Early water rights allowed up to full appropriation of live streamflow (0% exceedence), as needed. Appropriation of live streamflow was limited to 50% exceedence sometime after passage of the state water code, which was changed to 80% exceedence in 1992. Some limited appropriation of water for domestic and stock use may be allowed through Basin Programs even when a stream is fully or over-appropriated at 80% exceedence, similar to provisions for the Burnt River in the Powder Basin Program [OAR 690-509-000(4)].

Definition - Appropriation Beyond 50% Exceedence Flows

Current OWRD "policy" requires use of the 50% exceedence flow for any month or half-month to determine water availability for water right applications for storage [Tom Byler, OWRD, personal communication]. This policy has not been written into law or rule. Principles of water allocation in OAR 690-410-070(2)(c)&(d) indicate "new allocations of water for...storage facilities may be allowed" if a stream is over-appropriated under the 80% exceedence rule if existing water rights and instream uses are protected. Because OWRD bases instream water rights on the 50% exceedence threshold [see discussion in (d), below], a stream is considered to be over-appropriated for new storage projects during any month or half-month that water availability is less than 50% exceedence.

Definition - Groundwater Withdrawals Exceed Groundwater Aquifer Recharge

The official definition for groundwater over-appropriation reads:

(a) Over-appropriated means a condition of water allocation in which
(B) the appropriation of groundwater resources by all water rights exceeds the average annual recharge to a groundwater source over the period of record or results in the further depletion of already over-appropriated surface waters" [OAR 690-400-000 (11)(a)(B); underline added for emphasis].

Definition – Unsatisfied Instream Water Rights for Fish Habitat

ODFW instream water rights are discussed in the water rights section of this assessment. **Priority dates are 1970, 1990 and 1992.** ODFW modeled streamflows for fish based on the Oregon Method, either as minimum or optimum needs. OWRD approved requested streamflows if they did not exceed modeled 50% exceedence flows. When ODFW streamflows requests were less than OWRD 50% exceedence flows, ODFW requests were reduced to the 50% exceedence level. This information is provided in the water availability analysis for each instream water right application. Over-appropriation exists, with respect to fish needs, during any month or half-month that water availability is less than 50% exceedence.

ODFW/OWRD Streamflow Restoration Priorities

State policy reads: "where streamflows have been depleted to the point that public uses have been impaired, methods to restore the flows are to be developed and implemented" [OAR 690-410-030(1)]. One purpose of this assessment is to identity where flow restoration may be needed. Information on ODFW/OWRD streamflow restoration priorities is discussed in the document: Nowak, M, C., et. al. 2001. Draft Powder Subbasin Summary. Prepared for the Northwest Power Planning Council, pp. 36-38, 47-48; a map appears on page 36.

2. Federal Concepts

Inadequate Flows for Listed Fish Species

The most conservative instream flow needs concept is used by federal agencies that enforce the Endangered Species Act. For example, the USFWS and National Marine Fisheris Service (NMFS) have used their regulatory authority to stop the exercise of valid water rights from several streams in the western USA during the past several years where they believed the existence of a listed fish species would be jeopardized by exercise of those water rights. Under this concept, over-appropriation would be any use of natural flows that jeopardizes listed species, whether use is instream (such as suction dredging) or out-of-stream (such as irrigation). See "The Effect of the Federal Endangered Species Act on State Water Rights," (Estes, 199?) for a discussion on the legal background for this concept.

This concept could be applied to Bull Trout conservation efforts in the assessment area.

The NMFW published the following definition in the Federal Register [Vol. 64, No. 215, pg. 60724, November 8, 1999] which applies to the watershed::

> Endangered and Threatened Wildlife and Plants; Definition of "Harm."
> Summary: This final rule defines the term "harm" which is contained in the definition of "take" in the Endangered Species Act (ESA).... This final rule...provides clear notification to the public that habitat modification or degradation may harm listed species and, therefore, constitutes a take under the ESA as well as ensuring consistency between NMFS and the Fish and Wildlife Service (FWS). This final rule defines the term "harm" to include any act which actually kills or injures fish or wildlife, and emphasizes that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife.
> Dates: This rule is effective on December 8, 1999.

Inadequate Flows for Purposes of Federal Reservations

The United States of America claims federal reserved water rights for the Baker City Forest Reserve (1904) and Blue Mountain Forest Reserve (1906), as described in the water rights section of this assessment. OWRD policy has been to not regulate for or against federal claims until they are adjudicated. When federal reserved water right claims for the North Powder River and Powder River are accepted by OWRD in the future, any water rights issued under state law for points of diversion located on or upstream from National Forest Lands could be viewed as over-appropriation if they are junior to and injure federal claims.

No evaluation has been made to determine if any existing water rights issued under state law would be affected by potential federal claims to consumptive and instream water rights in the watershed.

OWRD WATER AVAILABILITY REPORTS (WARs)

Source of Information

Water Availability information included in this appendix was obtained from the OWRD website. Additional information on water availability for a stream of interest may be viewed by following the instruction in the box, below.

Log on to your computer.
Open Internet Explorer, then type <http://www.wrd.state.or.us> on the command line.
Window #1: Click on Interactive Mapping under Water Rights Maps in middle of page.
Window #2: Find Basin in upper left: click on down arrow, scroll, select Powder Basin.
Window #3:
Find the Table of Contents on the upper right side of the window.
Under the Layer column, find WAB (short for Water Availability Basin).
Check the box to the right of WAB under the Visible column.
Click the Refresh button at the bottom.
Check the box to the right of WAB under the Active column, then Refresh.
If the map is too busy, uncheck most themes under the Visible column, then Refresh.
Find the Tools column at the upper left: Check the i button
Click within a WAB on the map.
Window 4: A small WAB menu box will appear in upper left:
Click on either the 50% or 80% button in the Water Availability box.
Window 5: The Water Availability Tables will appear; scroll to view.

Water Availability Basins and Watershed IDs

The Water Availability Basins (WABs) listed in the following table are located within or below the Powder River – Powder Valley Watershed Assessment Area. Each WAB is assigned a reference number referred to as a Watershed ID (WID).

Name of Water Availability Basin (WAB)	Watershed ID (WID)
Antelope Creek > Powder River – at Mouth	30920325
Anthony Fork > North Powder River – at mouth	72165
Anthony Creek, North Fork > Anthony Fork – at mouth	72184
Anthony Fork > North Powder River – above Indian Creek	72164
Antone Creek > North Powder River – at mouth	72166
Clear Creek > Wolf Creek – at mouth	72171
Cusick Creek > Powder River – at mouth	30920324
Dutch Flat Creek > North Powder River – at mouth	72176
Jimmy Creek > Powder River – at mouth	30920326
North Powder River > Powder River – at mouth	72188
North Powder River > Powder River – above Anthony Fork	72187
North Powder River > Powder River – above Antone Creek	71685
* Powder River > Snake River – at mouth	30920301
* Powder River > Snake River – above Eagle Creek	72193
** Powder River > Snake River – above Goose Creek	72192
Powder River > Snake River - above unnamed stream (above Thief Valley Res)	72191
** Powder River > Snake River – above Rock Creek	30920327
Rock Creek > Powder River – at mouth	72194
Rock Creek > Powder River – above unnamed stream (below Killamacue Cr)	72159
Salmon Creek > Powder River – at mouth	30920329
Willow Creek > Powder River – at mouth	30920328
Wolf Creek > Powder River – at mouth	72163

Wolf Creek > Powder River – above Clear Creek	30920323
[illegible]	[illegible]

Summary of Water Availability Tables

A one-page summary of water availability is provided below for each of the 23 WABs listed in the above table. Only three of several tables for each stream are shown. The tables are Limiting Watersheds for 50% Exceedence, Limiting Watersheds for 80% Exceedence, and Water Availability Calculation for 80% Exceedence.

How to Interpret Water Availability Tables

Of the three tables, one is for 50 percent exceedence and two are for 80% exceedence. Information in the 50 percent exceedence table relates to the flow of water available 50 percent of the time on a monthly basis. OWRD uses 50 percent exceedence flows to determine water availability for water right applications for storage and instream water rights. Information in the 80 percent exceedence tables relates to the flow of water available 80 percent of the time on a monthly basis. OWRD uses 80 percent exceedence flows to determine water availability for water right applications for surface water (both out-of-stream and instream uses), and groundwater connected to surface water.

Streamflow information in all three tables is listed in cubic feet per second (CFS) by month, with 1 representing January and 12 representing December. Storage is listed separately at the bottom of each table in ACRE-FEET (AF). Positive numbers on the right hand side of each table indicate water is available for new appropriations: negative numbers indicate over-appropriation. Available water numbers differ among the three tables because they represent different decision points in the water availability calculation..

Both of the Limiting Watersheds tables describe the WAB that limits water availability for each month. One can look at the tables for that WAB for more information. The right side of the table indicates if water is available for new appropriations (YES/NO), and how much.

The Detailed Report of Water Availability table contains a large amount of important information. One column includes an estimate of natural streamflow. Two columns include estimates of consumptive use and storage (CU + Stor) based on water rights of record. Consumptive use and storage are subtracted from natural stream flow to estimate expected stream flow. Reserved stream flow is for future consumptive use. The instream water rights column refers to ODFW applications. The amounts of water shown in the net water available column apply only to the WAB, without the effects of downstream limiting watersheds.

ANTELOPE CREEK (at mouth)

LIMITING WATERSHEDS
ANTELOPE CR > POWDER R - AT MOUTH

Watershed ID #: 30920325 Basin: POWDER Exceedance Level: 50
Time: 09:09 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	30920325	ANTELOPE CR > POWDER R - AT MOUTH	YES	10.8
3	30920325	ANTELOPE CR > POWDER R - AT MOUTH	YES	18.8
4	30920325	ANTELOPE CR > POWDER R - AT MOUTH	YES	25.1
5	30920325	ANTELOPE CR > POWDER R - AT MOUTH	YES	8.8
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	30920325	ANTELOPE CR > POWDER R - AT MOUTH	YES	1.0
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	30920325	ANTELOPE CR > POWDER R - AT MOUTH	YES	3860.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ANTELOPE CR > POWDER R - AT MOUTH

Watershed ID #: 30920325 Basin: POWDER Exceedance Level: 50
Time: 09:09 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	4.74	0.00	0.00	4.73	0.00	0.00	4.73
2	10.80	0.00	0.03	10.80	0.00	0.00	10.80
3	18.90	0.00	0.06	18.80	0.00	0.00	18.80
4	25.90	0.71	0.08	25.10	0.00	0.00	25.10
5	13.20	4.44	0.00	8.76	0.00	0.00	8.76
6	3.67	5.29	0.00	-1.63	0.00	0.00	-1.63
7	0.86	2.39	0.00	-1.54	0.00	0.00	-1.54
8	0.37	0.69	0.00	-0.32	0.00	0.00	-0.32
9	0.29	0.36	0.00	-0.07	0.00	0.00	-0.07
10	0.38	0.00	0.00	0.37	0.00	0.00	0.37
11	1.06	0.00	0.01	1.05	0.00	0.00	1.05
12	2.93	0.00	0.00	2.92	0.00	0.00	2.92
Stor	4990	843	12	4350	0	0	4350

LIMITING WATERSHEDS
ANTELOPE CR > POWDER R - AT MOUTH

Watershed ID #: 30920325 Basin: POWDER Exceedance Level: 80
Time: 08:47 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	30920325	ANTELOPE CR > POWDER R - AT MOUTH	YES	12.2
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	30920325	ANTELOPE CR > POWDER R - AT MOUTH	YES	3860.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ANTELOPE CR > POWDER R - AT MOUTH

Watershed ID #: 30920325 Basin: POWDER Exceedance Level: 80
Time: 08:47 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	1.22	0.00	0.00	1.21	0.00	0.00	1.21
2	3.63	0.00	0.03	3.59	0.00	0.00	3.59
3	6.92	0.00	0.06	6.86	0.00	0.00	6.86
4	13.00	0.71	0.08	12.20	0.00	0.00	12.20
5	6.00	4.44	0.00	1.56	0.00	0.00	1.56
6	1.89	5.29	0.00	-3.41	0.00	0.00	-3.41
7	0.54	2.39	0.00	-1.86	0.00	0.00	-1.86
8	0.25	0.69	0.00	-0.44	0.00	0.00	-0.44
9	0.19	0.36	0.00	-0.17	0.00	0.00	-0.17
10	0.19	0.00	0.00	0.18	0.00	0.00	0.18
11	0.45	0.00	0.01	0.44	0.00	0.00	0.44
12	0.84	0.00	0.00	0.83	0.00	0.00	0.83
Stor	4990	843	12	4350	0	0	4350

ANTHONY CREEK (at mouth)

LIMITING WATERSHEDS
ANTHONY FK > N POWDER R - AT MOUTH

Watershed ID #: 72165 Basin: POWDER Exceedance Level: 50
Time: 09:45 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72165	ANTHONY FK > N POWDER R - AT MOUTH	NO	-4.6
3	72165	ANTHONY FK > N POWDER R - AT MOUTH	NO	-4.9
4	72165	ANTHONY FK > N POWDER R - AT MOUTH	YES	6.4
5	72188	N POWDER R > POWDER R - AT MOUTH	YES	25.3
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72165	ANTHONY FK > N POWDER R - AT MOUTH	YES	5.1
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72165	ANTHONY FK > N POWDER R - AT MOUTH	YES	2240.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ANTHONY FK > N POWDER R - AT MOUTH

Watershed ID #: 72165 Basin: POWDER Exceedance Level: 50
Time: 09:45 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	14.40	0.81	0.00	13.60	0.00	10.00	3.59
2	14.60	2.53	0.00	12.10	0.00	16.70	-4.63
3	18.50	1.06	0.00	17.40	0.00	22.30	-4.86
4	40.90	9.45	0.00	31.50	0.00	25.00	6.45
5	106.00	50.80	0.00	55.20	0.00	25.00	30.20
6	100.00	71.80	0.00	28.20	0.00	25.00	3.24
7	32.90	32.00	0.00	0.91	0.00	18.00	-17.10
8	17.10	7.11	0.00	9.99	0.00	10.00	-0.01
9	16.00	3.94	0.00	12.10	0.00	10.00	2.07
10	16.70	1.70	0.00	15.00	0.00	10.00	5.00
11	17.40	2.35	0.00	15.10	0.00	10.00	5.05
12	13.50	1.07	0.00	12.40	0.00	10.00	2.43
Stor	24700	11200	0	13500	0	11600	3540

LIMITING WATERSHEDS
ANTHONY FK > N POWDER R - AT MOUTH

Watershed ID #: 72165 Basin: POWDER Exceedance Level: 80
Time: 09:43 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72165	ANTHONY FK > N POWDER R - AT MOUTH	NO	-9.4
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72165	ANTHONY FK > N POWDER R - AT MOUTH	YES	2240.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ANTHONY FK > N POWDER R - AT MOUTH

Watershed ID #: 72165 Basin: POWDER Exceedance Level: 80
Time: 09:43 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	11.30	0.81	0.00	10.50	0.00	10.00	0.49
2	10.80	2.53	0.00	8.27	0.00	16.70	-8.43
3	13.40	1.06	0.00	12.30	0.00	22.30	-9.96
4	25.00	9.45	0.00	15.60	0.00	25.00	-9.45
5	69.00	50.80	0.00	18.20	0.00	25.00	-6.76
6	61.30	71.80	0.00	-10.50	0.00	25.00	-35.50
7	25.90	32.00	0.00	-6.09	0.00	18.00	-24.10
8	12.70	7.11	0.00	5.59	0.00	10.00	-4.41
9	12.80	3.94	0.00	8.86	0.00	10.00	-1.14
10	14.40	1.70	0.00	12.70	0.00	10.00	2.70
11	13.60	2.35	0.00	11.30	0.00	10.00	1.25
12	10.20	1.07	0.00	9.13	0.00	10.00	-0.87
Stor	24700	11200	0	13500	0	11600	3540

ANTHONY CREEK, NORTH FORK (at mouth)

LIMITING WATERSHEDS
N FK ANTHONY FK > ANTHONY FK - AT MOUTH

Watershed ID #: 72184 Basin: POWDER Exceedance Level: 50
Time: 09:48 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72165	ANTHONY FK > N POWDER R - AT MOUTH	NO	-4.6
3	72165	ANTHONY FK > N POWDER R - AT MOUTH	NO	-4.9
4	72184	N FK ANTHONY FK > ANTHONY FK - AT MOUTH	NO	-1.1
5	72184	N FK ANTHONY FK > ANTHONY FK - AT MOUTH	YES	7.3
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72184	N FK ANTHONY FK > ANTHONY FK - AT MOUTH	YES	0.2
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72184	N FK ANTHONY FK > ANTHONY FK - AT MOUTH	YES	461.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
Water Availability as of 12/30/2002 for
N FK ANTHONY FK > ANTHONY FK - AT MOUTH

Watershed ID #: 72184 Basin: POWDER Exceedance Level: 50
Time: 09:48 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	2.83	0.00	0.00	2.83	0.00	2.60	0.23
2	3.00	0.00	0.00	3.00	0.00	2.50	0.50
3	3.59	0.00	0.00	3.59	0.00	3.60	-0.01
4	8.49	0.00	0.00	8.49	0.00	9.60	-1.11
5	19.30	0.00	0.00	19.30	0.00	12.00	7.30
6	14.00	0.00	0.00	14.00	0.00	12.00	2.00
7	4.44	0.00	0.00	4.44	0.00	4.30	0.14
8	2.50	0.00	0.00	2.50	0.00	2.40	0.10
9	2.50	0.00	0.00	2.50	0.00	2.30	0.20
10	2.75	0.00	0.00	2.75	0.00	2.60	0.15
11	3.21	0.00	0.00	3.21	0.00	3.00	0.21
12	2.79	0.00	0.00	2.79	0.00	2.40	0.39
Stor	4190	0	0	4190	0	3580	682

LIMITING WATERSHEDS

N FK ANTHONY FK > ANTHONY FK - AT MOUTH

Watershed ID #: 72184 Basin: POWDER Exceedance Level: 80

Time: 09:47 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72165	ANTHONY FK > N POWDER R - AT MOUTH	NO	-9.4
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72184	N FK ANTHONY FK > ANTHONY FK - AT MOUTH	YES	461.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

N FK ANTHONY FK > ANTHONY FK - AT MOUTH

Watershed ID #: 72184 Basin: POWDER Exceedance Level: 80

Time: 09:47 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	2.26	0.00	0.00	2.26	0.00	2.60	-0.34
2	2.33	0.00	0.00	2.33	0.00	2.50	-0.17
3	2.83	0.00	0.00	2.83	0.00	3.60	-0.77
4	5.13	0.00	0.00	5.13	0.00	9.60	-4.47
5	12.20	0.00	0.00	12.20	0.00	12.00	0.20
6	8.53	0.00	0.00	8.53	0.00	12.00	-3.47
7	3.58	0.00	0.00	3.58	0.00	4.30	-0.72
8	1.82	0.00	0.00	1.82	0.00	2.40	-0.58
9	1.93	0.00	0.00	1.93	0.00	2.30	-0.37
10	2.33	0.00	0.00	2.33	0.00	2.60	-0.27
11	2.43	0.00	0.00	2.43	0.00	3.00	-0.57
12	2.07	0.00	0.00	2.07	0.00	2.40	-0.33
Stor	4190	0	0	4190	0	3580	682

ANTHONY CREEK (above Indian Creek)

LIMITING WATERSHEDS
ANTHONY FK > N POWDER R - AB INDIAN CR

Watershed ID #: 72164 Basin: POWDER Exceedance Level: 50
Time: 10:01 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72165	ANTHONY FK > N POWDER R - AT MOUTH	NO	-4.6
3	72165	ANTHONY FK > N POWDER R - AT MOUTH	NO	-4.9
4	72164	ANTHONY FK > N POWDER R - AB INDIAN CR	YES	6.0
5	72188	N POWDER R > POWDER R - AT MOUTH	YES	25.3
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72164	ANTHONY FK > N POWDER R - AB INDIAN CR	YES	0.5
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72164	ANTHONY FK > N POWDER R - AB INDIAN CR	YES	1940.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ANTHONY FK > N POWDER R - AB INDIAN CR

Watershed ID #: 72164 Basin: POWDER Exceedance Level: 50
Time: 10:01 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	6.14	0.01	0.00	6.13	0.00	4.60	1.53
2	5.96	0.01	0.00	5.95	0.00	5.90	0.05
3	7.18	0.01	0.00	7.17	0.00	6.00	1.17
4	16.60	0.01	0.00	16.60	0.00	10.60	5.99
5	56.40	0.01	0.00	56.40	0.00	20.00	36.40
6	59.30	0.01	0.00	59.30	0.00	20.00	39.30
7	18.70	0.01	0.00	18.70	0.00	15.00	3.69
8	9.39	0.01	0.00	9.38	0.00	8.00	1.38
9	8.59	0.01	0.00	8.58	0.00	8.00	0.58
10	8.60	0.01	0.00	8.59	0.00	8.00	0.59
11	8.49	0.01	0.00	8.48	0.00	8.00	0.48
12	6.58	0.01	0.00	6.57	0.00	7.50	-0.93
Stor	12800	7	0	12800	0	7350	5510

LIMITING WATERSHEDS
ANTHONY FK > N POWDER R - AB INDIAN CR

Watershed ID #: 72164 Basin: POWDER Exceedance Level: 80
Time: 09:58 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72165	ANTHONY FK > N POWDER R - AT MOUTH	NO	-9.4
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72164	ANTHONY FK > N POWDER R - AB INDIAN CR	YES	1940.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ANTHONY FK > N POWDER R - AB INDIAN CR

Watershed ID #: 72164 Basin: POWDER Exceedance Level: 80
Time: 09:58 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	4.77	0.01	0.00	4.76	0.00	4.60	0.16
2	4.58	0.01	0.00	4.57	0.00	5.90	-1.33
3	5.82	0.01	0.00	5.81	0.00	6.00	-0.19
4	11.00	0.01	0.00	11.00	0.00	10.60	0.39
5	37.60	0.01	0.00	37.60	0.00	20.00	17.60
6	36.20	0.01	0.00	36.20	0.00	20.00	16.20
7	14.80	0.01	0.00	14.80	0.00	15.00	-0.21
8	7.15	0.01	0.00	7.14	0.00	8.00	-0.86
9	7.06	0.01	0.00	7.05	0.00	8.00	-0.95
10	7.63	0.01	0.00	7.62	0.00	8.00	-0.38
11	6.76	0.01	0.00	6.75	0.00	8.00	-1.25
12	4.96	0.01	0.00	4.95	0.00	7.50	-2.55
Stor	12800	7	0	12800	0	7350	5510

ANTONE CREEK (at mouth)

LIMITING WATERSHEDS
ANTONE CR > N POWDER R - AT MOUTH

Watershed ID #: 72166 Basin: POWDER Exceedance Level: 50
Time: 12:58 Date: 01/02/2003

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72166	ANTONE CR > N POWDER R - AT MOUTH	NO	-1.7
3	72166	ANTONE CR > N POWDER R - AT MOUTH	NO	-0.3
4	72166	ANTONE CR > N POWDER R - AT MOUTH	NO	-0.3
5	72187	N POWDER R > POWDER R - AB ANTHONY FK	YES	1.9
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72166	ANTONE CR > N POWDER R - AT MOUTH	YES	0.5
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72166	ANTONE CR > N POWDER R - AT MOUTH	YES	145.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ANTONE CR > N POWDER R - AT MOUTH

Watershed ID #: 72166 Basin: POWDER Exceedance Level: 50
Time: 12:58 Date: 01/02/2003

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	3.91	0.01	0.00	3.90	0.00	4.00	-0.10
2	3.70	0.01	0.00	3.69	0.00	5.40	-1.71
3	4.76	0.01	0.00	4.75	0.00	5.00	-0.25
4	8.79	0.02	0.00	8.77	0.00	9.10	-0.33
5	23.50	0.09	0.00	23.40	0.00	10.00	13.40
6	31.10	0.10	0.00	31.00	0.00	10.00	21.00
7	13.20	0.05	0.00	13.10	0.00	5.50	7.65
8	5.43	0.02	0.00	5.41	0.00	3.00	2.41
9	4.03	0.02	0.00	4.01	0.00	2.90	1.11
10	3.88	0.01	0.00	3.87	0.00	3.80	0.07
11	4.47	0.01	0.00	4.46	0.00	4.00	0.46
12	3.59	0.01	0.00	3.58	0.00	4.00	-0.42
Stor	6670	22	0	6650	0	4020	2790

LIMITING WATERSHEDS
ANTONE CR > N POWDER R - AT MOUTH

Watershed ID #: 72166 Basin: POWDER Exceedance Level: 80
Time: 10:06 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72187	N POWDER R > POWDER R - AB ANTHONY FK	NO	-11.5
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72166	ANTONE CR > N POWDER R - AT MOUTH	YES	145.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ANTONE CR > N POWDER R - AT MOUTH

Watershed ID #: 72166 Basin: POWDER Exceedance Level: 80
Time: 10:06 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	2.65	0.01	0.00	2.64	0.00	4.00	-1.36
2	2.75	0.01	0.00	2.74	0.00	5.40	-2.66
3	3.12	0.01	0.00	3.11	0.00	5.00	-1.89
4	5.42	0.02	0.00	5.40	0.00	9.10	-3.70
5	14.40	0.09	0.00	14.30	0.00	10.00	4.31
6	18.30	0.10	0.00	18.20	0.00	10.00	8.20
7	6.63	0.05	0.00	6.58	0.00	5.50	1.08
8	3.65	0.02	0.00	3.63	0.00	3.00	0.63
9	2.75	0.02	0.00	2.73	0.00	2.90	-0.17
10	2.68	0.01	0.00	2.67	0.00	3.80	-1.13
11	3.15	0.01	0.00	3.14	0.00	4.00	-0.86
12	3.00	0.01	0.00	2.99	0.00	4.00	-1.01
Stor	6670	22	0	6650	0	4020	2790

CLEAR CREEK (at mouth)

LIMITING WATERSHEDS
CLEAR CR > WOLF CR - AT MOUTH

Watershed ID #: 72171 Basin: POWDER Exceedance Level: 50
Time: 09:35 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72163	WOLF CR > POWDER R - AT MOUTH	NO	-5.2
3	72163	WOLF CR > POWDER R - AT MOUTH	NO	-5.6
4	72163	WOLF CR > POWDER R - AT MOUTH	YES	2.1
5	72163	WOLF CR > POWDER R - AT MOUTH	NO	-51.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72163	WOLF CR > POWDER R - AT MOUTH	NO	-2.6
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72171	CLEAR CR > WOLF CR - AT MOUTH	YES	127.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
CLEAR CR > WOLF CR - AT MOUTH

Watershed ID #: 72171 Basin: POWDER Exceedance Level: 50
Time: 09:35 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	1.50	0.00	0.00	1.50	0.00	1.78	-0.28
2	1.92	0.00	0.00	1.92	0.00	2.76	-0.84
3	4.20	0.00	0.00	4.20	0.00	5.92	-1.72
4	20.70	0.00	0.00	20.70	0.00	7.00	13.70
5	25.80	0.00	0.00	25.80	0.00	7.00	18.80
6	8.54	0.00	0.00	8.54	0.00	7.00	1.54
7	1.13	0.00	0.00	1.13	0.00	2.00	-0.87
8	0.49	0.00	0.00	0.49	0.00	0.95	-0.46
9	0.49	0.00	0.00	0.49	0.00	0.76	-0.27
10	0.59	0.00	0.00	0.59	0.00	0.86	-0.27
11	1.14	0.00	0.00	1.14	0.00	1.34	-0.20
12	1.39	0.00	0.00	1.39	0.00	4.00	-2.61
Stor	4100	0	0	4100	0	2500	2060

LIMITING WATERSHEDS
CLEAR CR > WOLF CR - AT MOUTH

Watershed ID #: 72171 Basin: POWDER Exceedance Level: 80
Time: 09:33 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72163	WOLF CR > POWDER R - AT MOUTH	NO	-17.0
4	72163	WOLF CR > POWDER R - AT MOUTH	NO	-38.5
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72171	CLEAR CR > WOLF CR - AT MOUTH	YES	127.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
CLEAR CR > WOLF CR - AT MOUTH

Watershed ID #: 72171 Basin: POWDER Exceedance Level: 80
Time: 09:33 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	0.93	0.00	0.00	0.93	0.00	1.78	-0.85
2	1.24	0.00	0.00	1.24	0.00	2.76	-1.52
3	1.85	0.00	0.00	1.85	0.00	5.92	-4.07
4	8.72	0.00	0.00	8.72	0.00	7.00	1.72
5	10.30	0.00	0.00	10.30	0.00	7.00	3.30
6	2.94	0.00	0.00	2.94	0.00	7.00	-4.06
7	0.62	0.00	0.00	0.62	0.00	2.00	-1.38
8	0.29	0.00	0.00	0.29	0.00	0.95	-0.66
9	0.31	0.00	0.00	0.31	0.00	0.76	-0.45
10	0.47	0.00	0.00	0.47	0.00	0.86	-0.39
11	0.74	0.00	0.00	0.74	0.00	1.34	-0.60
12	0.90	0.00	0.00	0.90	0.00	4.00	-3.10
Stor	4100	0	0	4100	0	2500	2060

CUSSICK CREEK (at mouth)

LIMITING WATERSHEDS
CUSICK CR > POWDER R - AT MOUTH

Watershed ID #: 30920324 Basin: POWDER Exceedance Level: 50
Time: 09:02 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	30920324	CUSICK CR > POWDER R - AT MOUTH	YES	3.3
3	30920324	CUSICK CR > POWDER R - AT MOUTH	YES	6.8
4	30920324	CUSICK CR > POWDER R - AT MOUTH	YES	10.4
5	30920324	CUSICK CR > POWDER R - AT MOUTH	YES	4.9
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	30920324	CUSICK CR > POWDER R - AT MOUTH	YES	0.3
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	30920324	CUSICK CR > POWDER R - AT MOUTH	YES	1540.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
CUSICK CR > POWDER R - AT MOUTH

Watershed ID #: 30920324 Basin: POWDER Exceedance Level: 50
Time: 09:02 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	1.36	0.00	0.00	1.36	0.00	0.00	1.36
2	3.29	0.00	0.00	3.29	0.00	0.00	3.29
3	6.85	0.00	0.00	6.84	0.00	0.00	6.84
4	10.50	0.12	0.01	10.40	0.00	0.00	10.40
5	5.26	0.34	0.00	4.92	0.00	0.00	4.92
6	1.38	0.10	0.00	1.28	0.00	0.00	1.28
7	0.31	0.04	0.00	0.27	0.00	0.00	0.27
8	0.12	0.02	0.00	0.10	0.00	0.00	0.10
9	0.09	0.01	0.00	0.08	0.00	0.00	0.08
10	0.12	0.01	0.00	0.11	0.00	0.00	0.11
11	0.31	0.00	0.00	0.31	0.00	0.00	0.31
12	0.81	0.00	0.00	0.81	0.00	0.00	0.81
Stor	1830	39	1	1790	0	0	1790

LIMITING WATERSHEDS
CUSICK CR > POWDER R - AT MOUTH

Watershed ID #: 30920324 Basin: POWDER Exceedance Level: 80
Time: 08:56 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	30920324	CUSICK CR > POWDER R - AT MOUTH	YES	4.8
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	30920324	CUSICK CR > POWDER R - AT MOUTH	YES	1540.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
CUSICK CR > POWDER R - AT MOUTH

Watershed ID #: 30920324 Basin: POWDER Exceedance Level: 80
Time: 08:56 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	0.34	0.00	0.00	0.34	0.00	0.00	0.34
2	1.03	0.00	0.00	1.03	0.00	0.00	1.03
3	2.16	0.00	0.00	2.15	0.00	0.00	2.15
4	4.90	0.12	0.01	4.78	0.00	0.00	4.78
5	2.24	0.34	0.00	1.90	0.00	0.00	1.90
6	0.70	0.10	0.00	0.60	0.00	0.00	0.60
7	0.19	0.04	0.00	0.15	0.00	0.00	0.15
8	0.08	0.02	0.00	0.06	0.00	0.00	0.06
9	0.06	0.01	0.00	0.05	0.00	0.00	0.05
10	0.06	0.01	0.00	0.05	0.00	0.00	0.05
11	0.13	0.00	0.00	0.13	0.00	0.00	0.13
12	0.23	0.00	0.00	0.23	0.00	0.00	0.23
Stor	1830	39	1	1790	0	0	1790

DUTCH FLAT CREEK (at mouth)

LIMITING WATERSHEDS
DUTCH FLAT CR > N POWDER R - AT MOUTH

Watershed ID #: 72176 Basin: POWDER Exceedance Level: 50
Time: 10:28 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72176	DUTCH FLAT CR > N POWDER R - AT MOUTH	NO	-2.2
3	71685	N POWDER R > POWDER R - AB ANTONE CR	YES	0.6
4	71685	N POWDER R > POWDER R - AB ANTONE CR	YES	4.9
5	72187	N POWDER R > POWDER R - AB ANTHONY FK	YES	1.9
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72176	DUTCH FLAT CR > N POWDER R - AT MOUTH	YES	3.9
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72176	DUTCH FLAT CR > N POWDER R - AT MOUTH	YES	678.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
DUTCH FLAT CR > N POWDER R - AT MOUTH

Watershed ID #: 72176 Basin: POWDER Exceedance Level: 50
Time: 10:28 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	6.06	0.00	0.00	6.06	0.00	3.00	3.06
2	5.24	0.00	0.00	5.24	0.00	7.40	-2.16
3	5.98	0.00	0.00	5.98	0.00	5.00	0.98
4	11.80	0.35	0.00	11.40	0.00	6.40	5.05
5	41.60	2.23	0.00	39.40	0.00	13.00	26.40
6	54.70	2.66	0.00	52.00	0.00	13.00	39.00
7	18.80	1.20	0.00	17.60	0.00	8.00	9.60
8	7.49	0.34	0.00	7.15	0.00	3.00	4.15
9	5.46	0.18	0.00	5.28	0.00	3.00	2.28
10	5.11	0.00	0.00	5.11	0.00	3.00	2.11
11	6.87	0.00	0.00	6.87	0.00	3.00	3.87
12	6.05	0.00	0.00	6.05	0.00	3.00	3.05
Stor	10600	422	0	10200	0	4260	6020

LIMITING WATERSHEDS
DUTCH FLAT CR > N POWDER R - AT MOUTH

Watershed ID #: 72176 Basin: POWDER Exceedance Level: 80
Time: 10:26 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72187	N POWDER R > POWDER R - AB ANTHONY FK	NO	-11.5
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72176	DUTCH FLAT CR > N POWDER R - AT MOUTH	YES	678.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
DUTCH FLAT CR > N POWDER R - AT MOUTH

Watershed ID #: 72176 Basin: POWDER Exceedance Level: 80
Time: 10:26 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	3.61	0.00	0.00	3.61	0.00	3.00	0.61
2	4.17	0.00	0.00	4.17	0.00	7.40	-3.23
3	4.65	0.00	0.00	4.65	0.00	5.00	-0.35
4	7.55	0.35	0.00	7.20	0.00	6.40	0.80
5	25.00	2.23	0.00	22.80	0.00	13.00	9.77
6	30.40	2.66	0.00	27.70	0.00	13.00	14.70
7	9.33	1.20	0.00	8.13	0.00	8.00	0.13
8	5.02	0.34	0.00	4.68	0.00	3.00	1.68
9	3.74	0.18	0.00	3.56	0.00	3.00	0.56
10	3.73	0.00	0.00	3.73	0.00	3.00	0.73
11	4.38	0.00	0.00	4.38	0.00	3.00	1.38
12	4.15	0.00	0.00	4.15	0.00	3.00	1.15
Stor	10600	422	0	10200	0	4260	6020

JIMMY CREEK (at mouth)

LIMITING WATERSHEDS
JIMMY CR > POWDER R - AT MOUTH

Watershed ID #: 30920326 Basin: POWDER Exceedance Level: 50
Time: 09:21 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	30920326	JIMMY CR > POWDER R - AT MOUTH	YES	9.5
3	30920326	JIMMY CR > POWDER R - AT MOUTH	YES	18.9
4	30920326	JIMMY CR > POWDER R - AT MOUTH	YES	24.9
5	30920326	JIMMY CR > POWDER R - AT MOUTH	YES	0.7
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	30920326	JIMMY CR > POWDER R - AT MOUTH	YES	1.0
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	30920326	JIMMY CR > POWDER R - AT MOUTH	YES	3280.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
JIMMY CR > POWDER R - AT MOUTH

Watershed ID #: 30920326 Basin: POWDER Exceedance Level: 50
Time: 09:21 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	4.67	0.59	0.02	4.06	0.00	0.00	4.06
2	11.00	1.37	0.08	9.54	0.00	0.00	9.54
3	21.80	2.71	0.15	18.90	0.00	0.00	18.90
4	30.60	5.51	0.20	24.90	0.00	0.00	24.90
5	13.10	12.40	0.02	0.68	0.00	0.00	0.68
6	3.54	13.30	0.01	-9.77	0.00	0.00	-9.77
7	0.94	5.93	0.00	-4.99	0.00	0.00	-4.99
8	0.44	1.72	0.00	-1.28	0.00	0.00	-1.28
9	0.38	0.92	0.00	-0.54	0.00	0.00	-0.54
10	0.52	0.08	0.02	0.43	0.00	0.00	0.43
11	1.21	0.16	0.02	1.03	0.00	0.00	1.03
12	2.85	0.36	0.02	2.47	0.00	0.00	2.47
Stor	5470	2720	32	3710	0	0	3710

LIMITING WATERSHEDS
Water Availability as of 12/30/2002 for
JIMMY CR > POWDER R - AT MOUTH

Watershed ID #: 30920326 Basin: POWDER Exceedance Level: 80
Time: 09:16 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	30920326	JIMMY CR > POWDER R - AT MOUTH	YES	8.8
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	30920326	JIMMY CR > POWDER R - AT MOUTH	YES	3280.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
JIMMY CR > POWDER R - AT MOUTH

Watershed ID #: 30920326 Basin: POWDER Exceedance Level: 80
Time: 09:16 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	1.50	0.59	0.02	0.89	0.00	0.00	0.89
2	3.77	1.37	0.08	2.31	0.00	0.00	2.31
3	7.42	2.71	0.15	4.56	0.00	0.00	4.56
4	14.50	5.51	0.20	8.80	0.00	0.00	8.80
5	5.99	12.40	0.02	-6.43	0.00	0.00	-6.43
6	1.91	13.30	0.01	-11.40	0.00	0.00	-11.40
7	0.61	5.93	0.00	-5.32	0.00	0.00	-5.32
8	0.29	1.72	0.00	-1.43	0.00	0.00	-1.43
9	0.24	0.92	0.00	-0.68	0.00	0.00	-0.68
10	0.25	0.08	0.02	0.16	0.00	0.00	0.16
11	0.58	0.16	0.02	0.40	0.00	0.00	0.40
12	1.06	0.36	0.02	0.68	0.00	0.00	0.68
Stor	5470	2720	32	3710	0	0	3710

NORTH POWDER RIVER (at mouth)

LIMITING WATERSHEDS
N POWDER R > POWDER R - AT MOUTH

Watershed ID #: 72188 Basin: POWDER Exceedance Level: 50
Time: 09:42 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72188	N POWDER R > POWDER R - AT MOUTH	YES	13.9
3	72188	N POWDER R > POWDER R - AT MOUTH	YES	22.4
4	72188	N POWDER R > POWDER R - AT MOUTH	YES	41.8
5	72188	N POWDER R > POWDER R - AT MOUTH	YES	25.3
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	7.2
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72188	N POWDER R > POWDER R - AT MOUTH	YES	6620.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
N POWDER R > POWDER R - AT MOUTH

Watershed ID #: 72188 Basin: POWDER Exceedance Level: 50
Time: 09:42 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	40.70	5.97	0.00	34.70	0.00	12.00	22.70
2	41.70	7.78	0.01	33.90	0.00	20.00	13.90
3	54.90	7.52	0.02	47.40	0.00	25.00	22.40
4	109.00	42.00	0.25	66.80	0.00	25.00	41.80
5	260.00	209.00	0.92	50.30	0.00	25.00	25.30
6	273.00	257.00	0.47	16.00	0.00	25.00	-9.01
7	95.00	114.00	0.00	-18.60	0.00	20.00	-38.60
8	43.00	32.90	0.00	10.10	0.00	12.00	-1.92
9	35.30	19.20	0.00	16.10	0.00	12.00	4.14
10	35.80	6.41	0.00	29.40	0.00	12.00	17.40
11	43.60	7.78	0.01	35.80	0.00	12.00	23.80
12	37.60	5.95	0.00	31.70	0.00	12.00	19.70
Stor	64600	43200	101	22400	0	12800	11500

LIMITING WATERSHEDS
N POWDER R > POWDER R - AT MOUTH

Watershed ID #: 72188 Basin: POWDER Exceedance Level: 80
Time: 09:40 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72188	N POWDER R > POWDER R - AT MOUTH	NO	-2.0
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72188	N POWDER R > POWDER R - AT MOUTH	YES	6620.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
N POWDER R > POWDER R - AT MOUTH

Watershed ID #: 72188 Basin: POWDER Exceedance Level: 80
Time: 09:40 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	27.70	5.97	0.00	21.70	0.00	12.00	9.73
2	29.80	7.78	0.01	22.00	0.00	20.00	2.01
3	35.60	7.52	0.02	28.10	0.00	25.00	3.06
4	65.20	42.00	0.25	23.00	0.00	25.00	-2.03
5	162.00	209.00	0.92	-47.70	0.00	25.00	-72.70
6	159.00	257.00	0.47	-98.00	0.00	25.00	-123.00
7	57.30	114.00	0.00	-56.30	0.00	20.00	-76.30
8	29.90	32.90	0.00	-3.02	0.00	12.00	-15.00
9	25.60	19.20	0.00	6.44	0.00	12.00	-5.56
10	27.40	6.41	0.00	21.00	0.00	12.00	8.99
11	30.80	7.78	0.01	23.00	0.00	12.00	11.00
12	28.00	5.95	0.00	22.10	0.00	12.00	10.10
Stor	64600	43200	101	22400	0	12800	11500

NORTH POWDER RIVER (above Anthony Creek)

LIMITING WATERSHEDS
N POWDER R > POWDER R - AB ANTHONY FK

Watershed ID #: 72187 Basin: POWDER Exceedance Level: 50
Time: 10:05 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72187	N POWDER R > POWDER R - AB ANTHONY FK	YES	7.6
3	72187	N POWDER R > POWDER R - AB ANTHONY FK	YES	1.9
4	72187	N POWDER R > POWDER R - AB ANTHONY FK	YES	9.2
5	72187	N POWDER R > POWDER R - AB ANTHONY FK	YES	1.9
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	7.2
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72187	N POWDER R > POWDER R - AB ANTHONY FK	YES	1630.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
Water Availability as of 12/30/2002 for
N POWDER R > POWDER R - AB ANTHONY FK

Watershed ID #: 72187 Basin: POWDER Exceedance Level: 50
Time: 10:05 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	24.70	0.67	0.00	24.00	0.00	8.00	16.00
2	23.20	0.63	0.00	22.60	0.00	15.00	7.57
3	27.60	0.75	0.00	26.90	0.00	25.00	1.85
4	54.40	20.00	0.17	34.20	0.00	25.00	9.24
5	148.00	121.00	0.57	26.90	0.00	25.00	1.92
6	171.00	144.00	0.47	27.00	0.00	25.00	1.98
7	61.60	64.40	0.00	-2.82	0.00	15.00	-17.80
8	25.70	18.60	0.00	7.07	0.00	8.00	-0.93
9	19.10	9.79	0.00	9.31	0.00	8.00	1.31
10	18.80	0.52	0.00	18.30	0.00	8.00	10.30
11	25.80	0.70	0.00	25.10	0.00	8.00	17.10
12	23.30	0.64	0.00	22.70	0.00	8.00	14.70
Stor	37700	23100	73	14700	0	10700	4940

LIMITING WATERSHEDS

N POWDER R > POWDER R - AB ANTHONY FK

Watershed ID #: 72187 Basin: POWDER Exceedance Level: 80

Time: 10:03 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72187	N POWDER R > POWDER R - AB ANTHONY FK	NO	-11.5
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72187	N POWDER R > POWDER R - AB ANTHONY FK	YES	1630.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

N POWDER R > POWDER R - AB ANTHONY FK

Watershed ID #: 72187 Basin: POWDER Exceedance Level: 80

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	15.90	0.67	0.00	15.20	0.00	8.00	7.23
2	17.70	0.63	0.00	17.10	0.00	15.00	2.07
3	19.80	0.75	0.00	19.10	0.00	25.00	-5.95
4	33.70	20.00	0.17	13.50	0.00	25.00	-11.50
5	90.00	121.00	0.57	-31.10	0.00	25.00	-56.10
6	96.30	144.00	0.47	-47.70	0.00	25.00	-72.70
7	31.10	64.40	0.00	-33.30	0.00	15.00	-48.30
8	17.00	18.60	0.00	-1.63	0.00	8.00	-9.63
9	12.70	9.79	0.00	2.91	0.00	8.00	-5.09
10	12.90	0.52	0.00	12.40	0.00	8.00	4.38
11	17.00	0.70	0.00	16.30	0.00	8.00	8.30
12	17.50	0.64	0.00	16.90	0.00	8.00	8.86
Stor	37700	23100	73	14700	0	10700	4940

NORTH POWDER RIVER (above Antone Creek)

LIMITING WATERSHEDS
N POWDER R > POWDER R - AB ANTONE CR

Watershed ID #: 71685 Basin: POWDER Exceedance Level: 50
Time: 10:32 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	71685	N POWDER R > POWDER R - AB ANTONE CR	YES	2.8
3	71685	N POWDER R > POWDER R - AB ANTONE CR	YES	0.6
4	71685	N POWDER R > POWDER R - AB ANTONE CR	YES	4.9
5	72187	N POWDER R > POWDER R - AB ANTHONY FK	YES	1.9
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	7.2
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	71685	N POWDER R > POWDER R - AB ANTONE CR	YES	1030.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
N POWDER R > POWDER R - AB ANTONE CR

Watershed ID #: 71685 Basin: POWDER Exceedance Level: 50
Time: 10:32 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	19.90	0.67	0.00	19.20	0.00	8.00	11.20
2	18.40	0.62	0.00	17.80	0.00	15.00	2.78
3	21.30	0.71	0.00	20.60	0.00	20.00	0.59
4	43.10	13.10	0.08	29.90	0.00	25.00	4.93
5	122.00	77.30	0.40	44.30	0.00	25.00	19.30
6	138.00	92.00	0.47	45.60	0.00	25.00	20.60
7	47.80	41.10	0.00	6.75	0.00	15.00	-8.25
8	20.00	11.90	0.00	8.06	0.00	8.00	0.06
9	14.80	6.32	0.00	8.48	0.00	8.00	0.48
10	14.70	0.49	0.00	14.20	0.00	8.00	6.21
11	20.90	0.70	0.00	20.20	0.00	8.00	12.20
12	19.10	0.64	0.00	18.50	0.00	8.00	10.50
Stor	30200	14900	58	15300	0	10400	5370

LIMITING WATERSHEDS
N POWDER R > POWDER R - AB ANTONE CR

Watershed ID #: 71685 Basin: POWDER Exceedance Level: 80
Time: 10:30 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72187	N POWDER R > POWDER R - AB ANTHONY FK	NO	-11.5
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	71685	N POWDER R > POWDER R - AB ANTONE CR	YES	1030.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
N POWDER R > POWDER R - AB ANTONE CR

Watershed ID #: 71685 Basin: POWDER Exceedance Level: 80
Time: 10:30 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	12.80	0.67	0.00	12.10	0.00	8.00	4.13
2	14.30	0.62	0.00	13.70	0.00	15.00	-1.32
3	16.00	0.71	0.00	15.30	0.00	20.00	-4.71
4	27.00	13.10	0.08	13.80	0.00	25.00	-11.20
5	74.20	77.30	0.40	-3.53	0.00	25.00	-28.50
6	77.10	92.00	0.47	-15.30	0.00	25.00	-40.30
7	24.20	41.10	0.00	-16.80	0.00	15.00	-31.90
8	13.20	11.90	0.00	1.26	0.00	8.00	-6.74
9	9.80	6.32	0.00	3.48	0.00	8.00	-4.52
10	10.10	0.49	0.00	9.61	0.00	8.00	1.61
11	13.60	0.70	0.00	12.90	0.00	8.00	4.90
12	14.10	0.64	0.00	13.50	0.00	8.00	5.46
Stor	30200	14900	58	15300	0	10400	5370

POWDER RIVER (above Snake River)

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
POWDER R > SNAKE R - AT MOUTH

Watershed ID #: 30920301 Basin: POWDER Exceedance Level: 50
Time: 10:36 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	312.00	97.90	2.37	212.00	0.00	0.00	212.00
2	477.00	118.00	2.73	356.00	0.00	0.00	356.00
3	838.00	198.00	3.50	637.00	0.00	0.00	637.00
4	1640.00	419.00	9.97	1210.00	0.00	0.00	1210.00
5	2290.00	1120.00	17.90	1150.00	0.00	0.00	1150.00
6	2060.00	1140.00	11.30	905.00	0.00	0.00	905.00
7	673.00	639.00	5.52	28.90	0.00	0.00	28.90
8	320.00	401.00	1.68	-82.70	0.00	0.00	-82.70
9	229.00	301.00	3.32	-74.90	0.00	0.00	-74.90
10	214.00	89.90	3.24	121.00	0.00	0.00	121.00
11	250.00	53.20	2.36	194.00	0.00	0.00	194.00
12	281.00	112.00	2.32	167.00	0.00	0.00	167.00
Stor	578000	284000	4010	300000	0	0	300000

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
POWDER R > SNAKE R - AT MOUTH

Watershed ID #: 30920301 Basin: POWDER Exceedance Level: 80
Time: 10:48 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	185.00	97.90	2.37	84.70	0.00	0.00	84.70
2	272.00	118.00	2.73	151.00	0.00	0.00	151.00
3	455.00	198.00	3.50	254.00	0.00	0.00	254.00
4	974.00	419.00	9.97	545.00	0.00	0.00	545.00
5	1470.00	1120.00	17.90	332.00	0.00	0.00	332.00
6	1310.00	1140.00	11.30	155.00	0.00	0.00	155.00
7	441.00	639.00	5.52	-203.00	0.00	0.00	-203.00
8	254.00	401.00	1.68	-149.00	0.00	0.00	-149.00
9	186.00	301.00	3.32	-118.00	0.00	0.00	-118.00
10	179.00	89.90	3.24	85.90	0.00	0.00	85.90
11	186.00	53.20	2.36	130.00	0.00	0.00	130.00
12	189.00	112.00	2.32	74.50	0.00	0.00	74.50
Stor	578000	284000	4010	300000	0	0	300000

POWDER RIVER (above Eagle Creek)

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
POWDER R > SNAKE R - AB EAGLE CR

Watershed ID #: 72193 Basin: POWDER Exceedance Level: 50
Time: 10:36 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	172.00	95.10	2.32	74.50	0.00	60.00	14.50
2	301.00	118.00	2.68	181.00	0.00	70.00	111.00
3	586.00	198.00	3.23	384.00	0.00	80.00	304.00
4	1140.00	399.00	8.20	733.00	0.00	80.00	653.00
5	1330.00	1010.00	15.30	303.00	0.00	80.00	223.00
6	972.00	1030.00	8.32	-63.20	0.00	80.00	-143.00
7	295.00	534.00	1.98	-241.00	0.00	60.00	-301.00
8	148.00	311.00	1.65	-165.00	0.00	60.00	-225.00
9	101.00	229.00	1.55	-130.00	0.00	60.00	-190.00
10	97.80	70.80	2.26	24.80	0.00	60.00	-35.20
11	122.00	49.50	2.31	70.20	0.00	60.00	10.20
12	150.00	109.00	2.28	38.60	0.00	60.00	-21.40
Stor	327000	251000	3140	109000	0	48900	79000

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
POWDER R > SNAKE R - AB EAGLE CR

Watershed ID #: 72193 Basin: POWDER Exceedance Level: 80
Time: 10:48 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	89.20	95.10	2.32	-8.26	0.00	60.00	-68.30
2	157.00	118.00	2.68	36.70	0.00	70.00	-33.30
3	303.00	198.00	3.23	101.00	0.00	80.00	21.30
4	674.00	399.00	8.20	267.00	0.00	80.00	187.00
5	857.00	1010.00	15.30	-170.00	0.00	80.00	-250.00
6	644.00	1030.00	8.32	-391.00	0.00	80.00	-471.00
7	220.00	534.00	1.98	-316.00	0.00	60.00	-376.00
8	115.00	311.00	1.65	-198.00	0.00	60.00	-258.00
9	80.90	229.00	1.55	-150.00	0.00	60.00	-210.00
10	78.80	70.80	2.26	5.76	0.00	60.00	-54.20
11	86.80	49.50	2.31	35.00	0.00	60.00	-25.00
12	95.00	109.00	2.28	-16.40	0.00	60.00	-76.40
Stor	327000	251000	3140	109000	0	48900	79000

POWDER RIVER (above Goose Creek)

LIMITING WATERSHEDS
POWDER R > SNAKE R - AB GOOSE CR

Watershed ID #: 72192 Basin: POWDER Exceedance Level: 50
Time: 11:44 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	52.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	193.0
4	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	492.0
5	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	152.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	7.2
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	53800.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
POWDER R > SNAKE R - AB GOOSE CR

Watershed ID #: 72192 Basin: POWDER Exceedance Level: 50
Time: 10:36 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	138.00	94.00	2.18	41.90	0.00	50.00	-8.15
2	229.00	115.00	2.49	112.00	0.00	60.00	52.00
3	459.00	193.00	2.94	263.00	0.00	70.00	193.00
4	951.00	382.00	6.82	562.00	0.00	70.00	492.00
5	1210.00	976.00	12.00	222.00	0.00	70.00	152.00
6	929.00	1020.00	8.26	-99.30	0.00	70.00	-169.00
7	281.00	529.00	1.98	-250.00	0.00	50.00	-300.00
8	141.00	307.00	1.65	-168.00	0.00	50.00	-218.00
9	93.80	227.00	1.55	-134.00	0.00	50.00	-184.00
10	90.00	70.30	2.16	17.50	0.00	50.00	-32.50
11	109.00	49.60	2.19	57.20	0.00	50.00	7.21
12	126.00	109.00	2.14	15.20	0.00	50.00	-34.80
Stor	287000	246000	2800	77500	0	41600	53800

LIMITING WATERSHEDS
POWDER R > SNAKE R - AB GOOSE CR

Watershed ID #: 72192 Basin: POWDER Exceedance Level: 80
Time: 11:42 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	121.0
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	53800.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
POWDER R > SNAKE R - AB GOOSE CR

Watershed ID #: 72192 Basin: POWDER Exceedance Level: 80
Time: 10:48 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	76.20	94.00	2.18	-19.90	0.00	50.00	-69.90
2	128.00	115.00	2.49	11.00	0.00	60.00	-49.00
3	254.00	193.00	2.94	58.40	0.00	70.00	-11.60
4	580.00	382.00	6.82	191.00	0.00	70.00	121.00
5	800.00	976.00	12.00	-188.00	0.00	70.00	-258.00
6	620.00	1020.00	8.26	-408.00	0.00	70.00	-478.00
7	210.00	529.00	1.98	-321.00	0.00	50.00	-371.00
8	110.00	307.00	1.65	-199.00	0.00	50.00	-249.00
9	75.70	227.00	1.55	-152.00	0.00	50.00	-202.00
10	73.60	70.30	2.16	1.11	0.00	50.00	-48.90
11	80.20	49.60	2.19	28.40	0.00	50.00	-21.60
12	85.80	109.00	2.14	-25.00	0.00	50.00	-75.00
Stor	287000	246000	2800	77500	0	41600	53800

POWDER RIVER (above unnamed stream above Thief Valley Reservoir)

LIMITING WATERSHEDS
POWDER R > SNAKE R - AB UNN STR

Watershed ID #: 72191 Basin: POWDER Exceedance Level: 50
Time: 10:36 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72191	POWDER R > SNAKE R - AB UNN STR	YES	41.5
3	72191	POWDER R > SNAKE R - AB UNN STR	YES	97.6
4	72191	POWDER R > SNAKE R - AB UNN STR	YES	336.0
5	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	152.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72192	POWDER R > SNAKE R - AB GOOSE CR	YES	7.2
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72191	POWDER R > SNAKE R - AB UNN STR	YES	38100.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
POWDER R > SNAKE R - AB UNN STR

Watershed ID #: 72191 Basin: POWDER Exceedance Level: 50
Time: 10:36 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	108.00	65.20	1.78	41.00	0.00	25.00	16.00
2	158.00	84.40	2.00	71.50	0.00	30.00	41.50
3	308.00	168.00	2.25	138.00	0.00	40.00	97.60
4	702.00	321.00	4.71	376.00	0.00	40.00	336.00
5	1040.00	816.00	8.20	216.00	0.00	40.00	176.00
6	884.00	944.00	7.10	-67.10	0.00	40.00	-107.00
7	271.00	482.00	1.51	-212.00	0.00	25.00	-237.00
8	136.00	265.00	1.44	-130.00	0.00	25.00	-155.00
9	89.70	192.00	1.42	-104.00	0.00	25.00	-129.00
10	84.90	66.10	1.73	17.10	0.00	25.00	-7.91
11	99.40	47.50	1.80	50.10	0.00	25.00	25.10
12	107.00	59.10	1.76	46.10	0.00	25.00	21.10
Stor	241000	212000	2150	57500	0	22000	42900

LIMITING WATERSHEDS
POWDER R > SNAKE R - AB UNN STR

Watershed ID #: 72191 Basin: POWDER Exceedance Level: 80
Time: 10:33 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72191	POWDER R > SNAKE R - AB UNN STR	YES	89.9
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72191	POWDER R > SNAKE R - AB UNN STR	YES	38100.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
POWDER R > SNAKE R - AB UNN STR

Watershed ID #: 72191 Basin: POWDER Exceedance Level: 80
Time: 10:48 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	65.90	65.20	1.78	-1.10	0.00	25.00	-26.10
2	103.00	84.40	2.00	16.50	0.00	30.00	-13.50
3	203.00	168.00	2.25	32.60	0.00	40.00	-7.39
4	456.00	321.00	4.71	130.00	0.00	40.00	89.90
5	714.00	816.00	8.20	-110.00	0.00	40.00	-150.00
6	593.00	944.00	7.10	-358.00	0.00	40.00	-398.00
7	204.00	482.00	1.51	-279.00	0.00	25.00	-304.00
8	107.00	265.00	1.44	-159.00	0.00	25.00	-184.00
9	72.70	192.00	1.42	-121.00	0.00	25.00	-146.00
10	70.30	66.10	1.73	2.49	0.00	25.00	-22.50
11	75.10	47.50	1.80	25.80	0.00	25.00	0.81
12	77.90	59.10	1.76	17.00	0.00	25.00	-7.99
Stor	241000	212000	2150	57500	0	22000	42900

POWDER RIVER (above Rock Creek)

LIMITING WATERSHEDS
POWDER R > SNAKE R - AB ROCK CR

Watershed ID #: 30920327 Basin: POWDER Exceedance Level: 50
Time: 10:50 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-9.4
2	30920327	POWDER R > SNAKE R - AB ROCK CR	YES	8.4
3	30920327	POWDER R > SNAKE R - AB ROCK CR	YES	21.7
4	30920327	POWDER R > SNAKE R - AB ROCK CR	YES	154.0
5	30920327	POWDER R > SNAKE R - AB ROCK CR	YES	55.9
6	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-183.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-54.8
11	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-25.4
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	30920327	POWDER R > SNAKE R - AB ROCK CR	YES	14400.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION

POWDER R > SNAKE R - AB ROCK CR

Watershed ID #: 30920327 Basin: POWDER Exceedance Level: 50
Time: 10:50 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	72.50	55.40	1.49	15.60	0.00	25.00	-9.39
2	111.00	71.00	1.56	38.40	0.00	30.00	8.39
3	207.00	144.00	1.64	61.70	0.00	40.00	21.70
4	414.00	216.00	3.29	194.00	0.00	40.00	154.00
5	505.00	404.00	5.35	95.90	0.00	40.00	55.90
6	334.00	472.00	4.55	-143.00	0.00	40.00	-183.00
7	75.10	273.00	1.25	-199.00	0.00	25.00	-224.00
8	29.40	190.00	1.18	-162.00	0.00	25.00	-187.00
9	20.30	148.00	1.17	-129.00	0.00	25.00	-154.00
10	24.20	52.50	1.44	-29.80	0.00	25.00	-54.80
11	38.90	37.80	1.48	-0.43	0.00	25.00	-25.40
12	53.20	49.10	1.47	2.65	0.00	25.00	-22.30
Stor	114000	128000	1560	24500	0	22000	14400

LIMITING WATERSHEDS
POWDER R > SNAKE R - AB ROCK CR

Watershed ID #: 30920327 Basin: POWDER Exceedance Level: 80
Time: 10:48 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-85.5
4	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-46.5
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-63.6
11	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-39.1
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	30920327	POWDER R > SNAKE R - AB ROCK CR	YES	14400.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
POWDER R > SNAKE R - AB ROCK CR

Watershed ID #: 30920327 Basin: POWDER Exceedance Level: 80
Time: 10:48 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	36.90	55.40	1.49	-20.00	0.00	25.00	-45.00
2	58.70	71.00	1.56	-13.90	0.00	30.00	-43.90
3	99.80	144.00	1.64	-45.50	0.00	40.00	-85.50
4	213.00	216.00	3.29	-6.54	0.00	40.00	-46.50
5	300.00	404.00	5.35	-109.00	0.00	40.00	-149.00
6	163.00	472.00	4.55	-314.00	0.00	40.00	-354.00
7	42.00	273.00	1.25	-232.00	0.00	25.00	-257.00
8	17.60	190.00	1.18	-174.00	0.00	25.00	-199.00
9	12.60	148.00	1.17	-136.00	0.00	25.00	-161.00
10	15.40	52.50	1.44	-38.60	0.00	25.00	-63.60
11	25.20	37.80	1.48	-14.10	0.00	25.00	-39.10
12	34.90	49.10	1.47	-15.60	0.00	25.00	-40.60
Stor	114000	128000	1560	24500	0	22000	14400

ROCK CREEK (at mouth)

LIMITING WATERSHEDS
ROCK CR > POWDER R - AT MOUTH

Watershed ID #: 72194 Basin: POWDER Exceedance Level: 50
Time: 10:38 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72194	ROCK CR > POWDER R - AT MOUTH	YES	0.7
3	72194	ROCK CR > POWDER R - AT MOUTH	YES	2.7
4	72194	ROCK CR > POWDER R - AT MOUTH	NO	-2.2
5	72194	ROCK CR > POWDER R - AT MOUTH	NO	-10.8
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72194	ROCK CR > POWDER R - AT MOUTH	NO	-0.3
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72194	ROCK CR > POWDER R - AT MOUTH	YES	203.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ROCK CR > POWDER R - AT MOUTH

Watershed ID #: 72194 Basin: POWDER Exceedance Level: 50
Time: 10:41 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	9.20	0.17	0.00	9.03	0.00	8.84	0.19
2	9.37	0.17	0.00	9.20	0.00	8.52	0.68
3	12.80	0.24	0.00	12.60	0.00	9.88	2.68
4	34.20	18.40	0.00	15.80	0.00	18.00	-2.17
5	123.00	114.00	0.00	9.19	0.00	20.00	-10.80
6	146.00	136.00	0.00	10.30	0.00	20.00	-9.68
7	43.60	60.90	0.00	-17.30	0.00	12.00	-29.30
8	25.80	17.60	0.00	8.16	0.00	9.00	-0.84
9	11.60	9.08	0.00	2.52	0.00	9.00	-6.48
10	9.30	0.17	0.00	9.13	0.00	9.00	0.13
11	8.83	0.17	0.00	8.67	0.00	9.00	-0.34
12	8.73	0.16	0.00	8.57	0.00	8.02	0.55
Stor	26800	21600	0	6220	0	8530	256

LIMITING WATERSHEDS
ROCK CR > POWDER R - AT MOUTH

Watershed ID #: 72194 Basin: POWDER Exceedance Level: 80
Time: 10:37 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72194	ROCK CR > POWDER R - AT MOUTH	NO	-10.7
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72194	ROCK CR > POWDER R - AT MOUTH	YES	203.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ROCK CR > POWDER R - AT MOUTH

Watershed ID #: 72194 Basin: POWDER Exceedance Level: 80
Time: 10:40 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	6.60	0.17	0.00	6.43	0.00	8.84	-2.41
2	7.23	0.17	0.00	7.05	0.00	8.52	-1.47
3	10.20	0.24	0.00	9.96	0.00	9.88	0.08
4	25.70	18.40	0.00	7.33	0.00	18.00	-10.70
5	79.30	114.00	0.00	-34.50	0.00	20.00	-54.50
6	96.90	136.00	0.00	-38.80	0.00	20.00	-58.80
7	31.50	60.90	0.00	-29.40	0.00	12.00	-41.40
8	21.30	17.60	0.00	3.66	0.00	9.00	-5.34
9	8.96	9.08	0.00	-0.12	0.00	9.00	-9.12
10	7.57	0.17	0.00	7.40	0.00	9.00	-1.60
11	7.10	0.17	0.00	6.94	0.00	9.00	-2.07
12	6.39	0.16	0.00	6.23	0.00	8.02	-1.79
Stor	26800	21600	0	6220	0	8530	256

ROCK CREEK (above unnamed stream, below Killamacue Creek)

LIMITING WATERSHEDS
ROCK CR > POWDER R - AB UNN STR

Watershed ID #: 72159 Basin: POWDER Exceedance Level: 50
Time: 10:41 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72159	ROCK CR > POWDER R - AB UNN STR	YES	0.5
3	72194	ROCK CR > POWDER R - AT MOUTH	YES	2.7
4	72194	ROCK CR > POWDER R - AT MOUTH	NO	-2.2
5	72194	ROCK CR > POWDER R - AT MOUTH	NO	-10.8
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72194	ROCK CR > POWDER R - AT MOUTH	NO	-0.3
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72159	ROCK CR > POWDER R - AB UNN STR	YES	191.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ROCK CR > POWDER R - AB UNN STR

Watershed ID #: 72159 Basin: POWDER Exceedance Level: 50
Time: 10:41 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	8.26	0.16	0.00	8.10	0.00	6.00	2.10
2	8.30	0.16	0.00	8.14	0.00	7.68	0.46
3	11.40	0.22	0.00	11.20	0.00	8.17	3.01
4	31.80	4.42	0.00	27.40	0.00	14.30	13.10
5	119.00	26.20	0.00	92.80	0.00	20.00	72.80
6	143.00	31.30	0.00	112.00	0.00	15.00	96.70
7	42.50	13.70	0.00	28.80	0.00	12.00	16.80
8	25.20	4.17	0.00	21.00	0.00	6.00	15.00
9	11.30	2.12	0.00	9.18	0.00	6.00	3.18
10	9.00	0.17	0.00	8.83	0.00	6.00	2.82
11	8.37	0.16	0.00	8.21	0.00	6.00	2.21
12	8.11	0.16	0.00	7.95	0.00	6.00	1.95
Stor	25800	5030	0	20800	0	6830	13900

LIMITING WATERSHEDS
ROCK CR > POWDER R - AB UNN STR

Watershed ID #: 72159 Basin: POWDER Exceedance Level: 80
Time: 10:40 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-11.6
4	72194	ROCK CR > POWDER R - AT MOUTH	NO	-10.7
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72159	ROCK CR > POWDER R - AB UNN STR	YES	191.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
ROCK CR > POWDER R - AB UNN STR

Watershed ID #: 72159 Basin: POWDER Exceedance Level: 80
Time: 10:40 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	6.04	0.16	0.00	5.88	0.00	6.00	-0.12
2	6.20	0.16	0.00	6.04	0.00	7.68	-1.64
3	9.66	0.22	0.00	9.44	0.00	8.17	1.27
4	24.20	4.42	0.00	19.80	0.00	14.30	5.48
5	76.60	26.20	0.00	50.40	0.00	20.00	30.40
6	95.00	31.30	0.00	63.70	0.00	15.00	48.70
7	30.80	13.70	0.00	17.10	0.00	12.00	5.10
8	20.90	4.17	0.00	16.70	0.00	6.00	10.70
9	8.75	2.12	0.00	6.63	0.00	6.00	0.63
10	7.37	0.17	0.00	7.20	0.00	6.00	1.19
11	6.78	0.16	0.00	6.62	0.00	6.00	0.62
12	6.00	0.16	0.00	5.84	0.00	6.00	-0.16
Stor	25800	5030	0	20800	0	6830	13900

SALMON CREEK (at mouth)

LIMITING WATERSHEDS
SALMON CR > POWDER R - AT MOUTH

Watershed ID #: 30920329 Basin: POWDER Exceedance Level: 50
Time: 10:47 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	30920329	SALMON CR > POWDER R - AT MOUTH	NO	-33.1
2	30920329	SALMON CR > POWDER R - AT MOUTH	NO	-31.0
3	30920329	SALMON CR > POWDER R - AT MOUTH	NO	-25.7
4	30920329	SALMON CR > POWDER R - AT MOUTH	NO	-27.1
5	30920329	SALMON CR > POWDER R - AT MOUTH	NO	-91.5
6	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-183.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-54.8
11	30920329	SALMON CR > POWDER R - AT MOUTH	NO	-34.8
12	30920329	SALMON CR > POWDER R - AT MOUTH	NO	-35.0
Stor	30920329	SALMON CR > POWDER R - AT MOUTH	NO	0.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
SALMON CR > POWDER R - AT MOUTH

Watershed ID #: 30920329 Basin: POWDER Exceedance Level: 50
Time: 10:47 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	9.71	42.70	0.10	-33.10	0.00	0.00	-33.10
2	11.90	42.70	0.14	-31.00	0.00	0.00	-31.00
3	17.50	43.00	0.21	-25.70	0.00	0.00	-25.70
4	31.90	58.20	0.78	-27.10	0.00	0.00	-27.10
5	47.60	136.00	2.56	-91.50	0.00	0.00	-91.50
6	43.90	154.00	3.05	-113.00	0.00	0.00	-113.00
7	14.90	92.60	0.06	-77.80	0.00	0.00	-77.80
8	5.84	56.70	0.02	-50.90	0.00	0.00	-50.90
9	4.32	49.80	0.02	-45.50	0.00	0.00	-45.50
10	4.97	42.50	0.06	-37.60	0.00	0.00	-37.60
11	7.85	42.60	0.10	-34.80	0.00	0.00	-34.80
12	7.69	42.60	0.08	-35.00	0.00	0.00	-35.00
Stor	12600	48600	433	0	0	0	0

LIMITING WATERSHEDS
SALMON CR > POWDER R - AT MOUTH

Watershed ID #: 30920329 Basin: POWDER Exceedance Level: 80
Time: 10:45 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-85.5
4	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-46.5
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-63.6
11	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-39.1
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	30920329	SALMON CR > POWDER R - AT MOUTH	NO	0.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
SALMON CR > POWDER R - AT MOUTH

Watershed ID #: 30920329 Basin: POWDER Exceedance Level: 80
Time: 10:45 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	6.50	42.70	0.10	-36.30	0.00	0.00	-36.30
2	7.32	42.70	0.14	-35.60	0.00	0.00	-35.60
3	9.70	43.00	0.21	-33.50	0.00	0.00	-33.50
4	17.20	58.20	0.78	-41.80	0.00	0.00	-41.80
5	29.30	136.00	2.56	-110.00	0.00	0.00	-110.00
6	24.50	154.00	3.05	-133.00	0.00	0.00	-133.00
7	7.72	92.60	0.06	-84.90	0.00	0.00	-84.90
8	3.80	56.70	0.02	-52.90	0.00	0.00	-52.90
9	2.75	49.80	0.02	-47.10	0.00	0.00	-47.10
10	2.84	42.50	0.06	-39.70	0.00	0.00	-39.70
11	5.27	42.60	0.10	-37.40	0.00	0.00	-37.40
12	6.56	42.60	0.08	-36.10	0.00	0.00	-36.10
Stor	12600	48600	433	0	0	0	0

WILLOW CREEK (at mouth)

LIMITING WATERSHEDS
WILLOW CR > POWDER R - AT MOUTH

Watershed ID #: 30920328 Basin: POWDER Exceedance Level: 50
Time: 10:44 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-9.4
2	30920328	WILLOW CR > POWDER R - AT MOUTH	YES	4.0
3	30920328	WILLOW CR > POWDER R - AT MOUTH	YES	5.2
4	30920328	WILLOW CR > POWDER R - AT MOUTH	YES	2.9
5	30920328	WILLOW CR > POWDER R - AT MOUTH	NO	-18.9
6	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-183.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-54.8
11	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-25.4
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	30920328	WILLOW CR > POWDER R - AT MOUTH	YES	712.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
WILLOW CR > POWDER R - AT MOUTH

Watershed ID #: 30920328 Basin: POWDER Exceedance Level: 50
Time: 10:44 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	3.63	0.09	0.10	3.44	0.00	0.00	3.44
2	4.14	0.09	0.10	3.95	0.00	0.00	3.95
3	5.35	0.09	0.10	5.15	0.00	0.00	5.15
4	8.63	5.20	0.50	2.93	0.00	0.00	2.93
5	13.50	32.20	0.18	-18.90	0.00	0.00	-18.90
6	13.60	38.40	0.20	-25.00	0.00	0.00	-25.00
7	4.83	17.40	0.14	-12.70	0.00	0.00	-12.70
8	1.82	5.03	0.11	-3.33	0.00	0.00	-3.33
9	1.32	2.64	0.11	-1.43	0.00	0.00	-1.43
10	1.52	0.09	0.10	1.33	0.00	0.00	1.33
11	2.54	0.09	0.10	2.35	0.00	0.00	2.35
12	2.54	0.09	0.10	2.35	0.00	0.00	2.35
Stor	3830	6140	112	1290	0	0	1290

LIMITING WATERSHEDS
WILLOW CR > POWDER R - AT MOUTH

Watershed ID #: 30920328 Basin: POWDER Exceedance Level: 80
Time: 10:43 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-85.5
4	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-46.5
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-63.6
11	30920327	POWDER R > SNAKE R - AB ROCK CR	NO	-39.1
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	30920328	WILLOW CR > POWDER R - AT MOUTH	YES	712.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
WILLOW CR > POWDER R - AT MOUTH

Watershed ID #: 30920328 Basin: POWDER Exceedance Level: 80
Time: 10:43 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	2.13	0.09	0.10	1.94	0.00	0.00	1.94
2	2.70	0.09	0.10	2.51	0.00	0.00	2.51
3	2.85	0.09	0.10	2.65	0.00	0.00	2.65
4	4.82	5.20	0.50	-0.88	0.00	0.00	-0.88
5	8.60	32.20	0.18	-23.80	0.00	0.00	-23.80
6	7.46	38.40	0.20	-31.10	0.00	0.00	-31.10
7	2.30	17.40	0.14	-15.20	0.00	0.00	-15.20
8	1.12	5.03	0.11	-4.03	0.00	0.00	-4.03
9	0.78	2.64	0.11	-1.97	0.00	0.00	-1.97
10	0.78	0.09	0.10	0.59	0.00	0.00	0.59
11	1.60	0.09	0.10	1.41	0.00	0.00	1.41
12	2.02	0.09	0.10	1.83	0.00	0.00	1.83
Stor	3830	6140	112	1290	0	0	1290

WOLF CREEK (at mouth)

LIMITING WATERSHEDS
WOLF CR > POWDER R - AT MOUTH

Watershed ID #: 72163 Basin: POWDER Exceedance Level: 50
Time: 09:31 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72163	WOLF CR > POWDER R - AT MOUTH	NO	-5.2
3	72163	WOLF CR > POWDER R - AT MOUTH	NO	-5.6
4	72163	WOLF CR > POWDER R - AT MOUTH	YES	2.1
5	72163	WOLF CR > POWDER R - AT MOUTH	NO	-51.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72163	WOLF CR > POWDER R - AT MOUTH	NO	-2.6
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	72163	WOLF CR > POWDER R - AT MOUTH	YES	127.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
WOLF CR > POWDER R - AT MOUTH

Watershed ID #: 72163 Basin: POWDER Exceedance Level: 80
Time: 09:37 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	3.43	3.75	0.25	-0.57	0.00	4.00	-4.57
2	4.76	5.58	0.25	-1.07	0.00	8.00	-9.07
3	7.46	12.20	0.26	-5.00	0.00	12.00	-17.00
4	33.10	59.00	0.53	-26.50	0.00	12.00	-38.50
5	42.50	136.00	1.77	-95.10	0.00	12.00	-107.00
6	13.70	111.00	2.06	-98.90	0.00	12.00	-111.00
7	2.95	42.30	0.25	-39.60	0.00	4.00	-43.60
8	1.44	12.60	0.25	-11.50	0.00	2.73	-14.20
9	1.49	7.23	0.25	-5.99	0.00	2.47	-8.46
10	2.13	1.76	0.25	0.12	0.00	3.15	-3.03
11	3.02	3.01	0.25	-0.24	0.00	4.00	-4.24
12	3.33	3.15	0.25	-0.07	0.00	4.00	-4.07
Stor	16000	24000	400	1720	0	4840	127

LIMITING WATERSHEDS
WOLF CR > POWDER R - AT MOUTH

Watershed ID #: 72163 Basin: POWDER Exceedance Level: 80
Time: 09:26 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72163	WOLF CR > POWDER R - AT MOUTH	NO	-17.0
4	72163	WOLF CR > POWDER R - AT MOUTH	NO	-38.5
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	72163	WOLF CR > POWDER R - AT MOUTH	YES	127.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
WOLF CR > POWDER R - AT MOUTH

Watershed ID #: 72163 Basin: POWDER Exceedance Level: 80
Time: 09:37 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	3.43	3.75	0.25	-0.57	0.00	4.00	-4.57
2	4.76	5.58	0.25	-1.07	0.00	8.00	-9.07
3	7.46	12.20	0.26	-5.00	0.00	12.00	-17.00
4	33.10	59.00	0.53	-26.50	0.00	12.00	-38.50
5	42.50	136.00	1.77	-95.10	0.00	12.00	-107.00
6	13.70	111.00	2.06	-98.90	0.00	12.00	-111.00
7	2.95	42.30	0.25	-39.60	0.00	4.00	-43.60
8	1.44	12.60	0.25	-11.50	0.00	2.73	-14.20
9	1.49	7.23	0.25	-5.99	0.00	2.47	-8.46
10	2.13	1.76	0.25	0.12	0.00	3.15	-3.03
11	3.02	3.01	0.25	-0.24	0.00	4.00	-4.24
12	3.33	3.15	0.25	-0.07	0.00	4.00	-4.07
Stor	16000	24000	400	1720	0	4840	127

WOLF CREEK (above Clear Creek)

LIMITING WATERSHEDS
WOLF CR > POWDER R - AB CLEAR CR

Watershed ID #: 30920323 Basin: POWDER Exceedance Level: 50
Time: 09:39 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-8.1
2	72163	WOLF CR > POWDER R - AT MOUTH	NO	-5.2
3	72163	WOLF CR > POWDER R - AT MOUTH	NO	-5.6
4	72163	WOLF CR > POWDER R - AT MOUTH	YES	2.1
5	72163	WOLF CR > POWDER R - AT MOUTH	NO	-51.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-169.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-301.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-225.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-190.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-35.2
11	72163	WOLF CR > POWDER R - AT MOUTH	NO	-2.6
12	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-34.8
Stor	30920323	WOLF CR > POWDER R - AB CLEAR CR	YES	127.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
WOLF CR > POWDER R - AB CLEAR CR

Watershed ID #: 30920323 Basin: POWDER Exceedance Level: 80
Time: 09:37 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	2.08	0.01	0.00	2.06	0.00	0.00	2.06
2	2.44	0.01	0.00	2.43	0.00	0.00	2.43
3	3.71	0.01	0.00	3.70	0.00	0.00	3.70
4	19.60	0.03	0.00	19.60	0.00	0.00	19.60
5	30.20	0.12	0.00	30.10	0.00	0.00	30.10
6	10.20	0.14	0.00	10.10	0.00	0.00	10.10
7	2.14	0.07	0.00	2.07	0.00	0.00	2.07
8	1.06	0.03	0.00	1.03	0.00	0.00	1.03
9	1.10	0.02	0.00	1.08	0.00	0.00	1.08
10	1.58	0.01	0.00	1.57	0.00	0.00	1.57
11	2.11	0.01	0.00	2.09	0.00	0.00	2.09
12	2.15	0.01	0.00	2.14	0.00	0.00	2.14
Stor	10200	31	0	10200	0	0	10200

LIMITING WATERSHEDS
WOLF CR > POWDER R - AB CLEAR CR

Watershed ID #: 30920323 Basin: POWDER Exceedance Level: 80
Time: 09:37 Date: 12/30/2002

Mnth	Limiting Watershed	Stream Name	Water Avail?	Net Water Available
1	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-69.9
2	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-49.0
3	72163	WOLF CR > POWDER R - AT MOUTH	NO	-17.0
4	72163	WOLF CR > POWDER R - AT MOUTH	NO	-38.5
5	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-258.0
6	72192	POWDER R > SNAKE R - AB GOOSE CR	NO	-478.0
7	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-376.0
8	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-258.0
9	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-210.0
10	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-54.2
11	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-25.0
12	72193	POWDER R > SNAKE R - AB EAGLE CR	NO	-76.4
Stor	30920323	WOLF CR > POWDER R - AB CLEAR CR	YES	127.0

DETAILED REPORT ON THE WATER AVAILABILITY CALCULATION
WOLF CR > POWDER R - AB CLEAR CR

Watershed ID #: 30920323 Basin: POWDER Exceedance Level: 80
Time: 09:37 Date: 12/30/2002

Month	Natural Stream Flow	CU + Stor Prior to 1/1/93	CU + Stor After 1/1/93	Expected Stream Flow	Reserved Stream Flow	Instream Water Rights	Net Water Available
1	2.08	0.01	0.00	2.06	0.00	0.00	2.06
2	2.44	0.01	0.00	2.43	0.00	0.00	2.43
3	3.71	0.01	0.00	3.70	0.00	0.00	3.70
4	19.60	0.03	0.00	19.60	0.00	0.00	19.60
5	30.20	0.12	0.00	30.10	0.00	0.00	30.10
6	10.20	0.14	0.00	10.10	0.00	0.00	10.10
7	2.14	0.07	0.00	2.07	0.00	0.00	2.07
8	1.06	0.03	0.00	1.03	0.00	0.00	1.03
9	1.10	0.02	0.00	1.08	0.00	0.00	1.08
10	1.58	0.01	0.00	1.57	0.00	0.00	1.57
11	2.11	0.01	0.00	2.09	0.00	0.00	2.09
12	2.15	0.01	0.00	2.14	0.00	0.00	2.14
Stor	10200	31	0	10200	0	0	10200

Water Availability Basin (WAB)	Watershed ID (WID)	Net Available Water		Reason for Over-Approp.
		Over-Appropriation Months for 50% Exceedence	Over-Appropriation Months for 80% Exceedence	
Antelope Cr – at mouth	30920325	Jun-Sep	Jun-Sep	CU
Anthony Cr – at mouth	72165	Feb-Mar, July-Aug	Feb-Sep, Dec	CU, IWR
Anthony Cr, NF – at mouth	72184	Mar-Apr	Jan-Apr, Jun-Dec	IWR
Anthony Cr – abv Indian Cr	72164	Dec	Feb-Mar, Jul-Dec	IWR
Antone Cr – at mouth	72166		Jan-Apr	IWR
Clear Cr – at mouth	72171	Jan-Mar, Jul-Dec	Jan-Mar, Jun-Dec	IWR
Cusick Cr – at mouth	30920324	none	none	
Dutch Flat Cr – at mouth	72176	Feb	Feb-Mar	IWR
Jimmy Cr – at mouth	30920326	Jun-Sep	May-Sep	CU
N Powder R – at mouth	72188	Jun-Aug	Apr-Sep	CU
N Powder R – abv Anthony Cr	72187	Jul-Aug	Mar-Sep	CU, IWR
N Powder R – abv Antone Cr	71685	Jul	Feb-Sep	CU, IWR
* Powder R – at mouth	30920301	Aug-Sep	Jul-Sep	CU, IWR
* Powder R – abv Eagle Cr	72193	Jun-Oct, Dec	Jan-Feb, May-Dec	CU, IWR
** Powder R – abv Goose Cr	72192	Jan, Jun-Oct, Dec	Jan-Mar, May-Dec	CU, IWR
Powder R - abv unnamed str	72191	Jun-Oct	Jan-Mar, May-Oct, Dec	CU, IWR
** Powder R – abv Rock Cr	30920327	Jan, Jun-Dec	Jan-Dec	IWR
Rock Cr – at mouth	72194	Apr-Sep, Nov	Jan-Feb, Apr-Dec	CU, IWR
Rock Cr – abv unnamed str	72159	none	Jan-Feb, Dec	IWR
Salmon Cr – at mouth	30920329	Jan-Dec	Jan-Dec	CU
Willow Cr – at mouth	30920328	May-Sep	Apr-Sep	CU
Wolf Cr – at mouth	72163	Jan-Dec	Jan-Dec	CU, IWR
Wolf Cr – abv Clear Cr	30920323	none	none	
* (below assessment area) ** (partly in assessment area)				

Water Availability Basin (WAB)	Watershed ID (WID)	Expected Stream Flow	
		Over-Appropriation Months for 50% Exceedence	Over-Appropriation Months for 80% Exceedence
Antelope Cr – at mouth	30920325	Jun-Sep	Jun-Sep
Anthony Cr – at mouth	72165	none	Jun-Jul
Anthony Cr, NF – at mouth	72184	none	none
Anthony Cr – abv Indian Cr	72164	none	none
Antone Cr – at mouth	72166	none	none
Clear Cr – at mouth	72171	none	none
Cusick Cr – at mouth	30920324	none	none
Dutch Flat Cr – at mouth	72176	none	none
Jimmy Cr – at mouth	30920326	Jun-Sep	Jun-Sep
N Powder R – at mouth	72188	Jul	May-Aug
N Powder R – abv Anthony Cr	72187	Jul	May-Aug
N Powder R – abv Antone Cr	71685	none	May-Jul
* Powder R – at mouth	30920301	Aug-Sep	Aug-Sep
* Powder R – abv Eagle Cr	72193	Jun-Sep	Jan, May-Sep, Dec
** Powder R – abv Goose Cr	72192	Jun-Sep	Jan, May-Sep, Dec
Powder R - abv unnamed str	72191	Jun-Sep	Jan, May-Sep
** Powder R – abv Rock Cr	30920327	Jun-Nov	Jan-Dec
Rock Cr – at mouth	72194	Jul	May-Jul, Sep
Rock Cr – abv unnamed str	72159	none	none
Salmon Cr – at mouth	30920329	Jan-Dec	Jan-Dec
Willow Cr – at mouth	30920328	May-Sep	Apr-Sep
Wolf Cr – at mouth	72163	Jan-Sep, Nov-Dec	Jan-Sep, Nov-Dec
Wolf Cr – abv Clear Cr	30920323	none	none
* (below assessment area) ** (partly in assessment area)			

APPENDIX K

FISH SURVEYS

Anthony Creek
Antone Creek
Goodrich Creek
Indian Creek
Little Mill Creek
Marble Creek
Pine Creek
Salmon Creek

Table 71. Fish Surveys

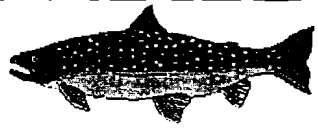
Stream Name : Anthony Creek
Watershed Code : 17050203
NFS Code : 18H
Reach No : 3.00

Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
1.00	ONMY	8/29/94		2.00							BEGINNING OF REACH 3. Temp. = 55 F. at 1315. Started above confluence with N. FK. Anthony Creek.
1.00	SAFO	8/29/94		1.00							
2.00	N/A	8/29/94									
3.00	ONMY	8/29/94				1.00	1.00				
4.00	ONMY	8/29/94		1.00	1.00						
5.00	ONMY	8/29/94		1.00		2.00					
6.00	N/A	8/29/94									Photo 17, Roll 109. Waterfall and pool. Just shocked the tailcrest of the pool due to the depth. (4ft.+)
7.00	COTTU	8/29/94		4.00							
7.00	ONMY	8/29/94				1.00	1.00				Photo's 18-19, 8-9" ONMY. Photo 20 is 150ft. above pool 7, bedrock waterfall. Photo 21---SAFO/SACO Hybrid. 2-4".
8.00	ONMY	8/29/94				1.00	1.00				
9.00	BU/BR	8/29/94		1.00							
9.00	COTTU	8/29/94		1.00							
9.00	ONMY	8/29/94				1.00	3.00				
10.00	ONMY	8/30/94		2.00		1.00	1.00				48 F. at 1050
11.00	COTTU	8/30/94		1.00							
11.00	ONMY	8/30/94		4.00	3.00		1.00				
12.00	ONMY	8/30/94		2.00							51 F. at 1235. Just above bedrock. steep falls area.
13.00	ONMY	8/30/94			1.00	1.00					
14.00	ONMY	8/30/94		3.00		1.00	1.00				
15.00	ONMY	8/30/94		1.00		2.00					
16.00	ONMY	8/30/94		1.00		2.00					
17.00	N/A	8/30/94									
18.00	COTTU	8/30/94			1.00						
18.00	ONMY	8/30/94		1.00	1.00		2.00				Deep pool, bedrock on right side
19.00	ONMY	8/30/94				1.00					
20.00	ONMY	8/30/94			2.00		1.00				
21.00	ONMY	8/30/94				1.00	1.00				Photo 22, waterfall w/ nice pool below.
22.00	ONMY	8/30/94				1.00	1.00				
23.00	ONMY	8/30/94		1.00							
24.00	ONMY	8/30/94			1.00						
25.00	ONMY	8/30/94		1.00	2.00						
26.00	ONMY	8/30/94			1.00		1.00				
27.00	ONMY	8/31/94		1.00	1.00						47 F. at 1020.
28.00	ONMY	8/31/94					1.00				
29.00	SACO	8/31/94			1.00						
30.00	ONMY	8/31/94			1.00						

DATA TABLES

Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
31.00	ONMY	8/31/94		1.00	2.00						
32.00	BU/BR	8/31/94			1.00						Photo's 23-24 sasc/safo hybrid.
32.00	ONMY	8/31/94		1.00	1.00						
33.00	COTTU	8/31/94		1.00							
33.00	ONMY	8/31/94		2.00	1.00	1.00	1.00				50 F. at 1300. Photo 25 Lg. woody debris jam
34.00	COTTU	8/31/94		1.00							
34.00	ONMY	8/31/94		1.00		1.00	1.00				
35.00	ONMY	8/31/94			2.00	1.00	2.00				
36.00	ONMY	8/31/94			1.00	1.00					
37.00	BU/BR	8/31/94				1.00					Roll 110. Photo's 1-3 possible hybrid, orange with Blk/wht fins
37.00	ONMY	8/31/94			2.00						
38.00	BU/BR	8/31/94				1.00					END OF REACH 3 AT RD 312 BRIDGE. Photo's 4-6. Hybrid and Redband in net. Bridge above pool crosses Rd. 7312.
38.00	ONMY	8/31/94			1.00		1.00				

Stream Name : Anthony Creek
Watershed Code : 17050203
NFS Code : 18H
Reach No : 4.00



Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
39.00	ONMY	8/31/94		2.00	2.00						BEGINNING OF REACH 4. 1st pool above bridge.
40.00	SACO	8/31/94					1.00				Pure bull trout in riffle/pool.
41.00	BU/BR	8/31/94			1.00	1.00					
41.00	ONMY	8/31/94		3.00	1.00	1.00					
42.00	BU/BR	8/31/94		3.00	2.00	1.00					
42.00	COTTU	8/31/94		2.00							51 F. at 1545.
42.00	ONMY	8/31/94			2.00	1.00					
43.00	ONMY	9/1/94		2.00	1.00	2.00					50 F. at 1030. Started .2 miles up Rd. 7312-065. Braided channel periodically, large LWD dams creating 3-10ft. waterfalls.
44.00	ONMY	9/1/94			1.00	1.00	1.00				
45.00	BU/BR	9/1/94			1.00						
45.00	COTTU	9/1/94		2.00							
46.00	COTTU	9/1/94		1.00							
46.00	ONMY	9/1/94			2.00	1.00	1.00				
47.00	ONMY	9/1/94			2.00	4.00	1.00				
47.00	SAFO	9/1/94					1.00				Photo's 7-8, 10" Brook Trout. Photo's 9-10, LWD jam created pool upstream and downstream.
48.00	COTTU	9/1/94		1.00							
48.00	ONMY	9/1/94		2.00	2.00	2.00					
48.00	SAFO	9/1/94					1.00				
49.00	BU/BR	9/1/94		2.00	2.00	2.00					
49.00	ONMY	9/1/94		3.00	2.00	1.00	3.00				
49.00	SAFO	9/1/94					1.00				52° F. at 1300.
50.00	BU/BR	9/1/94			1.00						
50.00	ONMY	9/1/94		3.00		1.00	4.00				
50.00	SAFO	9/1/94			1.00		1.00				
51.00	ONMY	9/1/94		2.00			1.00				
51.00	SAFO	9/1/94				1.00					
52.00	ONMY	9/1/94				2.00					All sand substrate. Photo 11. Steep, eroded bank on left. Meadow area above right trib. (Rd. 065 crosses here, but could only cross with ATV.
53.00	ONMY	9/1/94		1.00							
54.00	BU/BR	9/1/94			2.00		1.00				Rd. 7312-065 crosses creek. Very mossy. 52 F. at 1450.
54.00	ONMY	9/1/94		1.00	2.00	1.00					
54.00	SACO	9/1/94		1.00							
55.00	BU/BR	9/1/94			1.00						
55.00	ONMY	9/1/94			1.00		1.00				
55.00	SAFO	9/1/94				1.00					
56.00	ONMY	9/1/94			3.00	2.00					52° F. at 1530.

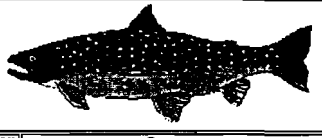
DATA TABLES

Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
57.00	ONMY	9/6/94				1.00					
58.00	N/A	9/6/94									
59.00	ONMY	9/6/94			1.00	1.00					END OF REACH 4 Ends at Webfoot Creek. 46 F. at 1115
59.00	SAFO	9/6/94				2.00					

Stream Name : Anthony Creek
Watershed Code : 17050203
NFS Code : 18H
Reach No : 5.00

Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
60.00	ONMY	9/6/94			1.00	1.00					BEGINNING OF REACH 5.
60.00	SAFO	9/6/94			1.00						
61.00	ONMY	9/6/94				1.00					Sandy substrate througout habitats. Steep eroded banks on left. meadow area aabove right trib. Rd. 065 crosses creek. accessible only by ATV. Photo #11
62.00	ONMY	9/6/94				2.00					Approx. 80ft. long chute above pool 62.
63.00	ONMY	9/6/94				1.00					
64.00	SAFO	9/6/94			1.00						
65.00	XXXX	9/6/94				1.00					Species escaped before positive identification.
66.00	ONMY	9/6/94				1.00					
66.00	SAFO	9/6/94			2.00	1.00					
67.00	ONMY	9/6/94			1.00	1.00					
68.00	SAFO	9/6/94			1.00						
69.00	ONMY	9/6/94			1.00						
69.00	SAFO	9/6/94			1.00						
70.00	SAFO	9/6/94			1.00	1.00					END OF REACH 5

Stream Name : Anthony Creek
Watershed Code : 17050203
NFS Code : 18H
Reach No : 6.00

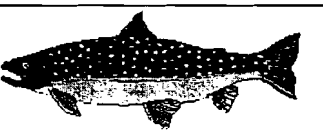


Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
71.00	ONMY	9/6/94	2.00			1.00					BEGINNING OF REACH 6
71.00	SAFO	9/6/94		1.00	1.00	3.00					
72.00	ONMY	9/6/94				1.00					
72.00	SAFO	9/6/94			1.00						
73.00	SAFO	9/6/94			2.00	1.00					
74.00	N/A	9/6/94									
75.00	SAFO	9/6/94			1.00	4.00					
76.00	SAFO	9/6/94			5.00	3.00	2.00				
77.00	SAFO	9/6/94			3.00	4.00	2.00	1.00			
78.00	ONMY	9/6/94						2.00			48 F. at 1505.
78.00	SAFO	9/6/94				2.00	4.00				
79.00	SAFO	9/6/94				1.00					
80.00	SAFO	9/6/94			1.00						1.5-1.7 mile ridge on left bank after bedrock area. Photo 14, bedrock upstream. Photo's 15-17, glacial morraine panned left and right of Mud Lake.
81.00	SAFO	9/6/94		3.00	1.00	7.00					50 F. at 1250. Sandy, eroded area. Rd. 7300-142 is close to this area.
82.00	SAFO	9/6/94			1.00	6.00					Photo's 12-13, Lg. boulder, sand pool. (Several large boulders/bedrock pools upstream.) Rocky morraines. 10-12 SAFO seen in pool as we walked along. (not shocked)
83.00	SAFO	9/6/94			2.00	5.00					Sand pool.
84.00	SAFO	9/6/94		1.00		1.00	1.00				

DATA TABLES

Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
85.00	SAFO	9/6/94			1.00	1.00					
86.00	SAFO	9/6/94		1.00							Observed one 6-8" dead SAFO. (bedrock pools)
87.00	SAFO	9/6/94			3.00	3.00	3.00				
88.00	SAFO	9/6/94		2.00	1.00	4.00					END OF REACH 6. 45 F at 1030 Ended just below Mud Lake.

Stream Name : Antone Creek
Watershed Code : 17050203
NFS Code : 18J
Reach No : 3.00

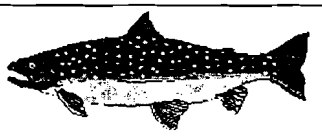


Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
1.00	N/A	8/24/94									BEGINNING OF REACH 3 Temp.=50 F. at 0940.
2.00	SAFO	8/24/94				1.00					
3.00	ONMY	8/24/94			1.00	1.00					
3.00	SAFO	8/24/94			1.00						
4.00	ONMY	8/24/94			1.00	1.00					
5.00	ONMY	8/24/94				1.00					
6.00	SAFO	8/24/94				2.00					
7.00	SAFO	8/24/94			1.00						
8.00	SAFO	8/24/94			1.00	1.00					
9.00	SAFO	8/24/94			1.00	1.00					
10.00	SAFO	8/24/94			1.00	1.00					
11.00	SAFO	8/24/94				1.00					
12.00	SAFO	8/24/94			1.00	1.00					
13.00	SAFO	8/24/94			3.00						
14.00	SAFO	8/24/94			2.00						
15.00	SAFO	8/24/94		1.00	1.00						
16.00	SAFO	8/24/94		1.00		1.00					
17.00	SAFO	8/24/94		2.00	2.00	2.00					
18.00	SAFO	8/24/94			2.00	1.00					
19.00	SAFO	8/24/94			2.00						
20.00	SAFO	8/24/94				1.00					
21.00	SAFO	8/24/94			1.00	1.00					
22.00	SAFO	8/24/94			1.00						
23.00	SAFO	8/24/94			1.00						
24.00	SAFO	8/24/94			2.00	5.00					
25.00	SAFO	8/24/94	3.00	2.00							
26.00	SAFO	8/24/94	1.00		2.00						
27.00	SAFO	8/24/94			1.00	1.00					
28.00	N/A	8/25/94									
29.00	SAFO	8/25/94	5.00		1.00	1.00					
30.00	SAFO	8/25/94			3.00	1.00					
31.00	SAFO	8/25/94			3.00	1.00					
32.00	SAFO	8/25/94			4.00						
33.00	XXXX	8/25/94									Observed fish in pool, but the depth was to deep to successfuly shock (4+ft.)
34.00	SAFO	8/25/94			2.00						
35.00	SAFO	8/25/94	1.00		2.00						
36.00	SAFO	8/25/94		1.00	2.00						
37.00	SAFO	8/25/94		1.00	3.00						
38.00	SAFO	8/25/94		1.00	2.00	1.00					
39.00	SAFO	8/25/94			1.00						
40.00	SAFO	8/25/94		1.00	1.00						
41.00	SAFO	8/25/94			1.00						
42.00	SAFO	8/25/94			1.00						
43.00	SAFO	8/25/94			3.00						
44.00	SAFO	8/25/94		1.00	2.00						
45.00	SAFO	8/25/94			1.00						
46.00	SAFO	8/25/94		2.00	1.00						
47.00	SAFO	8/25/94			5.00						
48.00	SAFO	8/25/94		5.00	4.00	1.00					
49.00	SAFO	8/25/94		1.00	1.00						

DATA TABLES

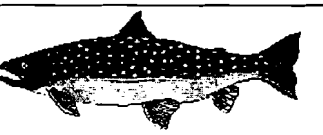
Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
50.00	SAFO	8/25/94		1.00							
51.00	SAFO	8/25/94		1.00		1.00					
52.00	SAFO	8/25/94		1.00	1.00	1.00					
53.00	SAFO	8/25/94		1.00	2.00						
54.00	SAFO	8/25/94		1.00	5.00	1.00					
55.00	SAFO	8/25/94		1.00	3.00						
56.00	SAFO	8/25/94			2.00	1.00					END OF REACH 3

Stream Name : Antone Creek
Watershed Code : 17050203
NFS Code : 18J
Reach No : 4.00



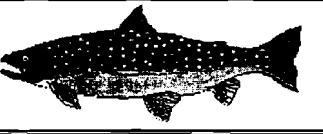
Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
57.00	SAFO	8/25/94			4.00						BEGINNING OF REACH 4
58.00	SAFO	8/25/94			2.00						
59.00	N/A	8/25/94									
60.00	SAFO	8/25/94			1.00						
61.00	SAFO	8/25/94			3.00						
62.00	SAFO	8/25/94			4.00	1.00					

Stream Name : Goodrich Creek
Watershed Code : 17050203
NFS Code : 01H; 0.7
Reach No : 1.00



Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
1.00	SAFO	8/4/94					1.00				Reach breaks are noted in the comments of each creek. If the creek consist of only 1 reach, nothing is noted. Pool 1, Photo 6 of Brook Trout located 1/4 mile below reservoir.
2.00	SAFO	8/4/94			1.00						
3.00	SAFO	8/4/94				1.00					
4.00	SAFO	8/4/94			3.00						
5.00	SAFO	8/4/94			1.00	2.00					
6.00	SAFO	8/4/94			1.00						
7.00	SAFO	8/4/94				2.00	1.00	1.00			
8.00	SAFO	8/4/94			2.00						
9.00	SAFO	8/4/94				1.00	1.00				
10.00	SAFO	8/4/94			2.00	1.00					

Stream Name : Indian Creek
Watershed Code : 17050203
NFS Code : 18H;2.5
Reach No : 1.00

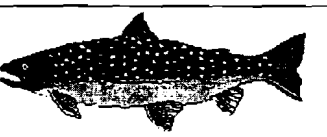


Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
1.00	ONMY	6/26/94			1.00						Reach breaks are noted in the comments of each creek. If the creek consist of only 1 reach, nothing is noted. Started at confluence.
2.00	ONMY	6/26/94			2.00						
3.00	ONMY	6/26/94				1.00					Temp-54/1040
4.00	ONMY	6/26/94				1.00					
5.00	ONMY	6/26/94			1.00						
6.00	ONMY	6/26/94		1.00							
7.00	ONMY	6/26/94			1.00	1.00					
8.00	ONMY	6/26/94			1.00	1.00					Stopped at Rd. 7312 crossing.
9.00	ONMY	8/18/94			2.00						Started at Rd. 7312 crossing & in creek.
10.00	ONMY	8/18/94				1.00					
11.00	N/A	8/18/94									54 F. at 1240.
12.00	ONMY	8/18/94			1.00						
13.00	ONMY	8/18/94				1.00					
14.00	N/A	8/18/94									
15.00	N/A	8/18/94									
16.00	ONMY	8/18/94			1.00	1.00					Flow turns murky after walking thru---due to fine grained sand substrate.
17.00	ONMY	8/18/94				1.00					All pools have been brushy. Sandy substrate. All the ONMY seem to be the same size. Large quantity of dead

DATA TABLES

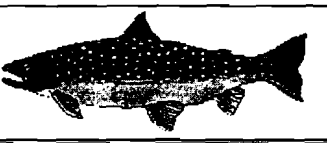
Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
											ALNUS Cattle sign on trail by creek
18.00	ONMY	8/18/94				2.00					
19.00	ONMY	8/18/94	6.00				2.00				
20.00	ONMY	8/18/94			1.00	3.00	1.00				
21.00	ONMY	8/18/94				2.00					
22.00	ONMY	8/18/94				1.00					
23.00	ONMY	8/18/94			1.00						
24.00	N/A	8/22/94									47 F. at 1025. Sandy substrate, water gets turbid when walking through.
25.00	ONMY	8/22/94				2.00					
25.00	SACO	8/22/94		2.00							Roll 109. photo 6. 2-4" SACO. remains of cordoroy bridge
26.00	ONMY	8/22/94				2.00					
27.00	ONMY	8/22/94			1.00	1.00					
28.00	ONMY	8/23/94				2.00					
28.00	SACO	8/23/94			1.00						Photo's 7-8. positive sighting of Bull Trout. Photo 9. very thick reprod. Photo's 10-11, downstream brush and upstream brush.
29.00	N/A	8/23/94									
30.00	ONMY	8/23/94				1.00					
31.00	N/A	8/23/94									
32.00	N/A	8/23/94									
33.00	ONMY	8/23/94		1.00							
34.00	ONMY	8/23/94			1.00						
34.00	SACO	8/23/94			1.00	1.00					
35.00	ONMY	8/23/94				1.00					
36.00	N/A	8/23/94									48 F. at 1255.
37.00	SACO	8/23/94			1.00						
38.00	N/A	8/23/94									
39.00	N/A	8/23/94									
40.00	N/A	8/23/94									Not able to identify.
41.00	SACO	8/23/94		1.00	1.00						Narrow Valley logged area.
42.00	SACO	8/23/94				2.00					
43.00	SACO	8/23/94			1.00						
44.00	N/A	8/24/94									49 F. at 1100. Pool located above Rd. 7315-035. Photo's 12-13, Rd. 7315-060 crosses creek, cordoroy bridge, periodic braided channel.
45.00	N/A	8/24/94		1.00							Not able to identify.
46.00	N/A	8/24/94									
47.00	N/A	8/24/94									
49.00	N/A	8/24/94									
50.00	N/A	8/24/94									Shocked riffles and pools for 300ft. before pool 50. No fish were observed. Photo 14, last pool shocked. Photo 15, upstream from pool, overhanging. Photo 16, downstream from last pool, log across. 50 F. at 1345. No fish found above 7315-030 rd.

Stream Name : Little Mill Creek
Watershed Code : 17050203
NFS Code : 01,H; 1.7, 5.9
Reach No : 1.00



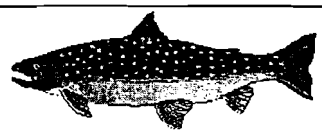
Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
1.00	ONMY	8/5/94			1.00						Little Mill Creek has not had a Hankin and Reeves survey. The reach breaks listed, if any, are not established. If no reach breaks are noted in comments, the creek only consists of 1 reach. Pool 1 is located below Watershed Pipeline.
2.00	ONMY	8/5/94			1.00						
3.00	ONMY	8/5/94			1.00	1.00					
4.00	ONMY	8/5/94			1.00	2.00					
5.00	ONMY	8/5/94			1.00						
6.00	ONMY	8/5/94			1.00						
7.00	ONMY	8/5/94			1.00	1.00					
8.00	ONMY	8/5/94	2.00		1.00						
9.00	N/A	8/5/94									Pool 9 is located above the Watershed Pipeline. No fish were present.
10.00	N/A	8/5/94									
11.00	N/A	8/5/94									
12.00	N/A	8/5/94									
13.00	N/A	8/5/94									
14.00	N/A	8/5/94									
15.00	N/A	8/5/94									

Stream Name : Marble Creek
Watershed Code : 17050203
NFS Code : 01H; 3.7
Reach No : 1.00



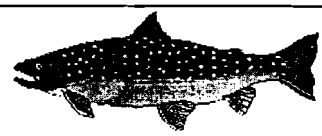
Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
1.00	ONMY	8/5/94			1.00						Marble Creek has not had a Hankin and Reeves survey. The reach breaks listed, if any, are not established. If no reach breaks are noted in comments, the creek only consists of 1 reach. Pool 1 is located below the Watershed Pipeline.
2.00	N/A	8/5/94									
3.00	N/A	8/5/94									
4.00	N/A	8/5/94									
5.00	ONMY	8/5/94			2.00						
6.00	ONMY	8/5/94			1.00						
7.00	N/A	8/5/94									
8.00	N/A	8/5/94									
9.00	N/A	8/5/94									
10.00	ONMY	8/5/94				1.00					
11.00	ONMY	8/5/94				1.00					

Stream Name : Pine Creek
Watershed Code : 17050201
NFS Code : 15L
Reach No : 4.00



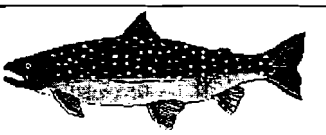
Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
1.00	ONMY	9/7/94				1.00	1.00				Reach breaks for this stream are preliminary. A Hankin & Reeves survey still needs to be done. as of 3/30/95, to properly establish them This section may end up as Reach 6.
1.00	SACO	9/7/94			3.00	4.00	3.00	1.00			Started above dry channal above E. Fk. Confluence.
2.00	ONMY	9/7/94				2.00	4.00	1.00			Pocket pool between normal frequency of pools. Han
2.00	SACO	9/7/94				2.00					
3.00	SACO	9/7/94				1.00	2.00	1.00			Photo# 13 - SACO in net Photo# 14 - SACO in net h
4.00	SACO	9/7/94				1.00					

Stream Name : Pine Creek
Watershed Code : 17050203
NFS Code : 01G
Reach No : 1.00



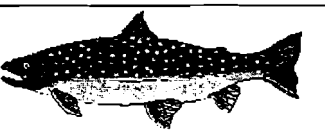
Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
1.00	ONMY	8/2/94					1.00				Above diversion, seem to be yellowish in color, steep gradient, cascading riffle. Road has been side cast into stream
2.00	ONMY	8/2/94		1.00	1.00	1.00					
3.00	ONMY	8/2/94			1.00						
4.00	ONMY	8/2/94		1.00	1.00	1.00	1.00				
5.00	ONMY	8/2/94			3.00	1.00	1.00				
6.00	ONMY	8/2/94			3.00	1.00	1.00				
7.00	ONMY	8/2/94		1.00							
8.00	ONMY	8/2/94		2.00	2.00						
9.00	ONMY	8/2/94		1.00	1.00		1.00				
10.00	ONMY	8/2/94		1.00	1.00						
11.00	ONMY	8/2/94			2.00						
12.00	ONMY	8/2/94			1.00	1.00					
13.00	ONMY	8/2/94		1.00	1.00						
14.00	ONMY	8/2/94			1.00	1.00					
15.00	ONMY	8/2/94				1.00					
16.00	ONMY	8/2/94			2.00	1.00					
17.00	ONMY	8/2/94			1.00	1.00					
18.00	N/A	8/2/94									

Stream Name : Pine Creek
Watershed Code : 17050203
NFS Code : 01G
Reach No : 1.00



Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
1.00	SAFO	8/28/95				1.00					Began at 5800 ft elevation.
2.00	ONMY	8/28/95				1.00					
3.00	ONMY	8/28/95				1.00					
4.00	N/A	8/28/95									
5.00	N/A	8/28/95									
6.00	ONMY	8/28/95			1.00						
7.00	N/A	8/28/95									
8.00	SAFO	8/28/95			1.00	1.00					
9.00	SAFO	8/28/95			3.00	1.00					
10.00	N/A	8/28/95									Fish barrier at least 50 ft 1/2 waterfall, 1/2 shoot.
11.00	SAFO	8/28/95				1.00					At flat above fish barrier. No bull trout located. BLM's report of a bull trout most likely was a brook trout.
12.00	SAFO	8/28/95				2.00					
13.00	SAFO	8/28/95					1.00				
14.00	SAFO	8/28/95					1.00				
15.00	SAFO	8/28/95				1.00					
16.00	SAFO	8/28/95			1.00	1.00					
17.00	SAFO	8/28/95				1.00					Ended at Reservoir.

Stream Name : Salmon Creek
Watershed Code : 17050203
NFS Code : 01H
Reach No : 1.00



Pool No	Species	Date	0-2"	2-4"	4-6"	6-8"	8-10"	10-12"	12-14"	14-16"	Comments
1.00	ONMY	8/2/94			14.00						Photos 1 to 4 roll ? Pond by excavators.
1.00	SACO	8/2/94				2.00					
2.00	N/A	8/3/94									Pool 2 is located above the Watershed pipeline. Used the Eloctrofishing method.
3.00	N/A	8/3/94									
4.00	N/A	8/3/94									
5.00	N/A	8/3/94									
6.00	N/A	8/3/94									
7.00	N/A	8/3/94									
8.00	N/A	8/3/94									
9.00	N/A	8/3/94									
10.00	N/A	8/3/94									
11.00	N/A	8/3/94									

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APPENDIX L

COMMENTARY ON BULL TROUT

Leggett
Maxwell

Figure 81. Leggett Letter

Upper Reaches of North Powder River

The documentation provided herein is specific to the North Powder River, a tributary of Powder River, and will show that the Upper Reaches of the North Powder River do not meet the criteria for establishing recovery of Bull Trout or designation for critical habitat. Therefore, this stream should be removed from the recovery list and list for critical habit.

Sources for documentation are: *Status of Oregon's Bull Trout* by the Oregon Department of Fish and Wildlife, Brook Trout Stocking records from ODFW Departments HMIS (Hatchery Management Information System); US Fish & Wildlife Service; Gildermeister (1992); Kostow; Buchanan, Hanson, and Hooton, 1997, Rieman and McIntyre. 1993, neighbors who spent a part of their lives fishing and hiking in this area, and personal observations by me and five generations of my family who have hiked, camped and fished in this watershed.

This documentation is specific to that portion of the North Powder River in the Elkhorn Mountain Range as indicated on the attached Map # 1 and identified in the Bull Trout Recovery Plan for the Hells Canyon Complex and the Bull Trout Critical Habitat for the Hells Canyon Complex. The length of North Powder River discussed is approximately 12.5 miles and stretches from the headwaters to its confluence with Anthony Creek. This section was electro-fished, snorkeled, and sampled by ODFW in 1991 and 1995 (Buchanan). Only a small population of bull trout was found in the upper headwaters encompassing a stream distance of .5 mile located in N ½ of section 17, Twp.8S, R.37E and in the SW ¼ of Section 8, Twp. 8S, R37E.

The next .9-mile of stream indicates predominantly brook trout with brook trout and bull trout hybrids. The next 4.7 miles sampled is all brook trout. It appears from the map that the total distance from the small brook trout population in the headwaters to the confluence with Anthony Creek is about 12.5 miles. My personal experience and that of others in the area reveal that there are 11 of those miles in which only brook trout with an occasional rainbow trout are caught.

The population documented in *Status of Oregon's Bull Trout* by ODFW states in 1991, "The population is fragmented and numbers are extremely low (3 fish in 250m electro fished, and 2 fish in 400m snorkeled) Population estimates have not been made. Bull trout have not been observed during creel checks since 1990" (ODFW 1993c). The status of this population was reported by Ratliff and Howell in 1992, updated in 1995-96 and identified as "High Risk." This population is resident.

Resident bull trout achieve a small maximum size, remain in smaller, headwater streams throughout their lives, and rely heavily on invertebrate forage. One of the reasons for this small population could be due to documentation provided by Beauchamp & VanTassell, 2001, in which they state, "cannibalism is not uncommon and may account for significant mortal top-level carnivores, a large prey base of forage fish is required to sustain viable populations of adults, and the largest populations may have occurred in rivers that supported large populations of anadromous salmon and steelhead. The Hells Canyon Dam on the Snake River and Thief Valley Dam on Powder River prevent there being any anadromous runs of these fish on this stream. There are no migratory fluvial or ad fluvial populations of bull trout documented."

The origin of this population is questionable. Gildemeister (1992) reports that Forest Ranger Thomas H. Parker stocked the High Lakes of the Elkhorns in the late 1800s or early 1920s, transporting "Dolly Varden" whitefish and wild trout by packhorse. This is also corroborated by a living daughter and descendants of Thomas H. Parker who still live in the area. This fact raises

the question in the mind of this writer and any who should read this report as to whether the bull trout were ever native in this particular watershed. If they were not native, then there may be no basis for restoration of a fish that was never in this stream historically. The assumption is made that Thomas H. Parker recognized that this fishery was not a particularly good fishery and attempted to improve it by stocking. Other reports are that he stocked brook trout in these high lakes and spent most of one summer with packhorses loaded with 30-gallon drums filled with the fish that he packed in to all of these lakes.

Another possible explanation of the fragmentation of the small populations in the entire Powder River watershed, if they were native, may be due to research explained by Cavender (1978), Broughton (2000), Haas & McPhail (1991, 2001), Paul & Post (1997), Rieman et al. (1997), Rieman & McIntyre (1995), Thurow et. al. (1997). They state, "Bull Trout occupied a much larger and more continuous geographic area during the Pleistocene, when climatic conditions provided abundant coldwater habitat suitable for bull trout. At the current time, bull trout occur in disjunctive, fragmented relict populations over a wide geographic area in the Northwestern United States and Western Canada. This represents small fragments of their former range, which has retracted due to anthropogenic and climatic causes. Most extant bull trout populations persist in geographically remote locations with limited access and minimal human development and disturbance."

The characteristic of the North Powder River area of this small population is that it is in a high elevation area of the headwaters of the North Powder River in which the source of water is largely from snowmelt from mountain peaks exceeding 8,200' elevation, and some small cold underground springs. This population exists in a road less area well within the boundaries of the Wallowa Whitman National Forest in an area designated as "wild and scenic" and near the boundary of the John Day Wilderness area. The road to the border of the Wallowa Whitman National Forest is through private land and is not maintained. There has been no logging, mining, grazing or agricultural influence in this bull trout populated area for many years due to its remoteness and ruggedness. There is no documentation that this bull trout population that has no influence of man is increasing, but to the contrary may be decreasing as indicated in the October, 1997, *Status of Oregon's Bull Trout, Distribution, Life History, Limiting Factors, Management Considerations, and Status.*

The limiting factors to this population's survival are largely natural and biological barriers that are discussed below. One must first understand this area. These headwaters are a small stream sandwiched between tall mountain peaks in excess of 8,200' in elevation. The soils on the steep slopes and along the stream banks are largely granitic and vulnerable to erosion. On lower reaches, brush and trees in this area and along the riparian area are thick with a large fuel load built up over the years due to fire suppression and forest management practices which have not involved the removal of this fuel load. The greatest threat to this population could be from the effects of an extremely hot burning wildfire ignited by lightning during the thunderstorm season and driest and hottest time of the year in August. This type of wildfire would be devastating, as it would result in a thick build up of ash along the riparian area. The wild fire would burn with such a hot intensity as to kill most of the vegetation and trees. At this high elevation, it would be many years before the vegetation and trees would recover to a point that the erosion would be stemmed.

In the meantime, due to the rapid spring snow melt and runoff from the steep slopes containing this granitic soil there would be severe sedimentation of this small spawning area. This would eliminate the gravel and cobble nature of this stream necessary for spawning and would likely be

the death knell to this small population. The biggest reason that this population is not likely to be recovered is the biological barrier. Below the area of this population, North Powder River is fed by the overflow out of Meadow Lake, Lost Lake, Little Summit Lake, Summit Lake, and Red Mountain Lake. ODFW sampling of this area documents most of the next 11 miles of stream with fish populations primarily of brook trout with some rainbow trout. Sampling of the five lakes mentioned above and the streams coming out of them and into North Powder River indicate strong thriving populations of brook trout. Brook trout are not native to these lakes and it is evident that they have been stocked. Documentation provided by ODFW dating back to 1978 documents the stocking of several of these lakes with brook trout over a period of several years.

Further documentation exists dating back to 1949 of stocking of brook trout and rainbow trout in the streams and lakes of the entire Powder River Basin watershed. Research documents that brook trout thrive over a wider range of temperature and environmental conditions and will out-produce and out-compete bull trout when they exist in the same stream. Since they are co-genetic with bull trout, they compete for similar foods and habitats (Nakano et al., 1998, Gunckel, 2000). Donald and Alger (1992) documented that introduced lake trout can displace and eliminate native bull trout. Markle (1992) studied bull tout, brook trout, and resulting bull trout-brook trout hybrids in Oregon and found that some small populations of bull trout are seriously threatened by the presence of introduced brook trout. Hybridization occurs naturally in many fish, including bull trout (Phillips et al., 1994, Baxter et al., 1997, Hagen & Taylor, 2001). Since species of fish often vary in chromosome number, hybrid progeny are often sterile, as is typical of many bull trout x brook trout hybrids (Shah et al., 1999).

This results in wasted reproductive effort for bull trout. There are no dams on North Powder River. There is a drop in elevation from around 7,500' at the headwaters to around 3,500' at the confluence with Anthony Creek. Once the snowmelt is gone in the mountains, which usually occurs sometime after July 1 of each year, the stream flow drops dramatically and is fed mainly by springs. During this portion of the summer, reduced stream flows coupled with high summer temperatures rapidly heat the water to temperatures in excess of 59 degrees F at the lower elevation. One of the reasons there are no bull trout in the lower reaches is likely due to water temperature. Most of the 11 kilometers of North Powder River sampled travels through private forested land. North Powder River is also a primary source of irrigation water with adjudicated water rights dating back to 1869. Prior to July 1 of each year, before the drop in stream flows, approximately 8,726 acres of adjudicated water rights irrigate out of six diversions out of North Powder River (Mansfield: 1,808 ac; Nicolson-Hartung: 224 ac.; Bulger Ditch: 2,776 ac.; Hillside Ditch: 2,552 ac.; Powers Ditch: 1328 ac.; and Bamburger Ditch: 38 ac.).

By late summer, stream flows are normally reduced to the point at which only the very oldest adjudicated water rights have any water for irrigation. Only stock water was available by late summer the past two years. This results in the dewatering of large stretches of North Powder River. Even with this dewatering there continues to be a thriving population of brook trout, which adapts to the low water flows and higher temperatures. There is good shade through most of the riparian area along North Powder River. Water users recognize the importance of this watershed and have been careful in past years with selective logging practices, which leave sufficient timber to prevent erosion and promote water retention but yet reduce fuel loads in the interest of fire prevention. Water use aggressively converted to gravity pressure irrigation over the past 20 years in the interest of water conservation to use water more efficiently. Several large projects have been cost shared with engineering provided by NRCS. My personal observations over my lifetime are that the water users of this watershed are very conscious of protecting this watershed by using "best science" agricultural practices to care for the timber in this watershed,

riparian area; and, water conservation and application methods are used to prolong stream flows, which is beneficial to both domesticated livestock and fish. Records in the local NCRS office provide the documentation for many of these projects over the past 20 years.

Hot springs in the area increase water temperatures substantially. An example of hot springs activity in this area is Fisher Hot Springs. This hot springs is a tributary of North Powder River and Powder River. It has a flow rate of about 33 miner's inches and comes out of the ground at a temperature of 102°F. It rises in section 10 of T8S, R38E at a point about ¼ mile west of Foothill Road. It runs parallel to North Powder and flows in an easterly direction approximately 8 miles before its confluence with North Powder River. It is identified on most maps as "Warm Springs Creek". It enters North Powder River at a point east of Interstate Highway 84 in section 14 of T8S, R38E. The temperature at the confluence varies with the season. In the winter it does not freeze and is warm throughout its length. During the months of July, August and part of September, it is still quite warm at it entry into North Powder River.

Anecdotal accounts by neighbors and those who have spent most of their lives in this area hiking and fishing in this watershed provide additional testimony to the documentation presented above.

This writer is the fourth generation to have lived continuously on land located at the base of the Elkhorn Mountain Range and at the base of the North Powder River. The family ranch depends upon irrigation water out of this river with adjudicated water rights for irrigation and stock water dating back to 1877. For most of the years between 1920 and the 1970s, the family milked a small herd of dairy cows. As they had to be there twice a day for the milking, recreational time away from the farm consisted of mainly traveling the distance one could travel to and from the farm in 6-8 hours of time. Consequently, the upper reaches of North Powder River were favorites as they were only 30 minutes from the farm.

My Grandmother was an avid fisherman who enjoyed fishing trips to the upper reaches of Powder River in the late summer in a Model A Ford. My Father, family members, and I have all hiked and fished in this watershed, which included mainly the high lakes. The reason for this was that until the latter part of June of each year, high water did not make for good fishing. By mid-July, low water on the lower part of the river did not make for good fishing. Fishing improved dramatically once ODFW began stocking the river and lakes with brook trout and rainbow. The best fishing has always been in the lakes for the brook trout. Personal experience backs up ODFW fish sampling as to the fish population of the five high lakes, which are tributaries of North Powder River consisting of brook trout with an occasional rainbow. Fishing has not been done in the upper headwaters where the documented location of the bull trout exists due to the small stream size, ruggedness, and remoteness.

As a child growing up in the 1950s, I felt that the man who had the best understanding of the water cycle and hydrology was an old water master by the name of Floyd Willetts who regulated the water usage in this watershed. He encouraged water users to irrigate early in the spring, even while the ground was still wet and it was often raining. When asked why, he would explain the water cycle and the beneficial effects of agricultural irrigation. Historically, when the snowmelt runoff was done in the Elkhorns, the streams would dwindle and dry up in places not fed by springs. Stories were told by the early settlers who had to drive their cattle to springs for water by late summer, as portions of the Powder River would be dry. Diaries from the early travelers on the Oregon Trail document that their travels through Baker County in late summer found dry streambeds and their distance of travel in a day was limited by the distance from spring to spring

for water for themselves and their livestock. The water cycle for the following year in this area begins in October and November with the fall rains beginning to soften the parched soil and fill the ground reservoir.

A series of winter storms is critical for water storage in the form of snow pack in the Elkhorn Mountains. The water master explained that winter storage is in the form of snow pack and summer storage is in the form of charging the ground water table to activate and maintain spring flow. Historically the streams dried up in late summer when the snow pack was gone. A good job of irrigation by the agricultural community during early spring run off re-charges the ground water table and re-charges underground springs. All drainage is towards the Powder and Snake Rivers. This recharging of the water table and springs, along with the reservoirs, now provides year-round water flows of Powder River all the way to the Snake River. The springs coming out of the ground feed the river with water temperatures at around 50 degrees F, which cools the water.

Conclusions why the North Powder River is not essential for the recovery of bull trout and its designation as critical habitat.

The ESA defines critical habitat to include: specific areas within the area occupied by the species, at the time it is listed on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection; and specific areas outside the area occupied by the species at the time it is listed upon a determination by the Secretary that such areas are essential for the conservation of the species. This stream does not appear to meet the above criteria due to the following reasons:

1. The population and spawning area are both too small to sustain a viable population as documented by the October, 1997, Status of Oregon's Bull Trout, Distribution, Life History, Limiting Factors, Management Considerations and Status and listed the status as High Risk.

2. Water temperature is a limiting factor as documented by the 1998 303(d) list of Idaho and Oregon for the Hells Canyon Recovery Unit. Since this population is already in an area well within the Wallowa National Forest and within a Wild and Scenic area which is road less and not easily accessible by the public there is little that can be done to achieve cooler water temperature.

3. Barriers in the way of the Hells Canyon Dam and Thief Valley Dam on the Powder River are barriers to recover of any migratory fluvial populations and therefore, limit bull trout's primary food source.

4. Economic costs to remove the above barriers or install fish ladders and possible loss of water for agriculture could outweigh the recovery criteria for listing this stream.

5. Low late summer stream flows and elevated temperature as documented are limiting factors.

6. Large populations of brook trout and some rainbow trout throughout most of the North Powder River and the lakes and streams that are tributaries to North Powder River which out compete the bull trout. There is also documented hybridization of the brook trout with the bull trout, which would limit any recovery efforts. The only way to recover the

bull trout would involve the extirpation of the brook trout and bull trout in the five lakes and North Powder river. The most effective method would be poisoning of all fish, which would likely also kill the remaining bull trout population. This would not likely be a socially acceptable method with the public who enjoys the good brook trout fishery in this pristine area. Due to the ruggedness and remoteness it would be difficult and expensive to accomplish.

Upper Reaches of North Powder River

From my research and personal observations, it does not appear that there is any way the North Powder River can fit the criteria for recovery of bull trout and the criteria for designation as critical habitat and therefore should be removed from the list. Because of the location of the small population, there is no additional protection needed and any efforts to restore the bull trout would not be economically feasible or socially acceptable.

Deryl Leggett
President, Bulger Ditch Company
Land Owner and Water User
Senior Credit Officer, Farm Credit Services

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Figure 82. Maxwell Letter.

INTRODUCTION: I was born in La Grande, Oregon in 1944 and raised on the Maxwell Ranch in Muddy Creek. My fishing experiences have been many in Baker County but will contain this discussion to Rock Creek, Pine Creek and North Powder river drainage's. I started fishing when I was about 5 years old.

ROCK CREEK DRAINAGE: I have extensive fishing experiences in this drainage system. The Maxwell Farm is supplied with irrigation water from Rock Creek Lake which requires a minimum of two trips a year to turn on and off the irrigation water. I made several of the trips to the lake to either turn the water on or off. I never made a trip into Rock Creek Lake without fishing in the creek or one of the lakes.

1) **Bucket Lake:** Bucket Lake has Eastern Brook Trout in it. The lake was planted by Omer Maxwell and Raymond Ward. The trout were packed into Rock Creek Lake by horses and then carried up the game trail (there is no established trail) to the lake in buckets. It is my understanding that this is how it got its name. The fish that are in Bucket Lake are Eastern Brook Trout. The Lake has no inlet but has a small, short, outlet that breaks into several water falls as it goes down Rock Creek Canyon to join Rock Creek. There is no fish passage up the stream because of the falls. The lake sits in a pocket well over 8,000 feet in elevation. The last time I fished the lake was in 1992 and it was overpopulated with fish. I cast out 60 times and caught 50 very small fish. The fish were not doing well because of inadequate feed supplies. In all the years of fishing Bucket Lake this was the first time that I had seen the fish doing so poorly. The Lake is approximately 6 acres in size and not very deep.
2) **Rock Creek Lake:** The first time I fished Rock Creek Lake was about 1950. The lake is about 30 acres in size and is about 100 feet deep in the deepest portions. The elevation is in excess of 7,000 feet. There is a small inlet feeding the lake from a meadow that sits above the lake. The highest mountain in the Elkhorn Range sits above it, Rock Creek Butte (9,000 feet elevation). Rock Creek origin is at this lake. There is a small damn on the outlet with a overflow. The damn was built by a miner for the Maxwell family. He stayed in a small cabin overlooking the lake. The lake is stocked with Lake Trout and Eastern Brook Trout. The Haines Boy Scouts (Ronnie Young, Vernon Stewart, Raymond Ward and Glenn Ward to name a few) packed fresh water shrimp by horse to give the lake more fish feed. In 1992 I was doing a survey on the lake and have information on reservoir water, date, time of reading, snowpack, inlet water, weir measurements, lake size, measurements at the Killimacue Lake weir, and Rock Creek Gauge readings. The dates I walked into Rock Creek Lake in 1992 are:

05/31/92	06/27/92	08/19/92
06/07/92	07/08/92	08/24/92
06/14/92	08/11/92	08/28/92
06/23/92	08/12/92	11/11/92

During the above trips I fished every time at various locations in the Rock Creek Drainage. Some of the Lake Trout in Rock Creek Lake had more square

tails then the typically deeply forked tail of the Lake Trout. Other Lake Trout showed some orange/reddish coloration on paired fins. The fin coloration could have been part of the Lake Trout characteristics but the squaring of the tail indicated they were hybrids....crossing somehow with the Eastern Brook Trout. Concerned that if this was happening that the trout could become sterile I took a legal limit (don't remember the limit size) for two days fishing to Fish and Game in La Grande, Oregon. Their was several Fish and Game personnel inspecting the fish. The last Fish and Game employee to inspect the fish said that the Eastern Brook Trout and the Lake Trout have crossbred in captivity. Since both species appear to spawn on the shallow, rocky, south side of the lake it appeared very suspicious that the two species had crossed. Fish and Game said the two trout were out of the same family and this most likely happened. They also said that the Eastern Brook Trout and the Bull Trout cross breed very easily and the Eastern Brooks Characteristics would take over because it was more dominate (in other words the Bull Trout's characteristics would disappear). What they did not say -or- maybe know... is there a concern for the Lake Trout/Eastern Brook Trout cross becoming sterile? Fish and Game told me that they have a hard time netting fish in Rock Creek Lake because of its depth. I offered to catch the fish for them and they gave it some serious thought. I told them that I was not going to show them how to catch the fish (the Lake Trout can be hard to catch). I have seen fish plantings in Rock Creek Lake by airplane (Fish and Game). It is somewhat difficult because the lake is in a deep pocket. The plane flew at a higher altitude then it probably wanted to drop the fingerlings because of the need to get out of the pocket. This left the small Eastern Brook dazed and put the Lake Trout into a feeding frenzy (the Lake Trout we caught that day all had been eating the dazed fish). I do not know who planted Rock Creek Lake initially. Fish and Game used to do regular plantings of either Lake Trout or Eastern Brook Trout. The lake had no fish before the plantings because of the impassable falls downstream and Rock Creek Falls below Rock Creek Meadows.

3) **Little Rock Creek Lake:** Little Rock Creek Lake is a short distance downstream from Rock Creek Lake. It is a small, shallow lake stocked with Eastern Brook Trout. The creek falls downstream again prevent fish passage upstream to this small lake. The best way to describe this lake is that it is where everybody goes when they can't catch fish in Rock Creek Lake. The other scuttle is that a fisherman did drown in this lake because of getting his chest waders stuck in the mud (do not know if true).
4) **Ellertson's Pond:** This was a small pond that had a small damn across Rock Creek. It had Eastern Brook Trout in it. The damn washed out but the pond location is where Ellertson's Meadows is. It was probably about 2 acres in size and shallow depth. I used to ride my bicycle to it to fish.
5) **Killimacue Lake:** This lake is located on the North side of Rock Creek. It has a damn on it and the reservoir portion is used for irrigation water. I did take readings from the weir during the 1992 study. The last time I fished

Killimacue Lake was in 1992 with Ronnie and Shelly Perkins. The lake is stocked with Eastern Brook Trout. The lake is moderately deep.

6) **Rock Creek Power Plant Reservoir:** The reservoir was used by the Rock Creek Power Plant to generate electricity (the power plant is now idle). The pond was fed by a wooden flume out of Rock Creek. There was fish in this pond and I believe they traveled through the flume system from Rock Creek (I do not know for sure). I have fished the pond several times and walked the flume a couple of times. Hallie Carnes (power plant employee) gave me a key to the locked gate by the Kerns farm to access the pond by road. The pond is currently drained. It had Eastern Brook Trout and Rainbow Trout.
7) **Rock Creek (valley floor):** I fished Rock Creek many times in the valley. There was Eastern Brook and Rainbow. The creek has several natural fishing holes and trees in the creek. Ralph Stephens had a farm pond stocked with Rainbow Trout out of Rock Creek (the pond is located next to Rock Creek). The trout were huge but Ralph did not let many people fish there. I might admit to fishing their once. Sometimes you would find tout in the farm fields being irrigated. The recently installed pipelines and fish screens prevents fish from entering the irrigation systems.
8) **Rock Creek (from valley to power plant):** There is several fishing holes in this stretch of Rock Creek. There is Rainbow Trout and Eastern Brook. The water that the Power plant used was back in the Creek. The Rock Creek water gauge is located downstream of the power plant.
9) **Rock Creek (from power plant to power plant flume):** This area is rocky and lacking water because of the water the power plant took out of the creek. The flume is currently not being used. There was not a lot of fishing holes. What you did catch was Eastern Brook and Rainbow.
10) **Rock Creek (from power plant flume to Ellertson's Meadows):** There is several fishing holes and stretches of fast water. Below Ellertson's Meadows is a stretch of creek that is on more level ground that had some good fishing holes. Killimacue Creek intercepts Rock Creek downstream from the meadows. The Killimacue Weir is located at the interception. There is a lot of tree growth. I caught Eastern Brook and Rainbow Trout.
11) **Rock Creek (Ellertson's Meadows to Rock Creek Lake Trailhead):** Some of this you have to be persistent to fish. You catch Eastern Brook and Rainbow Trout. There is a cabin located at the meadows on private land.
12) **Rock Creek (Rock Creek Lake Trailhead to Rock Creek Falls):** This area is tough but has some fishing holes that nobody fishes. I have caught one fish at the bottom of the Rock Creek Falls. The holes are small and contain Eastern Brook and Rainbow trout..
13) **Rock Creek (Rock Creek Falls to Rock Creek Meadows):** The falls are impassable for fish and, as far as I am concerned, man. This stretch of creek is by the old Power Line Trail.
14) **Rock Creek Meadows:** This is located about 1mile up the Power Line Trail. The meadows used to be full of small Eastern Brook. During the 1992 period I fished the fish population down and the results were quick to come. The

available feed for the smaller population quickly put weight on the fish. I could not tell if they were growing in length. I checked the area about 3 years ago and there was all most no fish. I was told that an otter was seen in the area. The only fish I caught was Eastern Brook. The upper end of the meadows is mostly marsh that contains a fair amount of the water for the creek. The Rock Creek Power Plant used to have a cabin located at the meadows. The cabin was used when the power lines were inspected. Hallie Carnes (he worked for the power company) gave me a key to this cabin so I could use it when fishing or hunting. The cabin has been removed.

15) **Rock Creek (from meadows to Little Rock Creek Lake):** This has very wooded, steep area and rocky, steep areas with impassable falls. What little I have seen of this area was enough to make me not want to see the rest. I have never found a hole in the areas I saw that would hold a fish. I have never caught a fish in this stretch of creek. There are mountain goats that are sometimes on the rocky canyon walls along the creek. There is the remnants of a miners cabin located about ½ mile from where the Rock Creek Lake trail breaks out of the tree line.

16) **Rock Creek (little Rock Creek Lake to Rock Creek Lake):** There is a small population of Eastern Brook located in the water hole in front of the weir and part way up the tunnel to the lake. They are Eastern Brook. The remaining steam is rocky and has little cover. This is a very short distance.

Rock Creek Drainage Summary:

I have fished all most the total drainage and I have never caught or seen a Bull Trout. The amount of trips I took into Rock Creek Lake in 1992 was more then most people would have in a lifetime. Recently my brother, Gerald Maxwell, flew me and a survey party into Rock Creek Lake by Helicopter to determine the lake size.

The efforts of individuals, boyscouts, Fish and Game, farmers and ranchers has made this pristine area very special. Fish and Game consistently planted the lake with Lake Trout and Eastern Brook Trout which kept the lake well stocked. A Engineer (Connie Eger) for Oregon State Parks and Recreation demanded that I take her to Rock Creek Lake after looking at some of my pictures. The Engineer wanted me to review the marine installation at Wallowa Lake so I took her to Rock Creek Lake after we inspected the marine installation. Her words were "I will never forget this trip" (I never will forget it either....she had a large sheep dog that swam out to our rubber boat and all most sunk it). I took my wife (Bonnie Rood from Haines) to the lake and she will never forget the trip. My wife and I camped at the top of the Pine Creek ridge and woke up with a Mountain Billy Goat eating our tent. The goat herd came down to the lake to check us out (usually the goat herd stay in the rocky cliffs). I had to have a helicopter take my wife out because she injured her leg . I have other parties to this area and they all enjoyed the trip. I can't recall anybody that liked the hike into the lake. I have documentation and pictures available for 1992.

PINE CREEK DRAINAGE: I have fished Pine Creek Reservoir many times. This is one of the routes we used to go into Rock Creek Lake. There is not an established trail

for Rock Creek Lake but there is a game trail that can be used for part of the trip. The creeks origin is from underground and surfaces in the bottom of the reservoir. The road to the reservoir is a 4 wheel drive only. There are times that it is difficult to get a 4-wheel vehicle up the road. The road above the reservoir was put in by bulldozer for the lime plan. The lime plant was doing exploratory work on mining the lime vein that runs through this region. Pine Creek drains a smaller area then Rock Creek. The amount of water is considerably less.

1) **Pine Creek Reservoir:** The reservoir when full is shallow and not very large. When the irrigation water is released the reservoir becomes a small pond and the inlet stream becomes exposed. There are Eastern Brook Trout in the reservoir that are in good condition. I did catch one large Eastern Brook Trout that broke my garcia mitchell 300 reel. I was concerned about where the trout were when the reservoir is empty so I walked the inlet stream looking for them. Finally I got into the stream and felt around in some of the holes under the bank and around logs. I had a friend from Scotland that swear up and down that you could catch fish by "Tickling" them. He was correct. I caught a couple, inspected them and then released them (the state regulations prohibit catching fish by hand ....why I don't know....it is difficult and cold).
2) **Pine Creek:** The creek is small, has several water falls and is difficult to walk. It has some holes that contain small Eastern Brook Trout. I have fished the areas that are close to the road. The remaining portions of Pine Creek I have not been on. I have never fished Pine Creek in the Valley.

PINE CREEK DRAINAGE SUMMARY: Pine Creek reservoir is in a scenic setting. Most people can go there and catch a couple of trout and enjoy the trip. The creek is small and contains small Eastern Brook. I have never seen a Bull Trout in the Pine Creek Drainage.

Figure 83. Loennig Letter

My husband, Frank Loennig, grew up in Muddy Creek and out on the Anthony Lake Highway. On his own, he started exploring the mountains, particularly the North Powder River watershed, regularly. With his grandfather, father, and uncles he fished all of these waters. He loved fishing in the high lakes such as Elk, Green, Lost, Meadow, Rock Creek and Bucket as well as the Lakes around Anthony: Black, Anthony, Grand Round, Lily Pad, Mud, Crawfish, and Van Patten.

Frank's Grandfather, who was born in 1864 here in Rock Creek, used to talk about the Indians and later the sheep herders stocking the lakes-Rock Creek, Elk, Green and Lost- with Dolly Vardon by hand- carrying buckets of fingerlings to the creeks that fed the lakes. I recall Frank saying that except for these fish the lakes were essentially devoid of fish when the first pioneers settled here or so he had heard from his grandfather. One of his great fishing thrills was catching mackinaw in Rock Creek Lake. When he pulled out a 20pounder, he almost lost his line as he had not expected anything that heavy. My son, Gerald, caught mackinaw in Rock Creek Lake last summer after the water had been let out. Frank told me that the mackinaw were stocked in Rock Creek Lake from early times.

Frank always was able to find Dolly Vardon in North Powder River and in Indian Creek which feeds into the North Fork of Anthony Creek above the Forest Service Road as well as high up on Wolf Creek. While these were "fish and release experiences", it gave him a thrill to catch a "native fish". My daughter and I on our last trip up North Powder River camped at the Elk Lake trailhead and caught Dolly Vardon above the creek. Before the jungle that resulted from the 1960's fire in the Gorham Butte area made access to Indian Creek for fishing very difficult, we caught Dolly Vardon there. Neither of us has fished Wolf Creek since Frank died.

We have fished the length of North Powder River, Dutch Flat Creek, Anthony Creek and Antone Creek without encountering a Dolly Vardon except in those selected sites mentioned above. We have caught "bastards", however. These are "brook" trout with all different varieties of meat: pink, whitish light orange and deep orange. They have the brook shape and spots but the spots are different colors also.

Marjorie S. Loennig 3/25/2002

Marjorie S. Loennig
Haines

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APPENDIX M

NATIONAL FOREST FISH HABITAT RMO's

STREAM SURVEYS

Antone Creek
Antone Creek Tributary
Anthony Creek
N. Fk. Anthony Creek
North Powder River

Table 66.

Below are the Interim Riparian Management Objectives (RMOs) for Interim Riparian Habitat Conservation Areas (RHCAs) which apply to public lands managed by WWNF and BLM in the Powder River-Powder Valley Watershed Assessment Area. They are referred to as INFISH standards, referring to non-anadromous watersheds of the Columbia Basin east of the Cascade Mountains.

Standard Widths for Interim INFISH RHCAs

Category 1 – Fish-bearing streams: The stream and the area on either side of the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet including both sides of the stream), whichever is greatest.

Category 2 – Permanently flowing non-fish-bearing streams: The stream and the area of either side on the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance (300 feet including both sides of the stream), whichever is greatest.

Category 3 – Ponds, lakes, reservoirs, and wetlands greater than 1 acre: The body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or to the extent of moderately and highly unstable areas, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest.

Category 4 – Seasonally flowing or intermittent streams, wetlands less than 1 acre, landslides, and landslide-prone areas: This category includes areas with high variability in size and site-specific characteristics. At a minimum, the RHCA must be:

a. the extent of the landslide or landslide-prone area.
b. the intermittent stream channel and the area to the top of the inner gorge.
c. the intermittent stream channel or wetland and the are to the outer edges of the riparian vegetation.
d. for a Priority Watershed, the area from the edges of the stream channel, wetland, landslide, or landslide-prone area to a distance equal to the height of one site-potential tree, or 100 feet slope distance, whichever is greatest.
e. for watersheds no identified as Priority Watersheds, the area from the edges of the stream channel, wetland, landslide, or landslide-prone area to a distance equal to the height of one-half site-potential tree, or 50 feet slope distance, whichever is greatest.

Interim Riparian Management Objectives for Interim RHCAs

Pool Frequency (all systems)	Varies by channel width (see pool frequency table below)
Water Temperature (all systems) (temperatures are for bull trout, but are applied to other salmonids)	No measurable increase in maximum water temperatures (7-day moving average of daily maximum temperature measured as the average of the maximum daily temperature of the warmest consecutive 7-day period). Maximum water temperatures below 59F within adult holding habitat and below 48F within spawning and rearing habitat.
Large Woody Debris (forested systems)	East of Cascade Crest in OR, WA, ID, NV, western MT: >20 pieces per mile; >12 inch diameter; >35 foot length.
Bank Stability (non-forested systems)	>80 percent stable.
Lower Bank Angle (non-forested systems)	>75 percent of banks with <90 degree angle (i.e., undercut)
Width/Depth Ratio (all systems)	<10, mean wetted width divided by mean depth.

Wetted width (feet)	10	20	25	50	75
Pools per mile	96	56	47	26	23

(In)Validation of Standards

Width/Depth Ratio: The above standard predates more recent science (**Rosgen & 199__**). This ratio should be based on stream potential based on stream type, as shown in the following table. Stream types B, C, D and F always are greater than 10.

Stream Type	Width/Depth Ratio (feet)
A	< 12
B	> 12
C	> 12
D	> 12
E	< 12
F	> 12
G	< 12

Pool Frequency: The methodology used to model pool frequency did not consider the fact that pool frequency also varies by stream type (discussed above). Some types of pools were not counted as pools, such as plunge pools and damaged pools. Stream inventories on the WWNF indicate that natural streams do not meet the Pool Frequency objectives.

Table 67a1.

ANTONE CREEK

Reach	Date	Stream Width Today (ft)	Stream Width in Spring (ft)	Turbidity and Water Temp.	% of Stream Shaded	Stream-side Cover Type	Flow (cfs)	Gravel (sq yds)
0.00-0.25	7-12-73	10	16	10+ 57 deg.	40	2nd Growth	5.92	37
0.25-0.50	7-12-73	10	18	10+ 57 deg.	50	2nd Growth	5.92	76
0.50-0.75	7-12-73	10	16	10+ 57 deg.	50	2nd Growth	5.92	85
0.75-1.00	7-12-73	10	16	10+ 57 deg.	60	2nd Growth	5.92	147
1.00-1.25	7-12-73	8		10+ 57 deg.	70	2nd Growth	5.92	0
1.25-1.50	7-12-73	8		10+ 55 deg.	70	2nd Growth	5.92	0
1.50-1.75	7-23-73	8		10+ 52 deg.	80	2nd Growth	5.92	0
1.75-2.00	7-23-73	8		10+ 52 deg.	60	2nd Growth	5.92	0
2.00-2.25	7-23-73	8		10+ 52 deg.	70	2nd Growth	5.80	
2.25-2.50	7-23-73	8		10+ 52 deg.	60	2nd Growth	5.80	0
2.50-2.75	7-23-73	8		10+ 50 deg.	70	2nd Growth	5.80	
2.75-3.00	7-23-73	8		10+ 50 deg.	70	2nd Growth	5.80	0
3.00-3.25	7-27-73	8		10+ 52 deg.	70	2nd Growth	5.80	0
3.25-3.50	7-27-73	8		10+ 52 deg.	80	2nd Growth	5.80	0
3.50-3.75	7-27-73	8		10+ 52 deg.	70	2nd Growth	5.80	0
3.75-4.00	7-27-73	8		10+ 52 deg.	70	2nd Growth	5.80	0
4.00-4.25	7-27-73	6		10+ 52 deg.	50	2nd Growth	5.77	0
4.25-4.50	7-27-73	6	9	10+ 52 deg.	60	2nd Growth	5.77	43
4.50-4.75	7-27-73	6		10+ 52 deg.	50	2nd Growth	5.77	0

Table 67b1. (Continues to the right of 67a.)

Pools (sq yds)	Rubble (sq yds)	% of Section in Pools	Gradient	Fish Species and Size (in)	Fish per 100 ft.	Method of Collection	Barriers	Pass able
175		10	Moderate	Rb 1-10 BT	1-5	Obser-vation		
180		10	Moderate	Rb 1-10 BT	1-5	Obser-vation		
180		10	Moderate	Rb 4-10 BT	1-5	Obser-vation	Logjam	No
175		10	Moderate	Rb 3-10 BT	6-50	Obser-vation		
155		10	Moderate	Rb 4-10	6-50	Obser-vation	Many Logjams	
100	1073	0	Moderate	Rb 3-10	6-50	Obser-vation		
82	1091	0	Moderate	Rb 3-10	6-50	Obser-vation		
52	1121	0	Steep	Rb 2-12	6-50	Obser-vation	Culvert	Yes
61	1112	0	Steep	Rb 2-12	6-50	Obser-vation		
95	1078	0	Steep	Rb 2-12 BT 5-10	6-50 1-5	Obser-vation	Many Logjams	
77	1096	0	Steep	Rb 2-12	6-50	Obser-vation		
82	1091	0	Steep	Rb 3-10 BT 3-10	1-5 1-5	Obser-vation	Culvert	Yes
57	1116	0	Steep	Rb 3-10 BT 3-10	1-5 1-5	Obser-vation		
47	1126	0	Steep	Rb 3-10 BT 3-10	1-5 1-5	Obser-vation	Falls Logjams	No
50	1123	0	Steep	Rb 2-8 BT 2-8				
53	1120	0	Steep	Rb 2-10 BT 2-10			Many Logjams	
180	700	20	Steep	Rb 2-8 BT 2-8	1-5 1-5	Obser-vation	Many Logjams	
165	672	10	Moderate	Rb 2-10 BT 2-10	 1-5	Obser-vation		
165	715	10	Steep	Rb 2-10 BT 2-10	6-50 6-50	Obser-vation		

(Table 67a2 continued)

4.75-5.00	7-27-73	6	10	10+ 52 deg.	50	2nd Growth	5.77	30
5.00-5.25	7-27-73	6		10+ 52 deg.	50	2nd Growth	5.77	0
5.25-5.50	7-27-73	6		10+ 52 deg.	60	2nd Growth	5.77	0
5.50-5.75	7-27-73	6	9	10+ 52 deg.	50	2nd Growth	5.77	18
5.75-6.00	7-31-73	5		10+ 52 deg.	70	2nd Growth	5.60	0
6.00-6.25	7-31-73	5		10+ 52 deg.	70	2nd Growth	5.60	0
6.25-6.50	7-31-73	5		10+ 52 deg.	70	2nd Growth	5.60	0
6.50-6.75	7-31-73	5	8	10+ 52 deg.	70	2nd Growth	5.60	42
6.75-7.00	7-31-73	5	8	10+ 56 deg.	70	2nd Growth	5.60	47
7.00-7.25	7-31-73	5		10+ 56 deg.	60	2nd Growth	5.12	0
7.25-7.50	7-31-73	5		10+ 56 deg.	70	2nd Growth	5.12	0
7.50-7.75	8-1-73	3		10+ 58 deg.	40	2nd Growth	2.52	14
7.75-8.00	8-1-73	3	5	10+ 58	30	2nd Growth	2.52	18
8.00-8.25	8-1-73	3	5	10+ 56 deg.	20	2nd Growth	2.52	13
8.25-8.50	8-1-73	3		10+ 56 deg.	20	2nd Growth	2.14	0
8.50-8.75	8-2-73	3		10+ 58 deg.	20	2nd Growth	2.14	0
8.75-9.00	8-2-73	3		10+ 58 deg.	20	2nd Growth	2.14	0
9.00-9.25	8-2-73	10		10+ 58 deg.	0	2nd Growth	2.14	0
9.25-9.50	8-2-73	3		10+ 58 deg.	20	2nd Growth	2.00	0
9.50-9.75	8-2-73	3		10+ 58 deg.	10	2nd Growth	2.00	0
9.75-10.0	8-2-73	4		10+ 58 deg.	10	Old Growth	2.00	0

Explanations: Turbidity is listed as "visibility in feet." Gradients are: "Steep"—over 2.5%, Moderate"—1.0 t

(Table 67b2 continued)

165	685	10	Steep	Rb 1-10 BT 1-10	1-5 6-50	Obser- vation		
65	815	0	Steep	Rb 1-10 BT 1-10	1-5 6-50	Obser- vation	Huge Logjams	
90	790	10	Steep	BT 1-10	6-50	Obser- vation		
180	682	10	Steep	Rb BT 1-10	6-50	Obser- vation	Culvert	
67	666	0	Steep	Rb 2-10 BT 2-10	1-5 6-50	Obser- vation	Many Logjams	
57	676	0	Steep	Rb 2-10 BT 2-10	1-5 6-50	Obser- vation	Many Logjams	
62	671	0	Steep	Rb 2-10 BT 2-10	1-5 6-50	Obser- vation		
63	628	0	Steep	Rb BT 1-8	6-50	Obser- vation	3 Huge Logjams	
374		50	Moderate	Rb BT 2-10	6-50	Obser- vation		
98	635	10	Steep	BT 2-8	6-50	Obser- vation		
52		0	Steep	Rb 2-8 BT 2-8	1-5 6-50	Obser- vation		
130		30	Steep	Rb BT 1-6	6-50	Obser- vation		
87		20	Moderate	Rb 1-4 BT 1-4	6-50 6-50	Obser- vation		
19	408	0	Moderate	Rb 1-4 BT 1-4	6-50 6-50	Obser- vation		
62	378	10	Steep					
33	407	0	Steep					
40	400	10	Steep					
4400		100	Flat	No Fish At All				
49	391	10	Steep					
45	395	10	Moderate	No Fish				
38		80	Flat	No Fish				

to 2.5%, "Flat"—0 to 1%. Fish species: Rb = Rainbow Trout, BT = Brook Trout.

Table 68a

ANTONE CREEK TRIBUTARY D (Mouth is at 8.00-mile marker of the Antone Creek survey)

Reach	Date	Stream Width Today (ft)	Stream Width in Spring (ft)	Turbidity and Water Temp.	% of Stream Shaded	Stream-side Cover Type	Flow (cfs)	Gravel (sq yds)
0.00-0.25	8-3-73	2		10+ 50 deg.	20	Old Growth	1.00	0
0.25-0.50	8-3-73	3		10+ 50 deg.	40	Old Growth	1.00	0
0.50-0.75	8-3-73	3		10+ 50 deg.	30	Old Growth		0
0.75-1.00	8-3-73	0		10+	30	Old Growth	0.00	0
1.00-1.25	8-3-73			10+ 60 deg.	10	Old Growth	0.00	0

Explanations:

Turbidity is listed as "visibility in feet."

Gradients are "Steep"---------over 2.5%
"Moderate"---1.0 to 2.5%
"Flat"----------0 to 1%

Fish Species: Rb----Rainbow Trout
BT----Brook Trout

Table 68b. (continues to the right of 68a).

Pools (sq yds)	Rubble (sq yds)	% of Section in Pools	Gradient	Fish Species and Size (in)	Fish per 100 ft.	Method of Collection	Barriers	Pass able
35	258	10	Steep	Rb 1-6 BT 1-6	1-5 6-50	Obser-vation		
399		90	Flat	Rb 1-6 BT 1-6	1-5 6-50	Obser-vation		
343		70	Flat	Rb 1-6 BT 1-6	1-5 6-50	Obser-vation		
			Flat	Rb 1-6 BT 1-6	1-5 6-50	Obser-vation		

Table 69a1. Anthony Creek Stream Survey

ANTHONY CREEK

Reach	Date	Stream Width Today (ft)	Stream Width in Spring (ft)	Turbidity and Water Temp.	% of Stream Shaded	Stream-side Cover Type	Flow (cfs)	Gravel (sq yds)
0.00-0.25	8-7-73	12	30	10+ 58 deg.	40	Herbs Cottonwo	8	140
0.25-0.50	8-7-73	12 (Channel	30 Modified)	10+ 58 deg.	40	Herbs Trees	8	85
0.50-0.75	8-7-73	12	30	10+ 58 deg.	60	Herbs Cottonwo	8	210
0.75-1.0	8-7-73	12	30	10+ 58 deg.	60	Herbs Other	8	202
1.00-1.25	8-7-73	12	30	10+ 59 deg.	50	Herbs Cot/Birch	7	115
1.25-1.50	8-7-73	12	30	10+ 59 deg.	30	Herbs Other	7	133
1.50-1.75	7-7-73	12	30	10+ 59 deg.	50	Herbs Other	7	102
1.75-2.00	8-7-73	12	20	10+ 60 deg.	60	Herbs Co/Bir/Al	7	101
2.00-2.25	8-7-73	12	30	10+ 60 deg.	60	Herbs Other	6	105
2.25-2.50	8-7-73	15	30	10+ 61 deg.	40	Herbs Other	6	68
2.50-2.75	8-7-73	17	30	10+ 61 deg.	60	Herbs Other	6	56
2.75-3.00	8-7-73	12	30	10+ 61 deg.	60	Herbs Other	6	52
3.00-3.25	8-7-73	11	25	10+ 62 deg.	50	Herbs Trees	6	56
3.25-3.50	8-7-73	11	30	10+ 62 deg.	60	Herbs Other	5	67
3.50-3.75	8-7-73	11	30	10+ 62 deg.	50	Herbs Other	5	14
3.75-4.00	8-7-73	12	30	10+ 62 deg.	60	2nd & Old Growth	7	7
4.00-4.25	8-7-73	12	30	10+ 62 deg.	60	2nd & Old Growth	7	3
4.25-4.5	8-7-73	11	25	10+ 62 deg.	70	2nd & Old Growth	7	12

Table 69b1. (continues to the right of 69a).

Pools (sq yds)	Rubble (sq yds)	% of Section in Pools	Gradient	Fish Species and Size (in)	Fish per 100 ft.	Method of Collection	Barriers	Pass able
180	1440	10	Moderate	Rb 2-8 Bt 1-8	1-5 6-50	Obser-vation		
215	1460	20	Moderate	Rb 2-6 Bt 2-8	1-5 6-50	Obser-vation		
220	1330	20	Moderate	Rb 2-8 BT 2-8	6-50 1-5	Obser-vation		
225	1333	20	Moderate	Rb 2-8 BT 2-8 Wf 6-12	6-50 1-5 1-5	Obser-vation		
245	1400	20	Moderate	Rb 1-8 BT 2-4	6-50 1-5	Obser-vation		
255	1372	20	Moderate	Rb 2-6	6-50	Obser-vation		
215	1443	20	Moderate	Rb 2-8	6-50	Obser-vation		
215	1444	20	Moderate	Rb 2-8	6-50	Obser-vation		
250	1405	20	Moderate	Rb 2-8	6-50	Obser-vation		
86	2046	10	Moderate	Rb 2-4	6-50	Obser-vation		
121	2316	10	Moderate	Rb 2-9 BT 2-7	6-50 1-5	Obser-vation		
150	1558	10	Moderate	Rb 1-9 BT 2-8	6-50 1-5	Obser-vation		
130	1427	10	Moderate	Rb 2-9 BT 2-8	6-50 1-5	Obser-vation		
147	1399	10	Moderate	Rb 1-9 BT 2-6	6-50 1-5	Obser-vation		
113	1486	10	Steep	Rb 1-9 BT 2-8	6-50 1-5	Obser-vation		
63	1690	0	Steep	Rb 2-9 BT 1-6	6-50 1-5	Obser-vation		
58	1699	0	Steep	Rb 2-6 BT 1-4	6-50 1-5	Obser-vation		
69	1532	0	Steep	Rb 1-8 BT 1-8	6-50 1-5	Obser-vation		

(Table 69a2 continued)

4.50-4.75	8-7-73	11	25	10+ 62 deg.	70	2nd & Old Growth	7	18
4.75-5.00	8-7-73	11	25	10+ 62 deg.	70	2nd & Old Growth	8	44
5.00-5.25	8-8-73	11	25	10+ 57 deg.	30	Old Growth	8	27
5.25-5.50	8-8-73	11	20	10+ 57 deg.	70	Old Growth	8	13
5.50-5.75	8-8-73	11	20	10+ 57 deg.	80	Old Growth	8	10
5.75-6.00	8-8-73	15	20	10+ 57 deg.	80	Old Growth	8	30
6.00-6.25	8-8-73	15	20	10+ 57 deg.	80	Old Growth	8	11
6.25-6.50	8-8-73	15	20	10+ 57 deg.	80	Old Growth	8	35
6.50-6.75	8-10-73	15	20	10+	70	Old Growth	7	4
6.75-7.00	8-10-73	15	20	10+ 54 deg.	70	Old Growth	7	3
7.00-7.25	8-10-73	12	18	10+ 54 deg.	70	Old Growth	7	1
7.25-7.50	8-10-73	12	18	10+ 54 deg.	80	Old Growth	7	3
7.50-7.75	8-10-73	12	18	10+ 54 deg.	80	Old Growth	7	14
7.75-8.00	8-10-73	9	12	10+ 53 deg.	40	2nd Growth	7	11 (Start of
8.00-8.25	8-10-73	9	12	10+ 53 deg.	60	2nd Growth	7	5
8.25-8.50	8-10-73	9	12	10+ 53 deg.	40	2nd Growth	6	10
8.50-8.75	8-10-73	10	12	10+ 53 deg.	30	2nd Growth	6	21
8.75-9.00	8-10-73	10	12	10+ 53 deg.	30	2nd Growth	6	195
9.00-9.25	8-10-73	9	12	10+ 56 deg.	30	2nd Growth	5	280
9.25-9.50	8-13-73	8	11	10+ 56 deg.	30	2nd Growth	5	209
9.50-9.75	8-13-73	9	12	10+ 56 deg.	30	2nd Growth	5	87
9.75-10.0	8-13-73	9	12	10+ 56 deg.	30	2nd Growth	5	232

(Table 69b2 continued)

52	1543	0	Steep	Rb 1-7 BT 1-6	6-50 1-5	Obser- vation		
54	1515	0	Steep	Rb 1-7 BT 1-6	6-50 1-5	Obser- vation		
89	1497	0	Steep	Rb BT	6-50 1-5	Obser- vation		
66	1534	0	Steep	Rb 1-7 BT 1.7	6-50 1-5	Obser- vation		
68	1535	0	Steep	Rb 2-9	1-5	Obser- vation		
84	2086	0	Steep	Rb 2-9 BT 4-7	6-50 1-5	Obser- vation		
80	2109	0	Steep	Rb 2-9 BT 2-6	6-50 1-5	Obser- vation		
68	2097	0	Steep	Rb 1-6 BT 1-4	6-50 1-5	Obser- vation		
96	2100	0	Steep	Rb 2-4	1-5	Obser- vation		
85	2112	0	Steep	Rb 2-6 BT 2-4	6-50 1-5	Obser- vation		
205	1554	10	Steep	Rb 1-5	1-5	Obser- vation		
105	1652	0	Steep	Rb 2-6 BT 1-4	1-5 1-5	Obser- vation		
123	1623	0	Steep	Rb 1-5	1-5	Obser- vation		
91 Anthony	1218 Burn)	0	Steep	BT 1-8 Rb	1-5	Obser- vation	Many Logjams	
146	1169	10	Steep	BT 1-8 Rb	1-5	Obser- vation		
327	983	20	Steep	Rb 1-8 BT 1-8	1-5 1-5	Obser- vation		
262	1184	20	Steep	Rb 1-8 BT 1-8	1-5 6-50	Obser- vation		
627		40	Moderate	Rb 1-8 BT 1-8	6-50 6-50	Obser- vation		
581	0	40	Moderate	Rb 1-8 BT 1-8	6-50 6-50	Obser- vation		
649	0	50	Moderate	Rb 1-8 BT 1-8	1-5 1-5	Obser- vation		
262		20	Steep	Rb 1-8 BT 1-8	1-5 1-5	Obser- vation		
145		10	Steep	Rb 1-8 BT 1-8	1-5 1-5	Obser- vation		

(Table 69a3 continued)

10.0-10.25	8-13-73	6	8	10+ 56 deg.	40	2nd Growth	5	107
10.25-10.5	8-13-73	6	8	10+ 56 deg.	50	Logged 6-10 yrs.	5	0 (End of
10.5-10.75	8-13-73	8	10	10+ 58 deg.	20	Logged 6-10 yrs	4	0
10.75-11.0	8-13-73	6	8	10+ 58 deg.	60	Logged 6-10 yrs	4	82
11.0-11.25	8-13-73	8	10	10+ 58 deg.	60	Logged 6-10 yrs	4	29
11.25-11.5	8-13-73	8	10	10+ 58 deg.	60	Logged 6-10 yrs	4	67
11.5-11.75	8-13-73	8	10	10+ 54 deg.	50	Old Growth	4	430
11.75-12.0	8-13-73	8	10	10+ 56 deg.	40	Old Growth	3	90
12.0-12.25	8-13-73	6		10+ 56 deg.	30	Old Growth	3	0
12.25-12.5	8-13-73	6		10+ 56 deg.	20	Old Growth	3	
12.5-12.75	8-13-73	6	8	10+ 56 deg.	30	Old Growth	3	82
12.75-13.0	8-13-73	6	8	10+ 56 deg.	30	Old Growth	3	47
13.0-13.25	8-13-73	5		10+ 54 deg.	0	Old Growth	3	
13.25-13.5	8-13-73	6	8	10+ 55 deg.	20	Old Growth	3	67
13.5-13.75	8-13-73	6	8	10+ 54 deg.	20	Old Growth	3	47
13.75-14.0	8-14-73	4		10+ 66 deg.	30	Old Growth	3	0

Explanations:

Turbidity is listed as "visibility in feet."

Gradients are "Steep"---------over 2.5%
"Moderate"---1.0 to 2.5%
"Flat"---------0 to 1%

Fish Species: Rb----Rainbow Trout
BT----Brook Trout
WF---Whitefish

(Table 69b3 continued)

55		0	Steep	BT 1-6 Rb	1-5	Obser- vation		
35 Anthony	Burn)	0	Steep	BT 1-6	1-5	Obser- vation		
35		0	Steep	BT 1-6	1-5	Obser- vation		
70	728	0	Steep	Rb BT				
64	1080	0	Steep	Rb 1-8 BT 1-8	1-5 1-5	Obser- vation		
77	1029	0	Steep	BT 1-6 Rb	1-5	Obser- vation	Many Logjams	
250	493	20	Steep	Rb 1-12 BT 1-12	6-50 6-50	Obser- vation		
210	873	20	Steep	Rb 1-15 BT 1-13	6-50 6-50	Obser- vation		
30		0	Steep	Rb 1-14 BT 1-14	6-50 6-50	Obser- vation		
32	848	0	Steep					
598		60	Moderate	Rb 1-8 BT 1-8	6-50 6-50	Obser- vation		
265	568	30	Moderate	Rb 1-8 BT 1-8	1-5 1-5	Obser- vation		
35	698	0	Steep					
620	193	70	Flat	Rb 1-8 BT 1-8	1-5 1-5	Obser- vation		
797		90	Flat	Rb 1-8 BT 1-8	1-5 1-5	Obser- vation		
472		80	Flat	Rb 1-6 BT 1-6	6-50 6-50	Obser- vation		

Table 70a. North Fork Anthony Creek Survey.

NORTH FORK ANTHONY CREEK

Reach	Date	Stream Width Today (ft)	Stream Width in Spring (ft)	Turbidity and Water Temp.	% of Stream Shaded	Stream-side Cover Type	Flow (cfs)	Gravel (sq yds)
0.00-0.25	8-7-73	12	18	10+ 54 deg.	50	2nd Growth	12	168
0.25-0.50	8-7-73	8	16	10+ 54 deg.	60	2nd Growth	12.0	145
0.50-0.75	8-7-73	8	16	10+ 54 deg.	70	2nd Growth	12.0	265
0.75-1.00	8-7-73	8	16	10+ 54 deg.	70	2nd Growth	12.0	305
1.00-1.25	8-7-73	8	16	10+ 54 deg.	70	2nd Growth	12.0	115
1.25-1.50	8-7-73	8	15	10+ 54 deg.	60	2nd Growth	12.0	75
1.50-1.75	8-7-73	8	15	10+ 54 deg.	70	2nd Growth	12.0	67
1.75-2.00	8-7-73	8	15	10+ 59 deg.	60	2nd Growth	12.0	230
2.00-2.25	8-7-73	7	11	10+ 58 deg.	70	Old Growth	11.91	90
2.25-2.50	8-7-73	6	10	10+ 58 deg.	50	Old Growth	11.82	70
2.50-2.75	8-7-73	6	10	10+ 58 deg.	40	Old Growth	6.08	230
2.75-3.00	8-7-73	6	10	10+ 58 deg.	30	2nd Growth	6.08	225 (Start of
3.00-3.25	8-7-73	4	6	10+ 58 deg.	30	2nd Growth	6	200
3.25-3.50	8-8-73	4	6	10+ 52 deg.	40	2nd Growth	4.0	9 (End of
3.50-3.75	8-8-73	4	6	10+ 52 deg.	50	Old Growth	4.0	29
3.75-4.00	8-8-73	3	5	10+ 54 deg.	50	Logged 1 month	3.91	13
4.00-4.25	8-8-73	3	5	10+ 54 deg.	40	Logged 0-5 yrs	3.70	
4.25-4.50	8-8-73	2	4	10+ 54 deg.	50	Old Growth	1.12	

Explanations: Turbidity is listed as "visibility in feet." Gradients are: "Steep"—over 2.5%; "Moderate"—1.0

Table 70b. (continues to the right of 70a)

Pools (sq yds)	Rubble (sq yds)	% of Section in Pools	Gradient	Fish Species and Size (in)	Fish per 100 ft.	Method of Collection	Barriers	Pass able
150	1442	0	Steep	Rb 1-3 BT	1-5	Obser-vation		
345	683	30	Steep	Rb BT				
95	813	0	Steep	Rb 1-6 BT 1-6	1-5 1-5	Obser-vation	Logjam	Yes
260	608	20	Steep	Rb 1-3 BT	1-5	Obser-vation	Logjam	Yes
185	873	10	Steep	Rb 1-7 BT 1-7	1-5 1-5	Obser-vation		
95	1003	0	Steep	Rb 1-7 BT 1-7	1-5 1-5	Obser-vation		
210	896	20	Steep	Rb 1-7 BT 1-7	1-5 1-5	Obser-vation		
335	608	10	Steep	Rb 1-7 BT 1-7	1-5 1-5	Obser-vation	Culvert	?
137	800	10	Steep	Rb 1-8 BT 1-8	1-5 1-5	Obser-vation		
110	700	10	Steep	Rb 1-7 BT 1-7	1-5 1-5	Obser-vation		
285	365	30	Steep	Rb 1-7 BT 1-7	1-5 1-5	Obser-vation		
335 Anthony	320 Burn)	30	Steep	Rb 1-7 BT	1-5	Obser-vation		
135	387	20	Steep	BT 1-8 Rb	1-5	Obser-vation		
77 Anthony	501 Burn)	10	Steep	BT 1-8 Rb	1-5	Obser-vation		
30	528	0	Steep	BT 1-7 Rb	1-5	Obser-vation	Many Logjams	
31	396	0	Steep	BT 1-6 Rb	1-5	Obser-vation		
34		0	Moderate	BT 1-6	1-5	Obser-vation		
92		20	Moderate	BT 1-6	1-5	Obser-vation		

to 2.5%; "Flat"—0 to 1%. Fish: Rb = Rainbow Trout, BT = Brook Trout.

Table 71a1. North Powder River Stream Survey.

NORTH POWDER RIVER

Reach	Date	Stream Width Today (ft)	Stream Width in Spring (ft)	Turbidity and Water Temp.	% of Stream Shaded	Stream-side Cover Type	Flow (cfs)	Gravel (sq yds)
Mouth-.25	7-28-77	10	18	1-2	20	Herbs Willows	2.25	130
0.25-0.50	7-28-77	12	20	1-2	10	Herbs Willows	2.25	27
0.50-0.75	7-26-77	12	20		20	Herbs Willows		74
0.75-1.00	7-21-77	12	20	1-2 70 deg.	10	Herbs Willows	2.7	123
1.00-1.25	7-21-77	12	20	78 deg.	10	Herbs Willows	2.7	14
1.25-1.50	7-21-77	12	20	78 deg.	10	Herbs	2.7	0
1.50-1.75	7-26-77	15	20	1-2	0	Feedlot	1.26	20
1.75-2.00	7-26-77	12 (Channel	20 Modified)		30	Herbs Willows	1.3	50
2.00-2.25	7-26-77	12	20	1-2	10	Herbs Willows	1.35	83
2.25-2.50	7-26-77	21	15	1-2	20	Herbs Willows Rose		130
2.50-2.75	7-28-78	20 (Channel	25-30 Modified)	2-5 78 deg.	10	Herbs	7.0	32
2.75-3.00	7-28-78	21	25-30	2-5 78 deg.	10		7.0	
3.00-3.25	7-28-77	21 (Channel	25-30 Modified)	2-5 78 deg.	10	Herbs	4	53
3.25-3.50	7-28-77	21 (Channel	25-30 Modified)	2-5 78 deg.	10	Herbs	4	0

Table 71b1. (continues to the right of 71a)

Pools (sq yds)	Rubble (sq yds)	% of Section in Pools	Gradient	Fish Species and Size (in)	Fish per 100 ft.	Method of Collection	Barriers	Pass able
1436	214	70	Moderate	Bsu 1-18 Rss 1-4				
1150	603	70	Moderate	Rss 1.4 Bsu 1-18	50+ 6-50			
1612	94	90	Flat	Bsu 1-10 Rss 1-4	50+ 50+			
1556	101	80	Flat	Rb 10 Brb 9 Bsu 1-10 Rss 1-4	1-5	Obser-vation	Logjam	Yes
1674	92	70	Moderate	Bsu 1-10 Rss 1-4	50+ 50+	Obser-vation	1 Dam 1 Logjam	Yes Yes
1170	610	60	Moderate	Rss 1-4 Bsu 1-10	50+ 6-50	Obser-vation		
1665	540	70	Moderate	Rss 1-4 Bsu 1-15	50+ 50+	Collected		
1031	699	60	Moderate	Rss 1-4 Bsu 1-10	50+ 50+			
1274	423	70	Moderate	Rss 1-4 Bsu 1-10	50+ 50+			
2715 backwater from dam	270	80	Flat	Rb 6 Brb 8-9 Bsu Rss	1-5 6-50 6-50 6-50	Shock	1 Dam	No
1400	1683	50	Moderate	Rb 6-12 Brb 7-9 Bsu 1-12 Rss 1-4	1-5 1-5 6-50 6-50			
1260	1855	40	Moderate	Rb 6-12 Brb 7-9 Bsu 1-12 Rss 1-4	1-5 1-5 6-50 6-50			
1605	1457	50	Moderate	Rb 6-12 Brb 7-9 Bsu 1-12 Rss 1-4	1-5 1-5 6-50 6-50	Obser-vation	1 Dam	No
1479	1636	50	Moderate	Rb 6-12 Brb 7-9 Rss 1-4 Bsu 1-12	1-5 1-5 6-50 6-50		1 Dam	Yes

(Table 71a2 continued)

3.50-5.25	8-2-77	21 (200 yds of Channel	30 Modified above RR Bridge)	64 deg.	20	Herbs Willows P. Birch	5	
5.25-7.0	8-1-77	18	30-35	82 deg.	30	Herbs and 6 Tree Species	5	48
7.0-11.0	8-8-77	21		68 deg.	50	Herbs	2.5	26
11.0-11.25	8-2-77	24	35	5-10 64 deg.	20	Herbs and 3 Tree Species	13	
11.25-13.2							Dry	
13.25-14.0	8-11-77	15	20	5-10 65 deg.	50	Herbs Willows Alders	4	33
14-14.25	8-20-73	18	35	10+ 53 deg.	20	2nd Growth	8.0	4
14.25-14.5	8-20-73	16	33	10+ 53 deg.	30	2nd Growth	7.21	45
14.5-14.75	8-20-73	14	30	10+ 53 deg.	20	Logged 6-10 yrs	7.21	46
14.75-15.0	8-24-73	10	18	10+ 52 deg.	30	2nd Growth	14.4	0
15.0-15.25	8-24-73	10	18	10+ 52 deg.	30	2nd Growth	14.4	7
15.25-15.5	8-24-73	10	18	10+ 52 deg.	30	2nd Growth	14.4	0
15.5-15.75	8-24-73	8	16	10+ 51 deg.	30	2nd Growth	10.12	9
15.75-16.0	8-24-73	10	20	10+ 51 deg.	50	Logged 0-5 yrs	10.12	0
16.0-16.25	8-24-73	10	20	10+ 51 deg.	60	Logged 0-5 yrs	10.12	11
16.25-16.5	8-24-73	10	20	10+ 51 deg.	60	2nd Growth	10.12	0
16.5-16.75	9-10-73	10	20	10+ 49 deg.	50	2nd Growth	10.12	12
16.75-17.0	9-10-73	10	20	10+ 49 deg.	50	2nd Growth	10.12	0
17.0-17.25	9.10-73	10	18	10+ 50 deg.	50	2nd Growth	10.12	12

(Table 71b2 continued)

7508	14,297	40	Moderate	Rss 1-4 Bsu 1-12 Rb 6-12 Brb 7-9	6-50 6-50 1-5 1-5	Obser-vation	1 Dam	No
5252	13,390	40	Moderate	Rss 1-3 Bsu 1-10 Rb 6-12 Brb 7-9	6-50 6-50 1-5 1-5	Obser-vation	1 Logjam	Yes
18,736	31,078	50	Moderate	Rss 1-3 Bsu 4-10 Rb 6-12 Brb 7-9	6-50 6-50 1-5 1-5	Obser-vation	6 Dams	No
770	2790	50	Moderate	Rss 1-4 Bsu Rb 6-12	6-50 6-50 1-5			
2131	4511	30	Steep	Rb 1-12 Br	1-5 1-5	Obser-vation	2 Dams	No
787	1849	30	Steep	Rb 1-8 BT	1-5	Obser-vation		
676	`1626	30	Moderate	Rb 1-8 BT 1-6	6-50 1-5	Obser-vation		
631	1376	30	Moderate	Rb 1-10 BT 1-6	1-5 1-5	Obser-vation		
255	1212	20	Moderate	Rb 1-6	1-5	Obser-vation		
210	1250	10	Moderate	Rb 1-6 BT	1-5	Obser-vation		
67	1400	0	Moderate	Rb 1-6	1-5	Obser-vation		
84	1080	0	Moderate	Rb 1-6 BT 1-6	1-5 1-5	Obser-vation		
57	1410	0	Moderate	Rb 1-6 BT 1-6	1-5 1-5	Obser-vation		
70	1386	0	Moderate	Rb 1-6 BT 1-6	1-5 1-5	Obser-vation		
80	1387	0	Moderate	Rb 1-6 BT 1-6	1-5 1-5	Obser-vation		
59	1396	0	Moderate	Rb BT				
90	1377	0	Steep	Rb 1-6	1-5	Obser-vation	Several Logjams	No
96	1359	0	Steep	Rb 1-6 BT 1-6	1-5 1-5	Obser-vation		

(Table 71a3 continued)

17.25-17.5	9-10-73	10	19	10+ 50 deg.	60	2nd Growth	10.12	0
17.5-17.75	9-10-73	10	19	10+ 50 deg.	50	2nd Growth	10.12	12
17.75-18.0	9-10-73	10		10+ 50 deg.	60	2nd Growth	10.12	0
18.0-18.25	9-12-73	10		10+ 48 deg.	50	2nd Growth	10.12	0
18.25-18.5	9-12-73	10	19	10+ 49 deg.	50	2nd Growth	10.12	10
18.5-18.75	9-12-73	10		10+ 49 deg.	50	2nd Growth	10.12	0
18.75-19.0	9-12-73	10		10+ 50 deg.	50	2nd Growth	10.12	0
19.0-19.25	9-12-73	10	19	10+ 50 deg.	60	2nd Growth	10.12	19
19.25-19.5	9-12-73	10		10+ 50 deg.	60	2nd Growth	10.12	0
19.5-19.75	9-12-73	10	19	10+ 50 deg.	60	2nd Growth	10.12	0
19.75-20.0	9.12-73	10	19	10+ 50 deg.	60	2nd Growth	10.12	232
20.0-20.25	9-12-73	10	19	10+ 50 deg.	60	2nd Growth	10.12	330
20.25-20.5	9-13-73	10	19	10+ 45 deg.	60	2nd Growth	10.12	92
20.5-20.75	9-12-73	10	19	10+ 45 deg.	60	2nd Growth	10.12	25
20.75-21.0	9-12-73	8		10+ 45 deg.	60	2nd Growth	10.02	0
21.0-21.25	9-12-73	8		10+ 45 deg.	60	2nd Growth	10.00	0
21.25-21.5	9-12-73	8	15	10+ 45 deg.	60	2nd Growth	10.00	40
21.5-21.75	9-12-73	8	15	10+ 45 deg.	50	2nd Growth	10.00	25
21.75-22.0	9-12-73	6		10+ 45 deg.	60	2nd Growth	8.23	0
22.0-22.25	9-12-73	6	11	10+ 45 deg.	60	2nd Growth	8.23	22
22.25-22.5	9-13.73	6		10+ 45 deg.	50	2nd Growth	8.17	0
22.5-22.75	9-14-73	6	11	10+ 43 deg.	50	2nd Growth	8.17	12

(Table 71b3 continued)

130	1337	0	Steep	Rb 1-6 BT 1-6	1-5 1-5	Obser- vation		
58	1397	0	Steep	Rb 1-6 BT 1-6	1-5 1-5	Obser- vation		
57	1410	0	Steep	Rb 1-6 BT 1-6	1-5 1-5	Obser- vation		
98	1369	0	Steep	Rb 1-6 BT 1-5	1-5 1-5	Obser- vation	Many Logjams	
73	1384	0	Steep	Rb 1-6 BT 1-6	1-5 1-5	Obser- vation		
455	1012	30	Moderate	Rb 1-6	1-5	Obser- vation		
125	1342	0	Steep	Rb 1-6	1-5	Obser- vation		
128	1320	0	Steep	Rb 1-6	1-5	Obser- vation		
105	1362	0	Steep	Rb 1-6	1-5	Obser- vation	Many Logjams	
147	1320	10	Steep	Rb 1-6	1-5	Obser- vation		
543	692	30	Moderate	Rb 1-6 BT 1-6	1-5 1-5	Obser- vation		
477	660	30	Moderate	Rb 1-6 BT	1-5	Obser- vation		
245	1130	10	Steep	Rb 1-6 Bt	1-5	Obser- vation		
415	1027	20	Steep	Rb 1-6 BT 1-6	1-5 1-5	Obser- vation		
145	1028	10	Steep	Rb 1-6	1-5	Obser- vation		
250	923	20	Steep	Rb 1-6	1-5	Obser- vation		
690	443	60	Moderate	Rb 1-6 BT 1-6	1-5 1-5	Obser- vation		
150	998	10	Steep	Rb 1-6 BT	1-5	Obser- vation		
100	780	10	Steep	Rb 1-6	1-5	Obser- vation		
190	668	20	Steep	Rb 1-5 BT	1-5	Obser- vation		
140	740	10	Steep	Rb 1-6 BT 1-6	1-5 1-5	Obser- vation		
232	637	10	Steep	Rb 1-6 BT	1-5	Obser- vation		

(Table 71a4 continued)

22.75-23.0	9-13-73	5	9	10+ 43 deg.	50	2nd Growth	7.00	34
23.0-23.25	9-13-73	5		10+ 43 deg.	50	2nd Growth	7.00	0
23.25-23.5	9-13-73	4	7	10+ 43 deg.	50	2nd Growth	6.23	14
23.5-23.75	9-13-73	4		10+ 43 deg.	50	2nd Growth	6.23	0
23.75-24.0	9-13-73	4		10+ 43 deg.	40	2nd Growth	6.23	0
24.0-24.25	9-13-73	4		10+ 43 deg.	40	2nd Growth	4.31	0
24.25-24.5	9-13-73	3		10+ 43 deg.	40	2nd Growth	3.13	0

Explanations:

Turbidity is listed as "visibility in feet."

Gradients are "Steep"---------over 2.5%
"Moderate"---1.0 to 2.5%
"Flat"----------0 to 1%

Fish Species: Rb----Rainbow Trout
BT----Brook Trout
BSU--Bridgelip Sucker
Rss---Redside Shiner
Brb- -Brown Bullhead
Br----Brown Trout
But---Bull Trout
WF---Whitefish

(Table 71b4 continued)

165	534	20	Steep	Rb 1-5 BT	1-5	Obser-vation		
200	533	20	Steep	Rb 1-6	1-5	Obser-vation		
92	481	10	Steep	Rb 1-6 BT	1-5	Obser-vation		
107	480	10	Steep	Rb 1-4	1-5	Obser-vation		
110	477	10	Steep	Rb 1-4	!-5	Obser-vation		
72	515	10	Steep	Rb 1-4	1-5	Obser-vation		
38	402	0	Steep					

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APPENDIX N

STREAM SURVEY MAPS

North Powder River
Rock Creek
Muddy Creek

Figure 72. North Powder Stream Survey Map 1

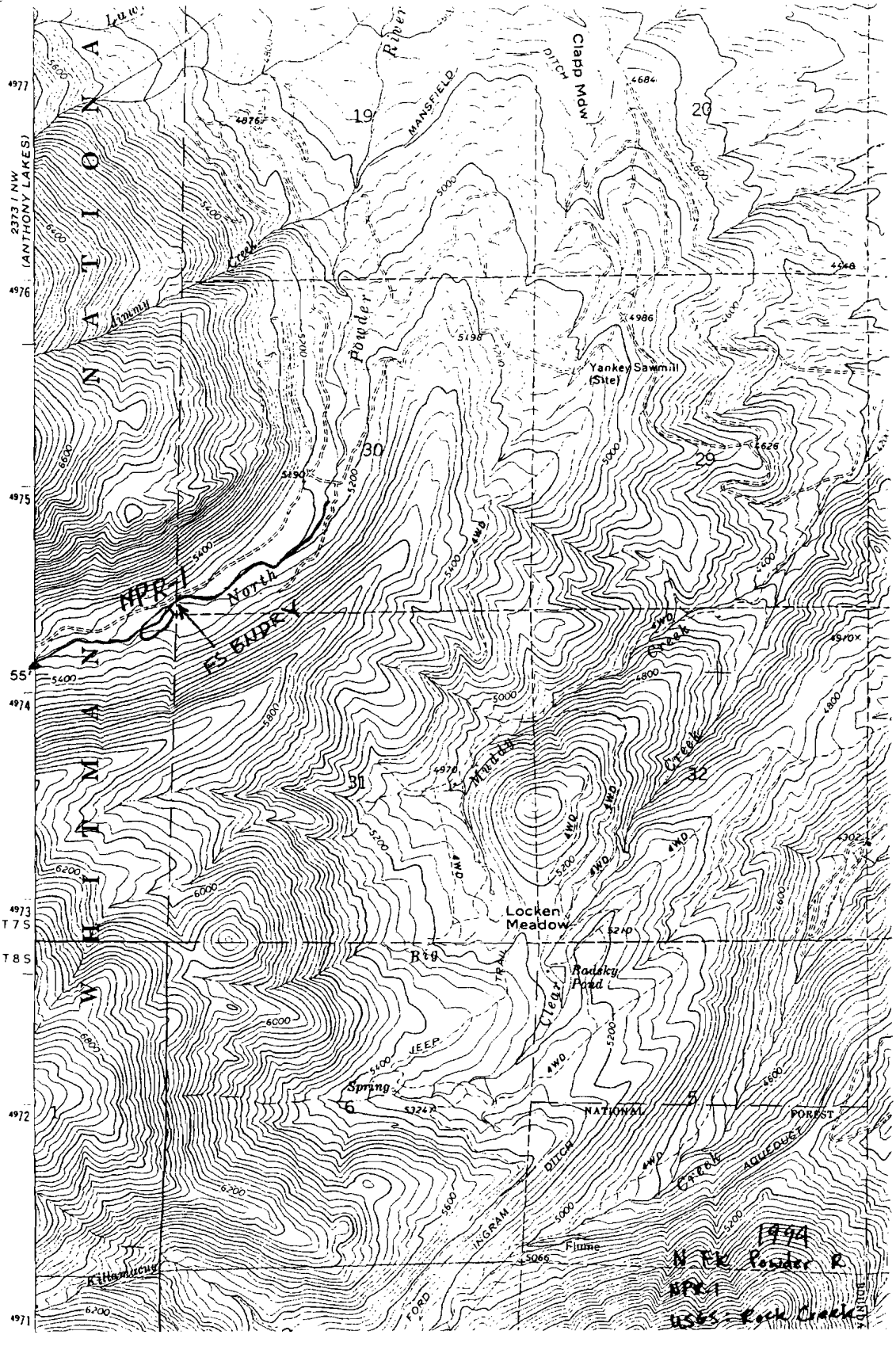


Figure 73. North Powder Stream Survey Map 2

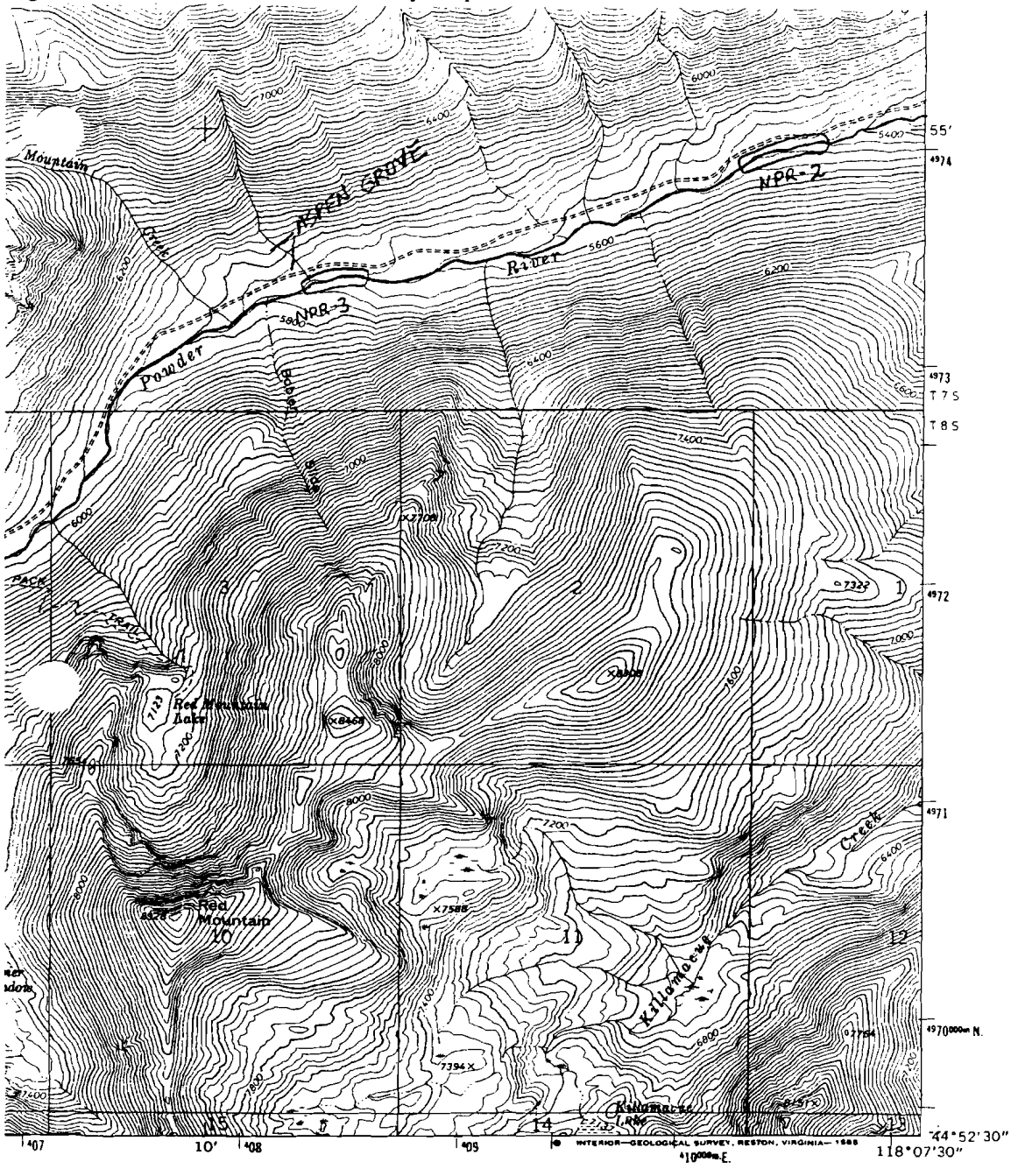


Figure 74. North Powder Stream Survey Map 3

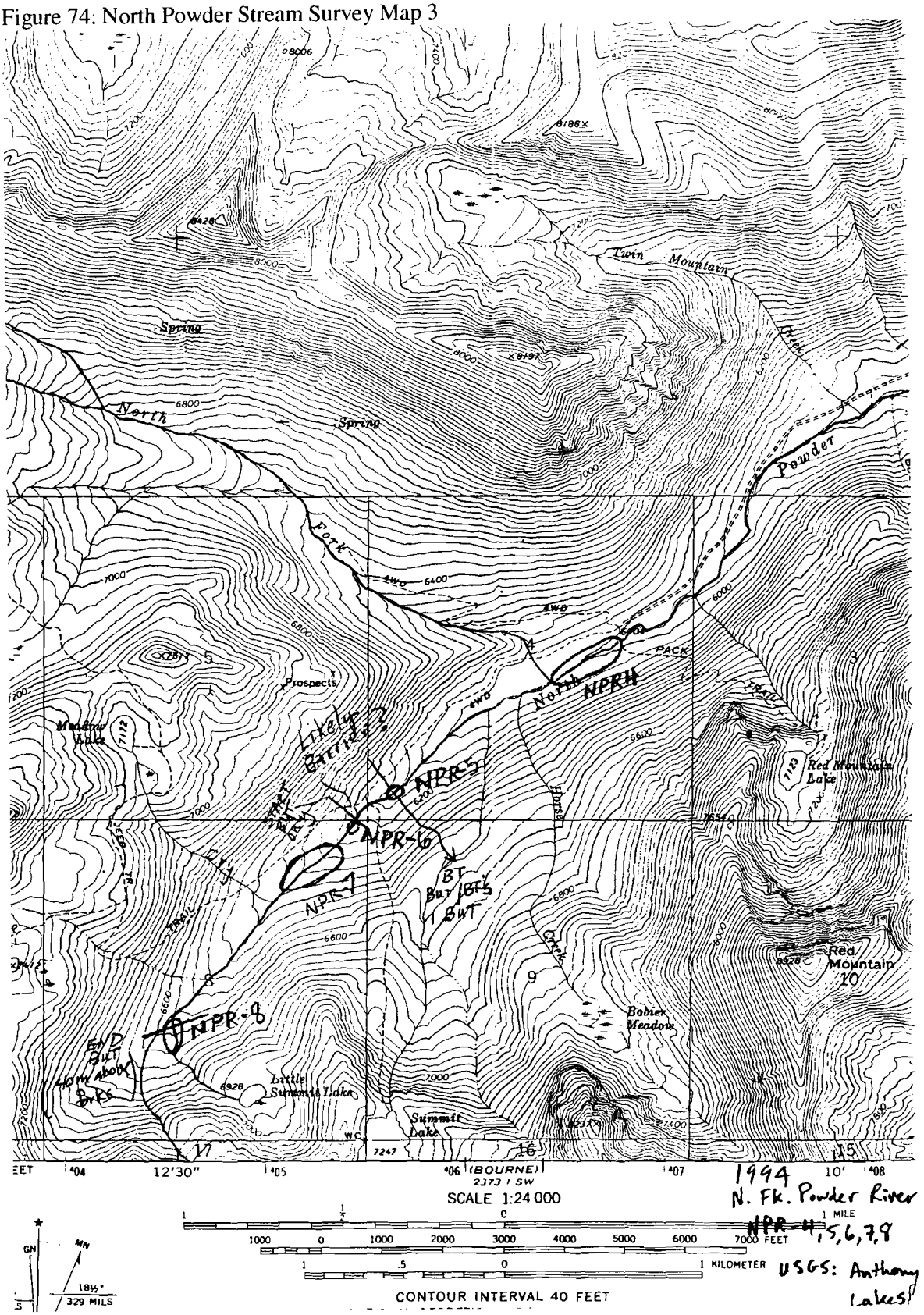
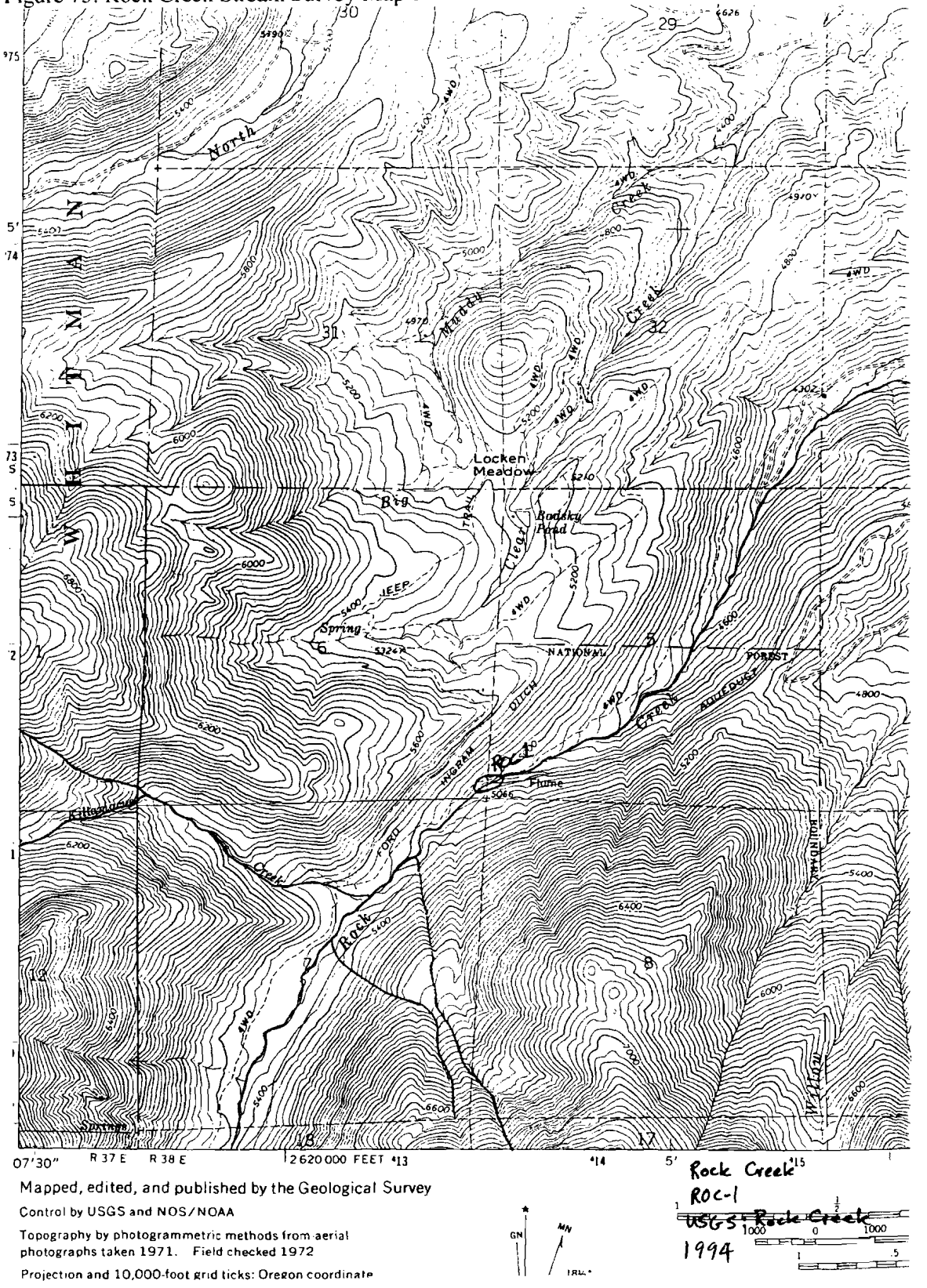


Figure 75. Rock Creek Stream Survey Map 1



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1971. Field checked 1972

Projection and 10,000-foot grid ticks: Oregon coordinate

Figure 76. Rock Creek Stream Survey Map 2

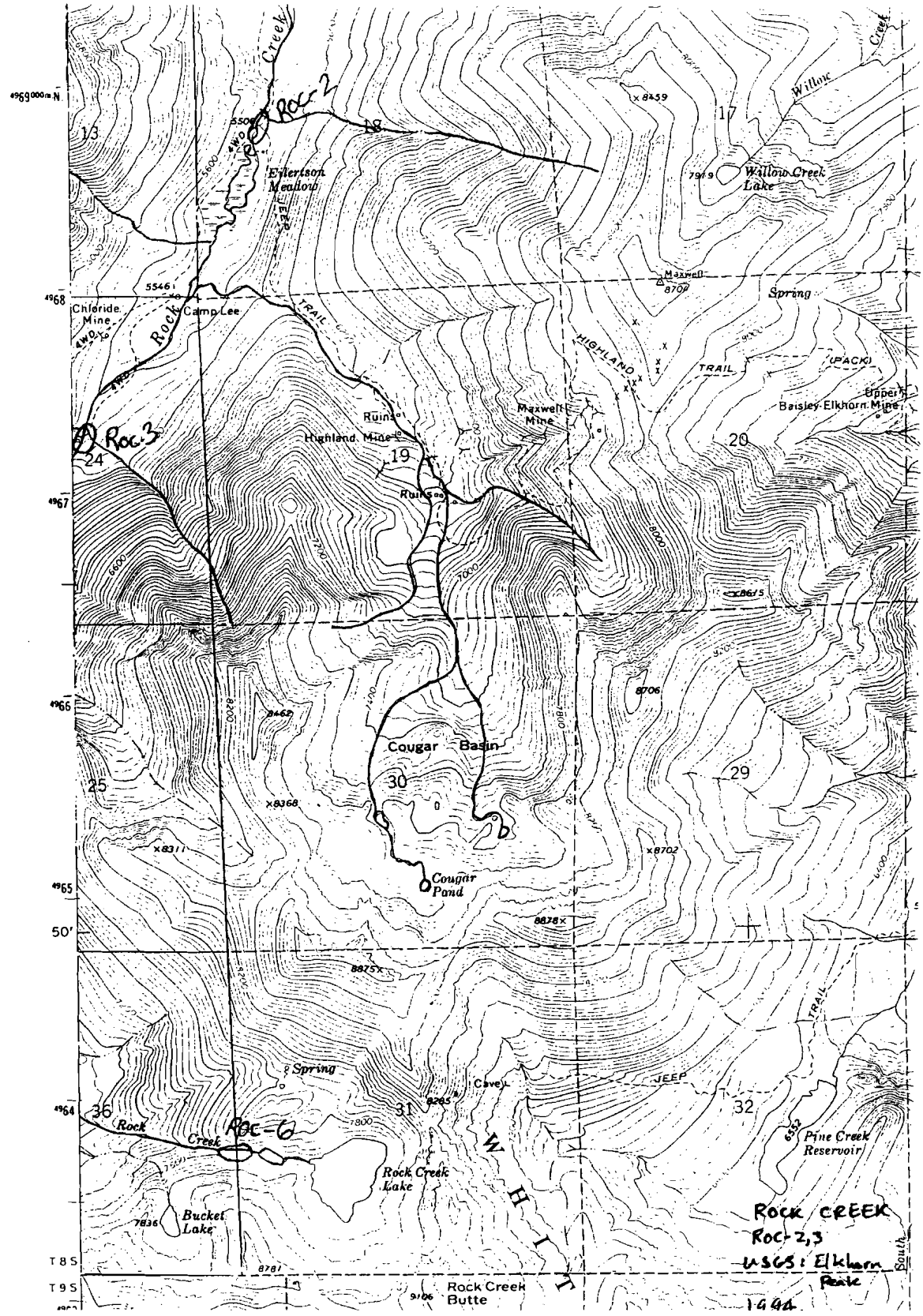


Figure 72. Rock Creek Stream Survey Map 3

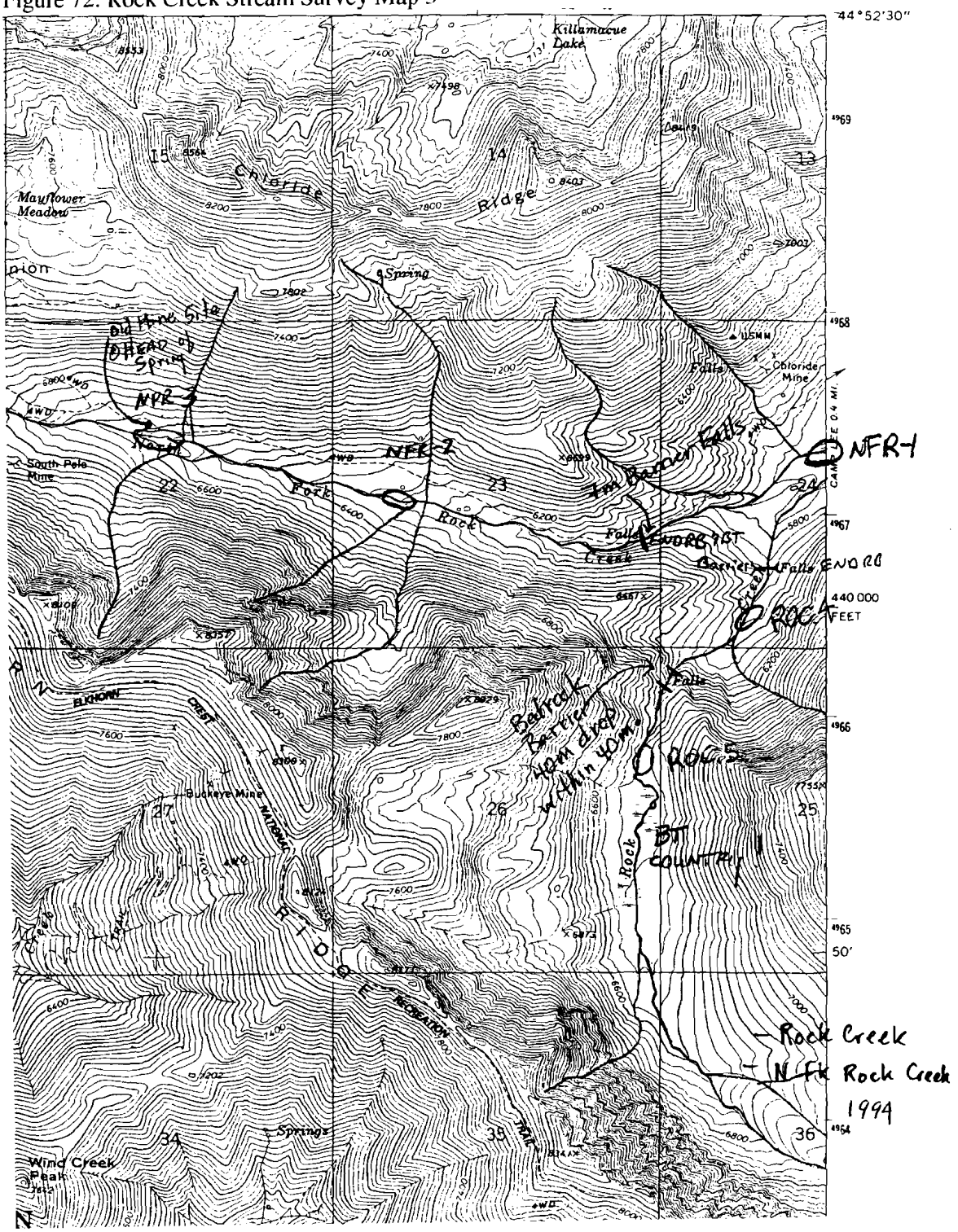


Figure 72. Muddy Creek Stream Survey Map

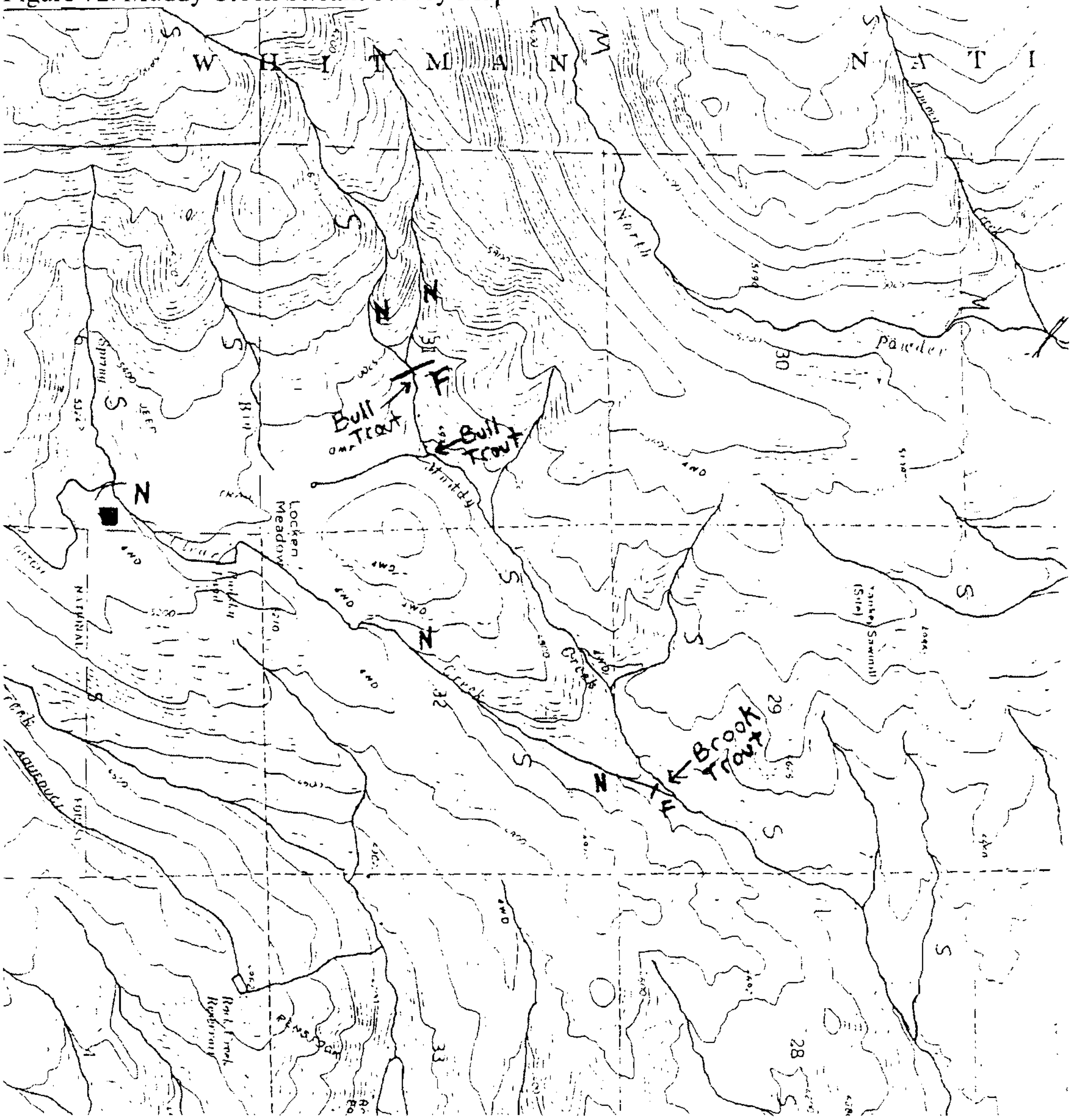


Figure 79 Wolf Creek Stream Survey Map 1

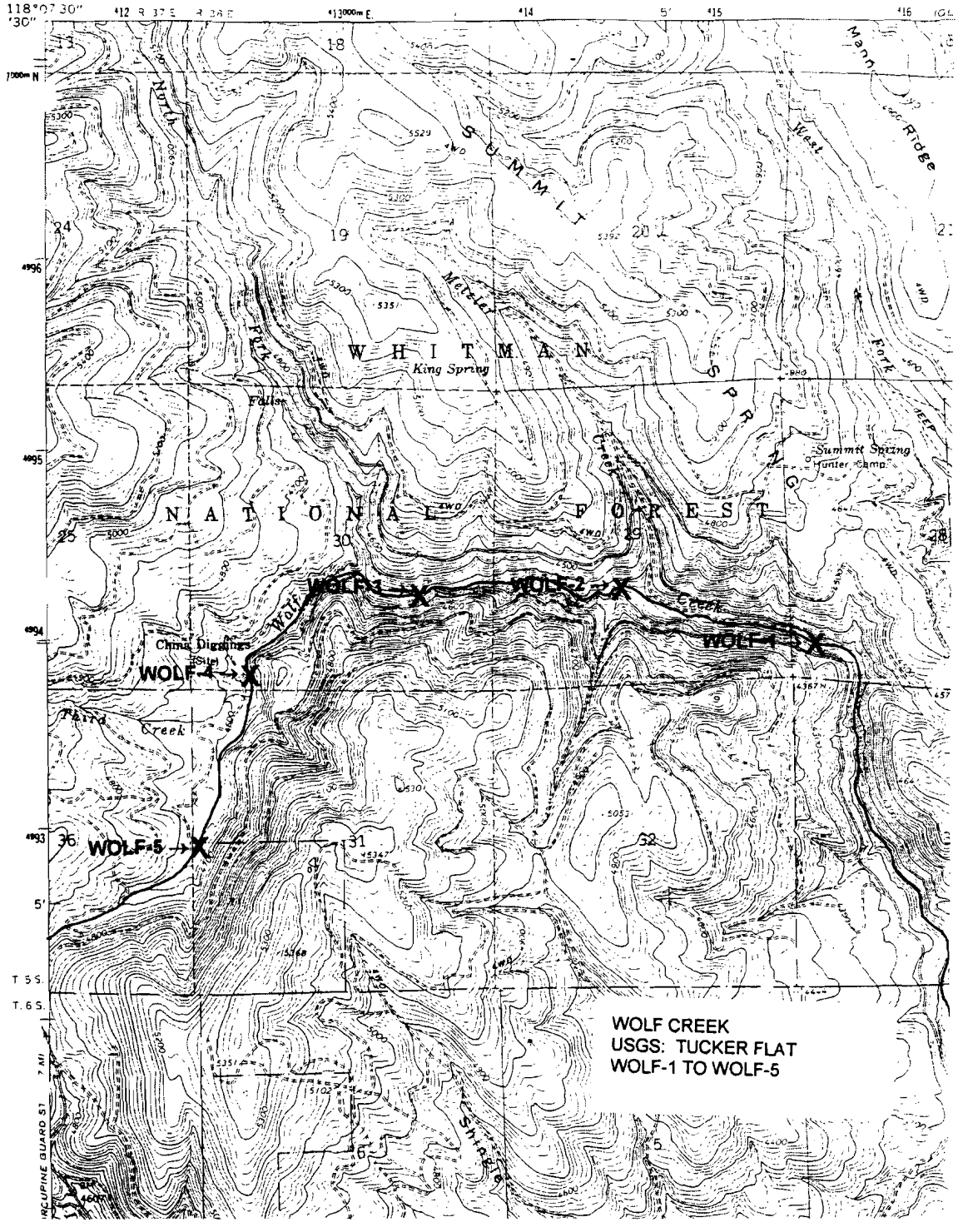
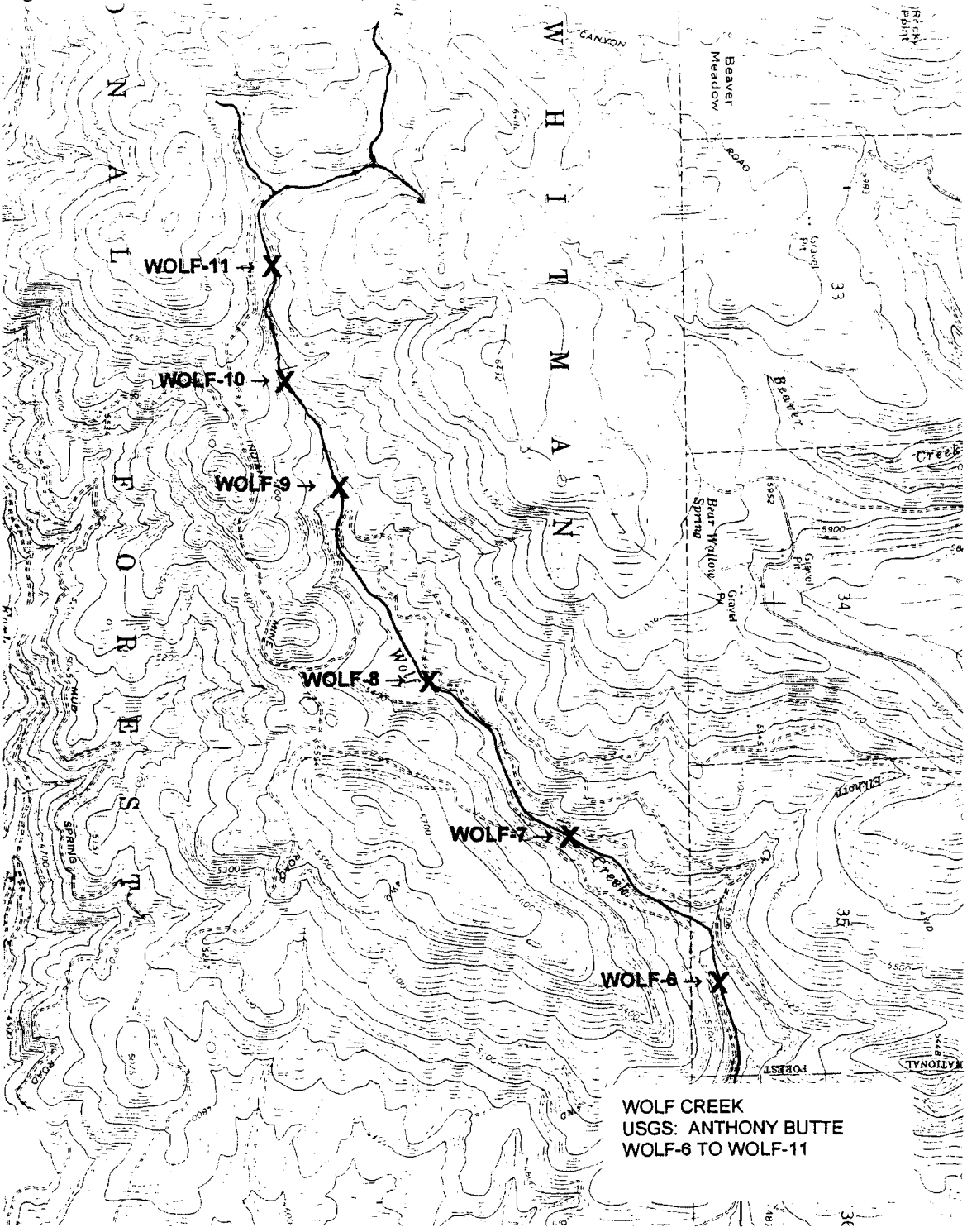


Figure 80. Wolf Creek Stream Survey Map 2



APPENDIX O

303(D) LISTS

Table 46. 303 (d) list

4/28/2003 1:32:12 PM

Oregon's Final 2002 303(d) List

Refresh Report Show All Records Records per page: 10 Go to page: 109

Sub Basin	Name & River Mile	Parameter	Criteria Text	Season	Supporting Data or Information	Last Date
POWDER	Anthony Creek 0 to 16	Temperature	Bull Trout: 10.0 C	Summer	USFS Data (3 Sites: 6S-37E-14; 6S-37E-15; 6S-37E-16): 7 day average of daily maximums of >55/>55 (based on min/max thermometer) at #1 , nd/53 and nd/54.4 exceeding Bull Trout temperature standard (50) respectively in 1992/1993.	1998
POWDER	Indian Creek 0 to 5.2	Temperature	Bull Trout: 10.0 C	Summer	USFS Data (Site at 6S-37E-26): 7 day average of daily maximums of >50 with maximums of 63 and 61 recorded exceeding Bull Trout temperature standard (50) in 1992 and 1993 respectively based on min/max temperature readings.	1998
POWDER	North Powder River 0 to 18.3	Temperature	Rearing: 17.8 C	Summer	USFS Data (Site at 7S-37E-36): 7 day average of daily maximums of >64 with seasonal maximums of 66 and 72 exceeded temperature standard (64) in 1992 and 1993 respectively based on min/max thermometer readings.	1998
POWDER	Powder River 71.9 to 115.6	Fecal Coliform	Geometric Mean of 200, No more than 10%>400	Winter/Spring/Fall	USBR Data (Site POW108; RM 119.3): 15% (6 of 39) FWS values exceeded fecal coliform standard (400) with a maximum of 6200 between WY 1986 - 1995.	1998
POWDER	Powder River 71.9 to 115.6	Fecal Coliform	Geometric Mean of 200, No more than 10%>400	Summer	USBR Data (Site POW108; RM 119.3): 10% (3 of 31) Summer values exceeded fecal coliform standard (400) with a maximum of 600 between WY 1986 - 1995; DEQ Data (Site 404169; RM 119.3): 25% (3 of 12) Summer values exceeded standard between 1982 - 1987.	1998
POWDER	Powder River 71.9 to 115.6	Temperature	Rearing: 17.8 C	Summer	Baker Valley SWCD Data (2 sites: below Hughes Lane and First Bridge above North Powder): 7 day moving average of daily maximums of approximately 70.4/65.7 and 80.4/no data exceeding temperature standard (64) in 1995 and 1996 respectively.	1998

For more information please contact Marilyn Fonseca by email at *fonseca.marilyn@deq.state.or.us* or by phone at (503) 229-6804.

Table 47. 303(d) list decision matrix

Final 1998 Oregon Section 303(d) List Decision Matrix

Stream Name & Reach	Stream Segment Number	Parameter, Criteria, Season	Basis for Consideration for Listing	Listing Status
Anthony Fork of North Powder (mouth to headwaters)	32D-ANNF0	Sedimentation	(**ODEQ 1988**) segment 482; moderate rating based on observation	Need Data; no supporting data or information
(mouth to North Fork Anthony Creek/Carnes Diversion)	32D-ANTH0	Temperature; Rearing 64F; summer	USFS Data (1993) 55.4 F	OK
Anthony Fork of North Powder, North Fork (mouth to headwaters)	32D-ANNF0	Temperature; Bull Trout 50F; summer	USFS Data (1992-93) >55 F	303(d) List
Antone Creek (mouth to headwaters)	32D-ANTO0	Temperature; Rearing 64F; summer	USFS Data (1992-93) <64 F	OK
Big Muddy Creek (mouth to headwaters)	32D-MUBI0	Dissolved Oxygen (DO)	(**ODEQ 1988**) - segment 436; moderate rating based on observation	Need Data; no supporting data or information
		Flow Modification	(**ODEQ 1988**) - segment 436; moderate rating based on observation	Need Data; no supporting data or information
		Habitat Modification	(**ODEQ 1988**) - segment 436; moderate rating based on observation	Need Data; no supporting data or information
		Sedimentation	(**ODEQ 1988**) - segment 436; moderate rating based on observation	Need Data; no supporting data or information
Dutch Creek (mouth to headwaters)	32D-DUTC0	Temperature; Rearing 64F; summer	USFS Data (1992-1993) <64 F	OK
Indian Cr (mouth to headwaters)	32D-INDI0	Temperature; Bull Trout 50F; summer	USFS Data (1992-1993) >50 F with maximums of 64 & 61	303(d) List
Little Muddy Creek (mouth to headwaters)	32D-MULI0	Dissolved Oxygen (DO)	(**ODEQ 1988**) - segment 435; moderate rating based on observation	Need Data; no supporting data or information
		Flow Modification	(**ODEQ 1988**) - segment 435; moderate rating based on observation	Need Data; no supporting data or information

Table 47. continued

		Habitat Modification	**(ODEQ 1988)** - segment 435; moderate rating based on observation	Need Data; no supporting data or information
		Sedimentation	**(ODEQ 1988)** - segment 435; moderate rating based on observation	Need Data; no supporting data or information
Powder River (Thief Valley Reservoir to Sutton Creek)	32D-POWD0	Bacteria Water contact recreation; fecal colliform 96 std; summer	USBR Data (1986-1995) 10% summer values exceeded standard; ODEQ Data (1982-1987) 25% summer values exceeded standard	303(d) List
		Bacteria Water contact recreation; fecal colliform 96 std; fall/winter/spring	USBR Data (1986-1995) 15% FWS values exceeded standard	303(d) List
		Chlorophyll a summer	USBR Data (1986-1995) 0% FWS values exceeded standard	OK
		Dissolved Oxygen (DO) Salmonid spawning: water DO <11 mg/l; March 1 – June 30	USBR Data (1986-1995) 8% March-June values exceeded standard; **(ODEQ 1988)** - segment 345; moderate rating based on observation	OK
		Flow Modification	**(ODEQ 1988)** - segment 344-345; moderate rating based on observation	Need Data; no supporting data or information
		Habitat Modification	**(ODEQ 1988)** - segment 344-345; moderate rating based on observation	Need Data; no supporting data or information
		Nutrients	**(ODEQ 1988)** - segment 345; moderate rating based on observation	Need Data; no supporting data or information
		pH Fall/Winter/Spring	USBR Data (1986-1995) 0% FWS values exceeded standard	OK
		pH Summer	USBR Data (1986-1995) 0% Summer values exceeded standard	OK
		Sedimentation	**(ODEQ 1988)** - segment 436;	Need Data; no supporting data or

Table 47 continued

			moderate rating based on observation	information
		Temperature; Rearing 64F; summer	Baker Valley SWCD Data (1995-1996) 80.4 F at first bridge above North Powder; **(ODEQ 1988)** - segment 436; moderate rating based on observation	303 (d) List
Powder River, North (mouth to National Forest boundary)	32D-PON0	Flow Modification	**(ODEQ 1988)** - segment 346; moderate rating based on observation	Need Data; no supporting data or information
		Habitat Modification	**(ODEQ 1988)** - segment 346; moderate rating based on observation	Need Data; no supporting data or information
		Sedimentation	**(ODEQ 1988)** - segment 346; moderate rating based on observation	Need Data; no supporting data or information
		Temperature; Rearing 64F; summer	USFS Data (1992-1993) >64 F; **(ODEQ 1988)** - segment 346; moderate rating based on observation	303 (d) List
Rock Creek (mouth to Olsen Ditch)	32D-ROCK0	Flow Modification	**(ODEQ 1988)** - segment 356; moderate rating based on observation	Need Data; no supporting data or information
		Sedimentation	**(ODEQ 1988)** - segment 356; moderate rating based on observation	Need Data; no supporting data or information
		Temperature; Rearing 64F; summer	**(ODEQ 1988)** - segment 356; moderate rating based on observation	Need Data; no supporting data or information
Thief Valley Reservoir (reservoir)	32D-THIE	Aquatic Weeds or Algae	**(PSU, 1985)** Atlas of Oregon Lakes; **(ODEQ 1988)** - segment 507; moderate rating based on observation	Need Data; no supporting data or information
		Dissolved Oxygen (DO)	**(PSU, 1985)** Atlas of Oregon Lakes; **(ODEQ 1988)** - segment 507; moderate rating based on observation	Need Data; no supporting data or information

Table 47 continued

		Flow Modification	**(PSU, 1985)** Atlas of Oregon Lakes; **(ODEQ 1988)** - segment 507; moderate rating based on observation	Need Data; no supporting data or information
		Nutrients	**(PSU, 1985)** Atlas of Oregon Lakes; **(ODEQ 1988)** - segment 507; moderate rating based on observation	Need Data; no supporting data or information
		Sediment	**(PSU, 1985)** Atlas of Oregon Lakes; **(ODEQ 1988)** - segment 507; moderate rating based on observation	Need Data; no supporting data or information
		Temperature	**(ODEQ 1988)** - segment 507; moderate rating based on observation	Need Data; no supporting data or information
Willow Creek (mouth to headwaters)	32D-WILL0	Dissolved Oxygen (DO)	**(ODEQ 1988)** - segment 434; moderate rating based on observation	Need Data; no supporting data or information
		Flow Modification	**(ODEQ 1988)** - segment 434; moderate rating based on observation	Need Data; no supporting data or information
		Habitat Modification	**(ODEQ 1988)** - segment 434; moderate rating based on observation	Need Data; no supporting data or information
		Sedimentation	**(ODEQ 1988)** - segment 434; moderate rating based on observation	Need Data; no supporting data or information
Wolf Creek (mouth to Wolf Creek Reservoir)	32D-WOLF0	Dissolved Oxygen (DO)	**(ODEQ 1988)** - segment 351; moderate rating based on observation	Need Data; no supporting data or information
		Flow Modification	**(ODEQ 1988)** - segment 351; moderate rating based on observation	Need Data; no supporting data or information
		Habitat Modification	**(ODEQ 1988)** - segment 351; moderate rating based on observation	Need Data; no supporting data or information
		Sedimentation	**(ODEQ 1988)** - segment 351; moderate rating based on	Need Data; no supporting data or information

Table 47. continued

			observation	
		Temperature	**(ODEQ 1988)** - segment 351; moderate rating based on observation	Need Data; no supporting data or information
Wolf Creek (Wolf Creek Reservoir to North Fork)	32D-WOLF8.5	Dissolved Oxygen (DO)	**(ODEQ 1988)** - segment 351; moderate rating based on observation	Need Data; no supporting data or information
		Flow Modification	**(ODEQ 1988)** - segment 351; moderate rating based on observation	Need Data; no supporting data or information
		Habitat Modification	**(ODEQ 1988)** - segment 351; moderate rating based on observation	Need Data; no supporting data or information
		Sedimentation	**(ODEQ 1988)** - segment 351; moderate rating based on observation	Need Data; no supporting data or information
		Temperature; Rearing 64F; summer	USFS Data (1992-1993) > 64 F in 1992; < 64 F in 1993 **(ODEQ 1988)** - segment 351; moderate rating based on observation	Potential Concern

Note: Most other streams in the Powder River valley (away from the mountains) would be expected to have conditions similar to those included in the above table.

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APPENDIX P

COMMENTARY FROM RESIDENTS

FOREST MANAGEMENT

Everyone knows that when a species of plant or animal is crowded into a small area there will be health problems until the population is reduced or the area increased. In forest management we have suppressed fire, terminated timber harvest and been very lackadaisical with insect control. Consequently we face very serious forest health problems in this watershed.

Everyone also knows that with so much forest in this watershed, if we have an unhealthy forest we'll have an unhealthy watershed. A pine beetle outbreak in the mid 1970's, and another unchecked insect outbreak in the early 1980's, left a large fuel load of dead material throughout the watershed. This, coupled with 70 years of fire suppression and little to no timber harvest on federal ground, leaves this watershed as a prime candidate for large wild fires.

Everyone who has been involved with fire suppression in this area also knows there will be a dry lightning storm about the middle of July and another one about the middle of August.

What a combination: an overcrowded forest, a diseased forest with considerable dead and dry fuel, and a guaranteed source of ignition!

To carry this sorry situation one step further, federal agencies are ill-equipped to deal with the situation. In order to suppress a wildland fire in timber, it must first be contained by constructing a fire line down to mineral soil. The fire line must go all around the perimeter of the fire, and all ground adjacent to and inside the fire line must be bare or black. The best way to construct the line is with bulldozers. Not too many years ago, when we still harvested forest products, a person could make three phone calls and have a dozen bull dozers on the way to a fire within fifteen minutes. These dozers would be fully armored for rocks and brush with operators that could handle them on steep terrain and in the rocks and brush. Now this equipment and their operators have gone the way of our timber harvest and the forest product industry. They aren't available.

To further compound the fire suppression problem, people who can do productive work in the woods and look out for themselves and fellow workers are very few and far between. Not very many years ago every governmental unit had timber markers, timber sale layout crews, road location crews, road survey crews, brush disposal crews, timber cruisers, road maintenance people, etc., as well as fire suppression crews. These people were used to working and moving in the brush and were all available for fire suppression when needed. One radio call to a crew and they were on the way to the fire. There was no waiting for days to man a fire.

In the past, federal agencies were very aggressive in fire suppression. They had a 10:00 a.m. policy that stated "Every fire will be contained by 10:00 a.m. following the day of

discovery." This does not appear to be the case today. The attitude does not appear to be one of urgency for containment.

It is naïve to think that we can simply drop a policy of forest management, have no planned transition, and not end up with serious problems. Yet it has happened. We have gone from multiple use management, and managing timber producing lands for optimum production, to no management. Granted, timber harvest exposes some raw soil, and if not properly done, may degrade water quality and quantity for a short time. However, the total negative effect is much less than that of a hot forest fire over the entire area.

Future watershed action plans for this area must address forest health issues and fire suppression. We can't have a healthy watershed without a healthy forest.

My recommendations are that (1) there should be a timber inventory system, updated every 5-10 years. Timber should be removed equal to the annual growth. Revenue derived from the harvest should be used to decrease fuel loadings, replant areas where needed, precommercially thin overcrowded stands, and clean up slash. (2) The 10 a.m. policy of fire containment should be reinstated from June 15 through Sept. 15. With the large fuel buildup, we can't afford to let a fire get a big start by not aggressively working to control it during this hot, dry period.

It is important to maintain diversity of age classes and timber species. Forests in this area need a mix of pines, firs, and tamaracks. A stand of all one species will not stay healthy through insect outbreaks. If other trees are interspersed, insects can't get to the next trees. The outbreak won't spread as fast, and recovery will be quicker. Multi-aged stands will have young, healthy trees along with older, decadent trees. Such stands are not so susceptible to disease and insects.

Tom Mac Kerns

December 2, 2002

I have been a 60-year observer of mountains, watersheds, and timber activities. I spent 26 years working for the forest service as a civil engineer. During my career everyone was involved in fire suppression. I have performed every job in fire suppression from smoke chaser to aerial observer, and was a member of a regional fire overhead team for 8 years. During the last of my career I was in charge of all fire presuppression and suppression activities on the Mark Twain National Forest in Missouri.

Confront issues with long-term cooperation

(Article published in Capital Press)

As a family farmer for 18 years and an employee of the United States Forest Service for 27 years, I have seen my share of environmental issues. I am writing today to address what I foresee as the two largest threats to national resource-based businesses, our form of government and our way of life.

These threats are conservation activists and the way the Endangered Species Act is being enforced.

The conservation community believes in the philosophy of life's natural order and wants to put everything back to a "natural environment.": This philosophy has appeal, I must admit, but can also be misleading if not carefully examined. The major downfall of that argument is the number of people on our planet, which is continuously increasing. If we currently had the world population that existed 150 years ago, there would be no need for concern over the salmon, suckerfish, wolves, dams or any other environmental issues.

As I said earlier the idea of a 'natural environment" is appealing and I would be willing to resign to the environmental activists' claim that we should return to that natural way of life if they would be willing to carry the idea to its completion. To solve the problems they perceive everything would need to be restored to a natural level and eliminate all unnatural occurrences. This would mean no more eyeglasses, fillings in teeth, antibiotics, pills, vaccines, etc. None of these things are natural. It would also mean reintroducing smallpox, polio, TB, black plague, etc. This would mean fewer people, hence more habitat for salmon, suckerfish, wolves, etc.

Upon considering these truths I doubt that very many of us would advocate this philosophy. Therefore the population will continue to grow and displace natural environments, flora and fauna.

The only solution is to position ourselves to take care of the world's exponentially increasing population. This means having a responsible government that will face up to the environmental activists, enforce the ESA accordingly, and revise it where necessary.

The time to take action on a foreseeable shortfall is while you still have a surplus. If we wait until a crisis exists, adjustments become very difficult and many people will be hurt. We should be continuing to expand our energy base---planning and constructing new dams, rather than wasting energy talking about dam removal; continuing to bring more agricultural land into higher production, not removing it from production as happened in the Klamath Basin in 2001; and increasing the productivity of our forests, not locking them up to protect a bird.

I'm not advocating we rape the environment or destroy flora and fauna wantonly. I advocate planned, well-thought-out actions that can be completed in a timely manner rather than decisions made in a crisis situation.

Each of us needs to do our part to assure our government is looking to the future. This means promoting and voting for people who will rein in the environmental activists and see that the ESA is enforced as intended and revised as needed. We must speak up when people talk about reducing our energy or water base and when judges make unfair and unjust rulings in favor of environmental activists.

The natural resources of this country have and will continue to provide us with remarkable opportunities, and with those opportunities comes the burden of caring for the environment. It is my belief that we have the ability to do this well.

By working together to find a long-run strategy to address the issues confronting our environment, we can find a compromise between a healthful natural environment and the progress of the human species.

Tom "Mac" Kerns

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APPENDIX Q

COMMON PESTICIDES USED IN BAKER COUNTY AND THEIR IMPACT ON HUMAN HEALTH AND WILDLIFE

Introduction

Information on the potential impacts of a given pesticide can be found on 2 websites. Both websites contain information on many of the pesticides used in Baker County.

1) EPA's website – **www.epa.gov/pesticides**

Once at the EPA website, select Pesticide Fact Sheet.

2) Northwest Coalition for Alternatives to Pesticides (NCAP) website -- **www.pesticide.org**

Once at the NCAP website, select Pesticide Fact Sheet. For information on a particular product look under the name of its "Active Ingredient." The articles can be downloaded and have extensive bibliographies. Sources used in the summary articles: *Journal of Experimental Zoology, Environmental Contaminant Toxicology, Bulletin of Environment Toxicology, Mutation Research, U.S EPA publications, Neurotoxicology, U. S. Geological Survey publications, Journal of Environmental Quality, Microbiology Ecology, Technical bulletins from Agricultural Research Stations, Weed Technology, Ground Water Monitoring Review, Journal of Range Management, American Journal of Veterinary Medecine, Water Environmental Research, and Crop Science,* to name a few.

The NCAP website also has Alternatives to Pesticides information that addresses many of the insect and plant problems that pesticides address, but without the side effects. The Alternatives to Pesticides section addresses mostly homeowner concerns. However, questions regarding agricultural concerns can also be directed to NCAP who will either be able to answer the question or direct the individual to other sources that can provide the information needed.

Selected Pesticide Summaries

2, 4-D (found in products such as 2,4-D, Weedmaster, Weed and Feed, Curtail)

2,4-D is the most widely used herbicide in the world. 2,4-D was first registered for use in the U.S. in 1948 and is now undergoing the reregistration process in which health and safety testing for older pesticides is brought up to current standards. As of 2004, the testing has not been completed. Almost 60 million pounds are used annually in the U.S. An estimated 35 million lawn and garden applications are made each year. It is a selective herbicide, with highest toxicity to broadleaf plants. The U.S. Department of Agriculture surveyed agricultural 2,4-D use pattern in 1996 and found that major uses included control of unwanted plants in pasture, fallow land, rangeland, wheat, corn, and turn.

Exposure to 2,4-D is frequent and widespread. Exposure can occur via contaminated air, water, soil, food, and through 2,4-D tracked inside homes. In a national survey of river basins, the U.S. Geological Survey found 2,4-D in 19 of the 20 basins sampled. Overall, between 10 and 13 percent of the samples collected were contaminated with 2,4-D. It is also found in wells, though not as frequently, and in rain. 2,4-D has been found in water following agricultural, urban, golf course, roadside, and noxious weed treatments. Persistence of 2,4-D in soils is variable with half-

lives as short as 2 days and as long as 297 days. One study found 2,4-D in water leaching from an agricultural soil 5 years after 2,4-D treatment. With respect to air, about 60 percent of air samples collected during national regional, and local studies were contaminated with 2,4-D. In some cases 2,4-D had moved in air up to 50 miles from the application site.

After a home lawn is treated with 2,4-D, the person who made the application as well as children and pets who live in the home track 2,4-D indoors. Particularly for infants, these exposures are a concern. People who work with 2,4-D are more highly exposed than the general populations. A study of farmers showed that their children's exposures also increased after farmers make a 2,4-D application.

Symptoms of 2,4-D poisoning include drowsiness, vomiting, convulsions, kidney and liver injury, and muscle twitching. 2,4-D, and its salts that are used in herbicide products, are severe eye irritants. Three of these salts cause skin lesions.

2,4-D is unusual among herbicides in that it causes an array of adverse effects to the nervous system: myotonia (the inability of muscles to relax), disruption of the activity of nervous system chemicals, and behavioral changes. Maturing nervous systems may be particularly vulnerable. In laboratory tests, juvenile rats exposed to 2,4-D developed smaller brains than unexposed rats. It also reduces the ability of blood to carry oxygen and to form clots in humans.

2,4-D has caused genetic damage in tests using both cell cultures and laboratory animals. It increased the frequency of a gene mutation in hamster muscles cell cultures, increased the frequency of abnormal chromosomes in bone marrow cells of rats and mice, and increased the number of breaks in human DNA (the molecule from which chromosomes are made.)

Exposure to 2,4-D has been associated with increased risk of lymphoma in dogs. A National Cancer Institute study found that owners of dogs with lymphoma had treated their lawns with 2,4-D (or hired lawn care companies) more frequently than owners of dogs without the disease.

2,4-D reduces successful hatching of bird eggs, and destroys birds' food and nesting habitat by altering vegetation cover. It is acutely toxic to earthworms and harms beneficial insects. Both 2,4-D (particularly the butoxyethanol ester) and a 2,4-D breakdown product (2,4-dichlorophenol) are acutely toxic to fish.

2,4-d causes genetic damage to barley, wheat, rice and onions.

2,4-D treatment can increase insect damage by increasing pest insects' ability to reproduce by killing off the beneficial insects that help keep the pest numbers in check. 2,4-D can also increase the severity of plant diseases, including tomato early blight, tobacco mosaic virus, and corn leaf blight. *Rhizobium* is a nitrogen-fixing bacteria found on the roots of legumes. 2,4-D reduces its growth and nitrogen-fixing ability, as well as the growth and nitrogen-fixing ability of several species of blue-green algae.

Sources:

Cox, C. (1999). 2,4-D: Toxicology, Part 1. *Journal of Pesticide Reform.* Spring 1999: Vol. 19, No. 1.

Cox, C. (1999). 2,4-D: Ecological Effects. *Journal of Pesticide Reform.* Fall 1999: Vol. 19, No. 3

Cox, C. (1999). 2,4-D: Exposure. *Journal of Pesticide Reform*. Winter 1999: Vol. 19, No. 4.

Can be downloaded from **www.pesticide.org** >Pesticide Fact Sheet > 2,4-D. Articles contain a complete list of references at the end.

Carbaryl (found in the product Sevin)

Go to www.pesticide.org > Pesticide Fact Sheet > scroll down to Carbaryl

Clopyralid (found in the product Curtail)

The herbicide clopyralid is commonly sold under the brand names Transline, Stinger, and Confront. It is used to kill unwanted plants in lawn and turf, range, pasture, rights-of-way, sugarbeets, mint, and wheat. It has been registered for use in the U.S. since 1987. The National Center for Food and Agricultural Policy estimates that agricultural uses of clopyralid in the U.S. total about 89,000 pounds per year. Most of this is used on sugarbeets, mint, and wheat. It is also used in plant community restoration efforts in an attempt to kill alien (weed) species and promote the growth of native species. The results have been mixed with clopyralid negatively impacting native species as well as the weed species.

EPA described clopyralid as "very soluble" in water and "very mobile" in soils and concluded that it has the potential to leach to groundwater and/or contaminate surface water. It has the chemical characteristics that make it a likely water contaminant. Despite its relatively low level of use it has been found in 2 of the 20 river basins studied by the U.S. Geological Survey. It is "considered volatile," according to EPA, meaning that it can evaporate from foliage and soil after application and move away from the application site and "adversely affect nontarget broadleaf plants." EPA calculated volatilization of only one percent of applied clopyralid would be enough to damage nontarget plants. EPA has identified 11 species of endangered plants which could be jeopardized by the use of clopyralid. It is also toxic to some insects that are economically important because they reduce populations of agricultural pests.

Clopyralid is "persistent" in soil, according to an EPA review, and field studies have measured persistence as long as 14 months. Enough clopyralid persists in soil that lentils, safflower, and peas are damaged 220 days after treatment and a fall application causes "severe potato growth reductions" in potatoes planted the next spring. In addition compost and mulches made from clopyralid-treated plants contain residues. A study from Michigan State University measured clopyralid in grass clippings composted for up to one year. Another study found that potatoes mulched with mint hay were damaged when the hay was made from plants treated with clopyralid the preceding spring. In a greenhouse experiment in which clopyralid-damaged bean plants were used as a soil amendment for subsequent plantings of beans, damage was visible for three generations.

Potatoes are extremely sensitive to clopyralid with damage occurring when plants are exposed to as little as 0.07 percent of typical agricultural rates. When tubers from these damage plants were grown in unsprayed fields, the new generation of plants also showed damage symptoms

Clopyralid and the products containing it area irritating to eyes, some severely. The eye hazards of four clopyralid products include permanent impairment of vision or irreversible damage. In

laboratory tests, clopyralid caused what a U.S. Environmental Protection Agency (EPA) reviewer called "substantial" reproductive problems. These include a reduction in the weight of fetuses carried by rabbits who ingested clopyralid, an increase in skeletal abnormalities in these fetuses at all doses tested, and an increase in the number of fetuses with hydrocephaly, accumulation of excess fluid around the brain.

"Inert" ingredients in clopyralid products include cyclohexanone (produces tearing and burning of the eyes, vomiting, diarrhea, and dizziness), triethylamine (a severe eye irritant and cause of chemical pneumonia), and polyethoxylated tallow amines (cause eye burns, nausea, and are acutely toxic to fish).

Source: Cox, C. (1998). Clopyralid herbicide factsheet. *Journal of Pesticide Reform.* Winter 1998. Vol. 18, No. 4.

Can be downloaded at **www.pesticide.org** > Pesticide Fact Sheet > Clopyralid. Article contains a complete list of references at the end.

Diazinon (found in the product Diazinon)

Diazinon is an insecticide that has agricultural, commercial, and household uses, but household uses predominate. It was first registered in 1956. The estimated agricultural use is 1.5 million pounds annual. Crops using most diazinon are almonds, berries, pecans, and nectarines. About 75 million household applications are made annually, 18 million indoors and 57 million outdoors. Home, lawn, and garden use totals 5.5 million pounds per year.

Rivers and streams are frequently contaminated with diazinon. In a national monitoring study, diazinon was the most commonly detected insecticide in both urban and agricultural watersheds. Diazinon is a frequent air contaminant; a compilation of US air monitoring studies found diazinon in 90 percent of the samples tested. Diazonon contaminates wells, but not as frequently as it contaminates surface water. Even deep wells 80 to 200 feet can become contaminated with the insecticide. Diazinon is a major cause of toxicity in the effluent from wastewater treatment plants. It is not removed from wastewater by the standard techniques used at wastewater treatment plants.

Diazinon frequently pollutes air and in 1998 the USGS found it the fifth most frequently detected pesticide. Both urban and agriculture uses contribute significantly to contamination of air, with urban uses particularly important. Airborne diazinon can travel large distances. In California, diazinon has been found in the air in the Sierra Nevada Mountains, 15 miles from the application site. It has also been found in rain 25 miles from the application site and in fog. Diazinon in fog water that drips from trees is transformed into diazoxon, a more biologically active and toxic molecule than diazinon, and results in "enhanced toxicity" to orchard workers.

It is toxic to many species of fish. In addition to killing fish, exposure to low concentrations (1 part per billion or less) also causes genetic damage, disrupts behaviors that are crucial for reproduction and protection from predators, and kills aquatic animals on which fish depend for food (i.e. waterfleas, scuds, and larval caddisflies). Exposure to diazinon also causes abnormalities in developing tadpoles at concentrations of several parts per billion. The abnormalities include stunting their tails and underdevelopment of their gills.

Diazinon is a commonly used insecticide that is toxic to birds and has caused what the U.S. EPA calls "widespread and repeated mortality." Exposure to diazinon also reduces the number of eggs birds lay and the survival of eggs and nestlings. Diazinon-related bird kills are common. Sensitive bird species include Canada goose, house sparrow, mallard duck, bobwhite quail, red-winged blackbird, and American wigeon. EPA's incident reporting system indicates that the number of diazinon-caused bird kills has increased steadily since the 1980s. Both liquid and granular diazinon products are hazardous to birds. Liquid products leave residues on vegetation. Birds also eat granular products when they stick to food or pick them up directly as grit. Diazinon washes into puddles during rainfall or irrigation, and birds drink the contaminated water. EPA stated that its past efforts to mitigate these risks by lowering application rates and adding label warnings "are not adequate to prevent mortality." Diazinon also harms insects and mites that are useful in agriculture. It is classified by EPA as "highly toxic" to honey bees. Alfalfa leafcutting bees and alkali bees, pollinators, are as sensitive to diazinon as honey bees.

The insecticide also caused genetic damage in plants and can reduce the ability of the soil organisms to fix nitrogen, an important plant nutrient. It also can reduce plant growth. The most sensitive species studies in tests submitted EPA for diazinon's registration was cucumber. A reduction in shoot height occurred at applications of less than the recommended 4 pounds per acre. EPA assessed diazinon's risk to endangered plant species using this data and concluded that the agency's "levels of concern" were exceeded for many agricultural uses. Source: Cox, C. (2000). Diazinon: Ecological Effects and environmental contamination. Journal of Pesticide Reform. Fall 2000: Vol. 20, No. 3.

Can be downloaded from **www.pesticide.org** >Pesticide Fact Sheet > Diazinon. Article contains a complete list of references at the end.

Dicamba (found in the product Weedmaster)

Dicamba is a selective herbicide and is used to kill broad-leaved plants growing in corn, rights-of-way, and lawns. It was first registered in 1967. Several different forms of dicamba are used as herbicides, the dimethylamine salt and the sodium salt are the most common. About 5.6 million pounds of dicamba are used annually in U.S. agriculture and most all of this, about 5 million pounds is used on corn. In addition, the EPA estimate that U.S. households annually use about 3 million dicamba-containing projects (product refers to a single container). Dicamba acts throughout the entire plant after it is absorbed through the leaves and roots. It is easily transported through the plant and also accumulates in new leaves.

Americans make an estimate 6 million application annually of dicamba-containing herbicides. Because these applications are made to heavily-used areas like lawns and gardens, the potential for exposure of household residents is high. Humans are exposed to dicamba while they or their neighbors are using the herbicide in the yard or garden, while using it on the job, through drinking of contaminated water, and through eating contaminated food. Dicamba residues have been found on sweet corn, tomatoes, and wheat.

Although dicamba has been registered for use in the US for almost 30 years, only inadequate laboratory tests of dicamba's ability to cause cancer have been submitted to EPA. The quality of the some of the tests appears to be seriously lacking. For example, one test was judged inadequate because "tumors were removed periodically."

Dicamba is "relatively water-soluable" and "mobile in soils." This means that it is likely to contaminate both ground water and surface water. In a study that compared soil mobility of 40 pesticides, dicamba was one of three with the highest mobility. These results are consistent with another study of 26 pesticides in which dicamba was more water soluble than all but three. EPA's water quality data base indicates about 1/3 of the surface water samples analyzed contained dicamba. It has also been found in groundwater. Dicamba is toxic to two nitrifying bacteria and two algae thought to "contribute significantly to the processes involved in soil fertility."

Dicamba volatilizes (evaporates) easily from plant surfaces, particularly when temperatures are over 85*F. Under agricultural conditions these vapors can drift up to 5 or 10 miles; thus there is potential for contamination following a neighbors' use of the chemical. The following effects have all been documented as a result of dicamba drift: 1) abnormal leaf growth, floral development, and yield in dry beans, 2) reduced yield, reduced quality and increased skin ulcers in potatoes, 3) reduced yield, reduced sugar production, and increased sugar losses after harvest in sugar beets and 4) reduced plant height and yield in soybeans. Drift in the amounts as low as 1 gram per hectare (about 0.01 ounces per acres) can damage susceptible crops. This is less than a hundredth of the typical agricultural application rates (2 to 4 ounces per acres). Widespread damage from drift has occurred when applications are made when temperatures are greater than 85 *F.

A recent (1992) study of farmers by the National Cancer Institute found that exposure to dicamba approximately doubled the farmers' risk of contracting the cancer non-Hodgkin's lymphoma two decades after exposure.

Dicamba is characterized as "slightly toxic" or practically nontoxic" to fish. However, there are wide variations in its acute toxicity. The amount required to kill a given species of fish varied as a function of 1) species, 2) conditions under with the fish interacted with the pesticide (i.e. migrating or holding), and the 3) presence of other products used with the dicamba. Little is known about the effects on fish other an acute toxicity. Its toxicity to aquatic organisms smaller than fish shows similarities to its toxicity to fish. It is characterized as "practically nontoxic" to aquatic invertebrates, and as an herbicide, it would not be expected to be acutely toxic to aquatic animals. However, tests show wide variations among species. Little is known about effects on aquatic invertebrates other an acute toxicity.

The chemical inhibits an enzyme found in the nervous systems of most animals. In addition, dicamba inhibits the activity of several enzymes in animal livers that detoxify and excrete foreign chemicals

Source: Cox, C. (1994). Dicamba Fact Sheet. Journal of Pesticide Reform, Spring 1994. Vol. 14, No.1.

Can be downloaded from **www.pesticide.org** > Pesticide Fact Sheet > Dicamba. Article contains a complete list of references at the end.

Glyphosate (found in the product Roundup)

Go to www.pesticide.org > Pesticide Fact Sheet > scroll down to Glyphosate

Picloran (found in the product Tordon)

The herbicide picloram is typically used to kill unwanted broad-leaved plants on rangeland and pasture, in forest, and along rights-of-way. Picloram is persistent and high mobile in soil. It is widely found as a contaminant of groundwater and has also been found in streams and lakes. Drift and runoff from picloram treatments have causes startling damage to crops, particularly tobacco and potatoes. Because of these characteristics, both the Ecological Effects Branch and the Environmental Fate and Ground Water Branch of the U.S. Environmental Protection Agency (EPA) recommended that use of picloram not be continued. These recommendations were not accepted by EPA when it evaluated picloram in 1995.

In laboratory tests, picloram causes damage to the liver, kidney, and spleen. Other adverse effects observed in laboratory tests include embryo loss in pregnant rabbits, and testicular atrophy in male rates. The combination of picloram and 2,4-D causes birth defects and decreases birth weights in mice.

Picloram is contaminated with the carcinogen hexachlorobenzene. Hexachlorobenzene, in addition to causing cancer of the liver, thyroid, and kidney, also damages bones, blood, the immune systems, and the endocrine systems. Nursing infants and unborn children are particularly at risk from hexachlorobenzene. There are also occupational hazards related to those workers who mix and apply picloram-containing herbicides.

Picloram is toxic to juvenile fish at concentration less than 1 part per million (ppm). Concentration as low as 0.04 ppm have killed trout fry. In Montana, roadside spraying of Tordon killed 15, 000 pounds of fish in a hatchery ¼ mile downstream from the Tordon treatment.

Picloram is also synergistic with several common herbicides with respect to its toxicity to mammals and fish. Picloram, in combination with 2,4-D, has negative reproductive impacts. In livestock the combination of the two has acted synergistically in causing mortality, as well as in causing cancer of the small intestine. The two are also synergistic in their acute toxicity to trout.

Source: Cox, C. (1998). Picloram: Herbicide Factsheet. Journal of Pesticide Reform. Spring 1998: Vol. 18, No. 1. Can be downloaded at **www.pesticide.org** > Pesticide Fact Sheet > Picloram

APPENDIX R

Water Rights by Certificate

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
74993					1993	3	Boise Cascade Corp	3.1E+07
74993					1993	3	Boise Cascade Corp	3.1E+07
31810	S 23934				1954	5	John A Shaw	3.1E+07
4445			Powder River		1872	2	C L Scott	3.1E+07
4179			Powder River		1881	2	L C Grout	3.1E+07
4179			Powder River		1880	1	L C Grout	3.1E+07
4445			Powder River		1872	1	C L Scott	3.1E+07
4445			Powder River		1883	1	C L Scott	3.1E+07
4445			Powder River		1872	3	C L Scott	3.1E+07
73654					1993	1	Seven Diamond Ranch	3.1E+07
73654					1993	2	Seven Diamond Ranch	3.1E+07
68883					1993	2	Seven Diamond Ranch	3.1E+07
	R 11892				1991	3	Wilson Cattle Co Inc	3.1E+07
	R 11892				1991	2	Wilson Cattle Co Inc	3.1E+07
	R 11892				1991	5	Wilson Cattle Co Inc	3.1E+07
73654					1993	3	Seven Diamond Ranch	3.1E+07
73654					1993	4	Seven Diamond Ranch	3.1E+07
73654					1993	5	Seven Diamond Ranch	3.1E+07
	R 11892				1991	1	Wilson Cattle Co Inc	3.1E+07
	R 11892				1991	4	Wilson Cattle Co Inc	3.1E+07
68879					1993	1	Seven Diamond Ranch	3.1E+07
68879					1993	3	Seven Diamond Ranch	3.1E+07
68879					1993	2	Seven Diamond Ranch	3.1E+07
4098			Powder River		1887	4	A P Dahlstrom	3.1E+07
4098			Powder River		1887	4	A P Dahlstrom	3.1E+07
4098			Powder River		1887	2	A P Dahlstrom	3.1E+07
31810	S 23934				1954	4	John A Shaw	3.1E+07
4098			Powder River		1896	3	A P Dahlstrom	3.1E+07
4098			Powder River		1896	1	A P Dahlstrom	3.1E+07
65111	S 40529				1976	1	Phillip R & Ellen L Stevenson	3.1E+07
	G 13678				1998	1	Don Duerkel	3.1E+07
	S 52205				1991	2	Wilson Cattle Co Inc	3.1E+07
	S 52205				1991	3	Wilson Cattle Co Inc	3.1E+07
	S 52205				1991	1	Wilson Cattle Co Inc	3.1E+07
	R 11892				1991	7	Wilson Cattle Co Inc	3.1E+07
	R 11892				1991	6	Wilson Cattle Co Inc	3.1E+07
68875					1993	1	Seven Diamond Ranch	3.1E+07
4087			Powder River		1876	1	S F Cusick	3.1E+07
31810	S 23934				1954	3	John A Shaw	3.1E+07
31810	S 23934				1954	6	John A Shaw	3.1E+07
31810	S 23934				1954	1	John A Shaw	3.1E+07
31810	S 23934				1954	2	John A Shaw	3.1E+07
31811	R 1810				1954	4	John A Shaw	3.1E+07
31811	R 1810				1954	5	John A Shaw	3.1E+07
31811	R 1810				1954	1	John A Shaw	3.1E+07
31811	R 1810				1954	2	John A Shaw	3.1E+07
31811	R 1810				1954	3	John A Shaw	3.1E+07
60752	S 36717				1973	1	Robert G & Linda M Haerling	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
74993	PEACH CR/RES 431	05.00S38.00E-24-NESE	AS	0.00	0.00	N	4.8
74993	PEACH CR/RES 431	05.00S38.00E-24-NESE	LW	0.00	0.00	N	4.8
31810	DRY CR	05.00S38.00E-25-SENE	IR	1.42	1.42	N	
4445	SPRS	05.00S39.00E-5-SWSW	IR	3.80	0.00	Y	
4179	CLOVER CR/SPRS	05.00S39.00E-7-NESW	IR	8.90	0.00	Y	
4179	CLOVER CR/SPRS	05.00S39.00E-8-NWNW	IR	8.90	8.90	N	
4445	CLOVER CR	05.00S39.00E-8-SWNW	IR	3.80	3.80	N	
4445	CLOVER CR	05.00S39.00E-8-SWNW	IR	3.80	3.80	N	
4445	SPRS	05.00S39.00E-8-SWSE	IR	3.80	0.00	Y	
73654	UNN STR/RES 1	05.00S39.00E-9-SESE	LV	0.00	0.00	N	5
73654	UNN STR/RES 2	05.00S39.00E-10-NENE	LV	0.00	0.00	N	5
68883	SPR/RES 80	05.00S39.00E-13-NENW	LV	0.00	0.00	N	2
	A SPR/RES 3	05.00S39.00E-15-NESW	LV	0.00	0.00	N	0.33
	A SPR/RES 2	05.00S39.00E-15-SWNW	LV	0.00	0.00	N	0.33
	A SPR/RES 8	05.00S39.00E-16-NESE	LV	0.00	0.00	N	1.65
73654	UNN STR/RES 3	05.00S39.00E-16-NWNE	LV	0.00	0.00	N	5
73654	UNN STR/RES 4	05.00S39.00E-16-NWNE	LV	0.00	0.00	N	5
73654	UNN STR/RES 5	05.00S39.00E-16-NWSE	LV	0.00	0.00	N	5
	A SPR/RES 1	05.00S39.00E-16-SESE	LV	0.00	0.00	N	0.12
	A SPR/RES 5	05.00S39.00E-16-SWSE	LV	0.00	0.00	N	0.33
68879	UNN STR/RES 67	05.00S39.00E-18-NENW	LV	0.00	0.00	N	5
68879	RESERVOIR	05.00S39.00E-18-NWSE	LV	0.00	0.00	N	5
68879	UNN STR/RES 66	05.00S39.00E-18-SENE	LV	0.00	0.00	N	5
4098	GUSSIE CR	05.00S39.00E-18-SESW	IR	6.80	0.00	Y	
4098	GUSSIE CR	05.00S39.00E-18-SESW	ST	0.00	0.00	N	20
4098	STEVENS PAST SPRS	05.00S39.00E-18-SWNW	IR	6.80	0.00	Y	
31810	GUSSIE CR	05.00S39.00E-19-NWSW	IR	3.00	3.00	N	
4098	N PRONG CLOVER CR	05.00S39.00E-20-NWNE	IR	6.80	0.00	Y	
4098	16 MILE SPRS	05.00S39.00E-20-SWNE	IR	6.80	6.80	N	
65111	CLOVER CR	05.00S39.00E-20-SWNE	IR	0.34	0.34	N	
	A WELL	05.00S39.00E-21-NWNW	IR	3.95	3.95	N	
	SPR 2	05.00S39.00E-22-NESE	LV	0.11	0.11	N	
	SPR 3	05.00S39.00E-22-NESE	LV	0.11	0.11	N	
	SPR 1	05.00S39.00E-22-SENE	LV	0.11	0.11	N	
	A SPR/RES 10	05.00S39.00E-22-SWNE	LV	0.00	0.00	N	0.62
	A SPR/RES 9	05.00S39.00E-22-SWNW	LV	0.00	0.00	N	0.62
68875	UNN STR/RES 72	05.00S39.00E-25-NWNE	LV	0.00	0.00	N	5
4087	THOMPSON SPRS	05.00S39.00E-25-SWNW	IR	0.65	0.65	N	
31810	UNN STR 3	05.00S39.00E-30-SWNW	IR	0.25	0.00	Y	
31810	SHAW RS	05.00S39.00E-31-NWNW	IR	0.00	0.00	N	504
31810	UNN STR 1	05.00S39.00E-31-NWNW	IR	0.50	0.50	N	
31810	UNN STR 2	05.00S39.00E-31-NWNW	IR	0.25	0.25	N	
31811	DRY CR	05.00S39.00E-31-NWNW	IR	0.00	0.00	N	504
31811	GUSSIE CR	05.00S39.00E-31-NWNW	IR	0.00	0.00	N	504
31811	UNN STR 1	05.00S39.00E-31-NWNW	IS	0.00	0.00	N	504
31811	UNN STR 2	05.00S39.00E-31-NWNW	IR	0.00	0.00	N	504
31811	UNN STR 3	05.00S39.00E-31-NWNW	IR	0.00	0.00	N	504
60752	SHAW RESERVOIR	05.00S39.00E-31-NWNW	IS	0.00	0.00	N	307

Certificate	ACF	ACF Estimated	Season	Remarks
74993	0	Y	1/1 - 12/31	
74993	4.8	N	1/1 - 12/31	
31810		N	1/1 - 12/31	
4445		N	1/1 - 12/31	
4179		N	1/1 - 12/31	
4179		N	1/1 - 12/31	
4445		N	1/1 - 12/31	
4445		N	1/1 - 12/31	
4445		N	1/1 - 12/31	
73654	5	N	1/1 - 12/31	
73654	0	Y	1/1 - 12/31	
68883	0	Y	1/1 - 12/31	
	0.33	N	1/1 - 12/31	
	0.33	N	1/1 - 12/31	
	1.65	N	1/1 - 12/31	
73654	0	Y	1/1 - 12/31	
73654	0	Y	1/1 - 12/31	
73654	0	Y	1/1 - 12/31	
	0.12	N	1/1 - 12/31	
	0.33	N	1/1 - 12/31	
68879	5	N	1/1 - 12/31	
68879	0	Y	1/1 - 12/31	
68879	0	Y	1/1 - 12/31	
4098		N	1/1 - 12/31	
4098	20	N	1/1 - 12/31	
4098		N	1/1 - 12/31	
31810		N	1/1 - 12/31	
4098		N	1/1 - 12/31	
4098		N	1/1 - 12/31	
65111		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
	0.62	N	1/1 - 12/31	
	0.62	N	1/1 - 12/31	
68875	5	N	1/1 - 12/31	
4087		N	1/1 - 12/31	
31810		N	1/1 - 12/31	
31810	504	N	1/1 - 12/31	
31810		N	1/1 - 12/31	
31810		N	1/1 - 12/31	
31811	0	Y	1/1 - 12/31	
31811	0	Y	1/1 - 12/31	
31811	504	N	1/1 - 12/31	
31811	0	Y	1/1 - 12/31	
31811	0	Y	1/1 - 12/31	
60752	307	N	1/1 - 12/31	

Certificate	Condition Code
74993	
74993	
31810	
4445	
4179	
4179	
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4445	
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73654	
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68883	
73654	
73654	
73654	
68879	
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68879	
4098	
4098	
4098	
31810	
4098	
4098	
65111	
68875	
4087	
31810	
31810	
31810	
31810	
31811	
31811	
31811	
31811	
31811	
60752	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
4299			Powder River		1897	1	Mrs R W Laughlin	3.1E+07
57973	R 8192				1980	1	Rufenacht & Rode Cattle Co	3.1E+07
57974	S 45274				1980	1	Rufenacht & Rode Cattle Co	3.1E+07
68882					1993	2	Seven Diamond Ranch	3.1E+07
68882					1993	2	Seven Diamond Ranch	3.1E+07
68882					1993	1	Seven Diamond Ranch	3.1E+07
68884					1993	5	Seven Diamond Ranch	3.1E+07
68884					1993	6	Seven Diamond Ranch	3.1E+07
68873					1993	1	Seven Diamond Ranch	3.1E+07
68873					1993	2	Seven Diamond Ranch	3.1E+07
58858	S 42263				1977	1	Ernest W Christopherson, Bar C Ranch	3.1E+07
58857	G 7633				1977	1	Ernest W Christopherson, Bar C Ranch	3.1E+07
68882					1993	3	Seven Diamond Ranch	3.1E+07
68882					1993	4	Seven Diamond Ranch	3.1E+07
68882					1993	6	Seven Diamond Ranch	3.1E+07
68882					1993	5	Seven Diamond Ranch	3.1E+07
68882					1993	10	Seven Diamond Ranch	3.1E+07
68882					1993	9	Seven Diamond Ranch	3.1E+07
68882					1993	8	Seven Diamond Ranch	3.1E+07
68882					1993	7	Seven Diamond Ranch	3.1E+07
992	S 1275				1912	1	K A Haag	3.1E+07
4570			Powder River		1877	1	Frederick A Eames	3.1E+07
4570			Powder River		1906	1	Frederick A Eames	3.1E+07
4210			Powder River		1906	1	W F Hendricks	3.1E+07
4189			Powder River		1896	2	J L Hand	72163
4189			Powder River		1903	2	J L Hand	72163
4189			Powder River		1896	2	J L Hand	3.1E+07
4189			Powder River		1903	2	J L Hand	3.1E+07
3995			Powder River		1887	1	H F Bauer	72163
3995			Powder River		1892	1	H F Bauer	72163
3995			Powder River		1897	1	H F Bauer	72163
3995			Powder River		1887	1	H F Bauer	72171
3995			Powder River		1892	1	H F Bauer	72171
3995			Powder River		1897	1	H F Bauer	72171
31636	S 24734				1957	1	Mary K Christman	72165
73687					1993	2	ODFW	72188
65428	G 10285				1983	1	James D Hanley	72165
65428	G 10285				1983	1	James D Hanley	72188
69534					1993	3	Chris & Donna Heffernan	72163
69534					1993	3	Chris & Donna Heffernan	72188
72096					1993	1	Mt Ranch Corp	72163
	R 13564				2002	1	Christopher Heffernan	72163
	R 11854				1991	1	Fredrick C Colton	72163
4002			Powder River		1872	1	S E Blevens	72163
4002			Powder River		1910	1	S E Blevens	72163
4170			Powder River		1872	1	A E Gilkison	72163
4170			Powder River		1873	1	A E Gilkison	72163

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
4299	SHAW CR	05.00S39.00E-33-NENW	IR	2.50	2.50	N	
57973	JIMMY CR	05.00S39.00E-35-NENE	IR	0.00	0.00	N	675
57974	JIMMY CR/RES	05.00S39.00E-35-SESE	IR	5.70	5.70	N	
68882	UNN STR/RES 2	05.00S40.00E-19-NESW	LV	0.00	0.00	N	5
68882	UNN STR/RES 2	05.00S40.00E-19-NESW	LV	0.00	0.00	N	5
68882	UNN STR/RES 1	05.00S40.00E-19-NWNW	LV	0.00	0.00	N	5
68884	STRS/RES 5	05.00S40.00E-20-SESW	LV	0.00	0.00	N	5
68884	STRS/RES 6	05.00S40.00E-20-SESW	LV	0.00	0.00	N	5
68873	UNN STR/RES	05.00S40.00E-23-NESE	LV	0.00	0.00	N	5
68873	UNN STR/RES	05.00S40.00E-24-SWSW	LV	0.00	0.00	N	5
58858	PRESCOTT CR	05.00S40.00E-27-SWSW	IC	1.35	1.35	N	
58857	A SUMP	05.00S40.00E-28-SWSE	IS	1.35	1.35	N	
68882	UNN STR/RES 3	05.00S40.00E-29-SWNE	LV	0.00	0.00	N	5
68882	UNN STR/RES 4	05.00S40.00E-30-SENE	LV	0.00	0.00	N	5
68882	UNN STR/RES 6	05.00S40.00E-30-SESE	LV	0.00	0.00	N	5
68882	UNN STR/RES 5	05.00S40.00E-30-SESW	LV	0.00	0.00	N	5
68882	UNN STR/RES 10	05.00S40.00E-31-NWSE	LV	0.00	0.00	N	5
68882	UNN STR/RES 9	05.00S40.00E-31-NWSE	LV	0.00	0.00	N	5
68882	UNN STR/RES 8	05.00S40.00E-31-NWSW	LV	0.00	0.00	N	5
68882	UNN STR/RES 7	05.00S40.00E-31-SWNE	LV	0.00	0.00	N	5
992	PRESCOTT CR	05.00S40.00E-33-NESE	IR	1.00	1.00	N	
4570	ANTELOPE CR	05.00S40.00E-33-NWSE	IR	4.68	4.68	N	
4570	ANTELOPE CR	05.00S40.00E-33-NWSE	IR	4.68	4.68	N	
4210	ANTELOPE CR SPR	05.00S40.00E-34-SENW	IR	0.43	0.43	N	
4189	LITTLE WOLF CR	06.00S38.00E-1-NENE	IR	1.50	0.00	Y	
4189	LITTLE WOLF CR	06.00S38.00E-1-NENE	IR	1.50	0.00	Y	
4189	LITTLE WOLF CR	06.00S38.00E-1-NENE	IR	1.50	0.00	Y	
4189	LITTLE WOLF CR	06.00S38.00E-1-NENE	IR	1.50	0.00	Y	
3995	WOLF CR	06.00S38.00E-3-NWSE	IR	0.80	0.80	N	
3995	WOLF CR	06.00S38.00E-3-NWSE	IR	0.80	0.80	N	
3995	WOLF CR	06.00S38.00E-3-NWSE	IR	0.80	0.80	N	
3995	WOLF CR	06.00S38.00E-3-NWSE	IR	0.80	0.80	N	
3995	WOLF CR	06.00S38.00E-3-NWSE	IR	0.80	0.80	N	
3995	WOLF CR	06.00S38.00E-3-NWSE	IR	0.80	0.80	N	
31636	DUTCH CR	06.00S38.00E-7-NWSW	IR	0.62	0.62	N	
73687	ANTHONY CR/RES 26	06.00S38.00E-8-SWSE	LW	0.00	0.00	N	1.55
65428	FILTRATION GALLERY	06.00S38.00E-8-SWSW	IR	0.13	0.13	N	
65428	FILTRATION GALLERY	06.00S38.00E-8-SWSW	IR	0.13	0.13	N	
69534	UNN STR/RES 5	06.00S38.00E-9-NWSE	LW	0.00	0.00	N	0.38
69534	UNN STR/RES 5	06.00S38.00E-9-NWSE	LW	0.00	0.00	N	0.38
72096	UNN STR/RES	06.00S38.00E-10-NWNW	LV	0.00	0.00	N	0.5
	RUNOFF	06.00S38.00E-10-SESW	MP			N	9
	UNN STR/RES	06.00S38.00E-11-NENE	LW	0.00	0.00	N	1
4002	WOLF CR	06.00S38.00E-11-NESW	IR	5.40	5.40	N	
4002	WOLF CR	06.00S38.00E-11-NESW	IR	5.40	5.40	N	
4170	WOLF CR	06.00S38.00E-11-NESW	IR	1.68	1.68	N	
4170	WOLF CR	06.00S38.00E-11-NESW	IR	1.68	1.68	N	

Certificate	ACF	ACF Estimated	Season	Remarks
4299		N	1/1 - 12/31	
57973	675	N	1/1 - 12/31	
57974		N	1/1 - 12/31	
68882	0	Y	1/1 - 12/31	
68882	0	Y	1/1 - 12/31	
68882	5	N	1/1 - 12/31	
68884	0	Y	1/1 - 12/31	
68884	0	Y	1/1 - 12/31	
68873	5	N	1/1 - 12/31	
68873	0	Y	1/1 - 12/31	
58858		N	1/1 - 12/31	
58857		N	1/1 - 12/31	
68882	0	Y	1/1 - 12/31	
68882	0	Y	1/1 - 12/31	
68882	0	Y	1/1 - 12/31	
68882	0	Y	1/1 - 12/31	
68882	0	Y	1/1 - 12/31	
68882	0	Y	1/1 - 12/31	
68882	0	Y	1/1 - 12/31	
68882	0	Y	1/1 - 12/31	
992		N	1/1 - 12/31	
4570		N	1/1 - 12/31	
4570		N	1/1 - 12/31	
4210		N	1/1 - 12/31	
4189		N	1/1 - 12/31	
4189		N	1/1 - 12/31	
4189		N	1/1 - 12/31	
4189		N	1/1 - 12/31	
3995		N	1/1 - 12/31	
3995		N	1/1 - 12/31	
3995		N	1/1 - 12/31	
3995		N	1/1 - 12/31	
3995		N	1/1 - 12/31	
3995		N	1/1 - 12/31	
31636		N	1/1 - 12/31	
73687	1.55	N	1/1 - 12/31	
65428		N	1/1 - 12/31	
65428		N	1/1 - 12/31	
69534	0.38	N	1/1 - 12/31	
69534	0.38	N	1/1 - 12/31	
72096	0.5	N	1/1 - 12/31	
	9	N	4/1 - 4/14	
	1	N	1/1 - 12/31	APPROPRIATED FOR STORAGE 10/1 4/30
4002		N	1/1 - 12/31	
4002		N	1/1 - 12/31	
4170		N	1/1 - 12/31	
4170		N	1/1 - 12/31	

Certificate	Condition Code
4299	
57973	
57974	
68882	
68882	
68882	
68884	
68884	
68873	
68873	
58858	
58857	
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992	
4570	
4570	
4210	
4189	
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4189	
3995	
3995	
3995	
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3995	
3995	
31636	
73687	
65428	
65428	
69534	
69534	
72096	
4002	
4002	
4170	
4170	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
4172			Powder River		1873	1	J E Gilkison	72163
4172			Powder River		1885	1	J E Gilkison	72163
4178			Powder River		1885	1	Sarah C Grahm	72163
4178			Powder River		1898	1	Sarah C Grahm	72163
4178			Powder River		1903	1	Sarah C Grahm	72163
4428			Powder River		1897	1	Sara E Richardson	72163
8251	S 8513				1928	1	Alma E Lund	72163
8252	S 8514				1928	1	S E Blevens	72163
4324			Powder River		1895	1	I W MaHarry	72163
4324			Powder River		1897	1	I W MaHarry	72163
72195	S 2173			T 6314	1911	2	Don & Louise Dodson, Zelda Joy Harrod	72163
	R 5776				1963	2	Powder Valley WCD	72163
	R 5776				1963	2	Powder Valley WCD	72163
	R 5776				1963	1	Powder Valley WCD	72163
	R 5776				1963	1	Powder Valley WCD	72163
	S 35791				1963	2	Powder Valley WCD	72163
	S 35791				1963	3	Powder Valley WCD	72163
	S 35791				1963	4	Powder Valley WCD	72163
	S 42690				1977	1	Powder Valley WCD	72163
4195			Powder River		1899	1	Geo T Harrison	72163
4462			Powder River		1869	1	Mrs M Simons	72163
4462			Powder River		1880	1	Mrs M Simons	72163
4462			Powder River		1885	1	Mrs M Simons	72163
4462			Powder River		1894	1	Mrs M Simons	72163
27738			Powder River		1863	1	J W O'Bryant	72163
27738			Powder River		1892	1	J W O'Bryant	72163
27738			Powder River		1894	1	J W O'Bryant	72163
	S 50717				1983	1	Powder Valley WCD	72163
68786					1993	1	Norman & Helen Records	72163
68786					1993	1	Norman & Helen Records	72188
69534					1993	2	Chris & Donna Heffernan	72188
	R 13565				2002	1	Christopher Heffernan	72188
	R 13565				2002	1	Christopher Heffernan	72188
11483	S 11025				1933	1	H H Parker	72188
	S 50717				1983	22	Powder River WCD	72188
	S 50717				1983	23	Powder River WCD	72188
	R 8353				1963	1	Powder Valley WCD	72165
	R 8353				1965	1	Powder Valley WCD	72165
	R 8353				1982	1	Powder Valley WCD	72165
	R 8353				1963	1	Powder Valley WCD	72188
	R 8353				1965	1	Powder Valley WCD	72188
	R 8353				1982	1	Powder Valley WCD	72188
73687					1993	1	ODFW	72165
73687					1993	1	ODFW	72188
3320	S 828				1911	1	L S Kelsey, J S Davis, J B Wilson, W MaHarry	72165
10091	S 3488				1917	1	H J Wallace	72165
62531	S 46687				1981	1	Michael Mason	72165
66118	S 43779				1978	1	Bill Cantrell	72165
75592			N Powder R	T 4938	1870	1	Michael Mason	72165

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
4172	WOLF CR	06.00S38.00E-11-NWNW	IR	0.85	0.85	N	
4172	WOLF CR	06.00S38.00E-11-NWNW	IR	0.85	0.85	N	
4178	WOLF CR	06.00S38.00E-11-NWNW	IR	2.10	2.10	N	
4178	WOLF CR	06.00S38.00E-11-NWNW	IR	2.10	2.10	N	
4178	WOLF CR	06.00S38.00E-11-NWNW	IR	2.10	2.10	N	
4428	WOLF CR	06.00S38.00E-11-NWNW	IR	0.20	0.20	N	
8251	WOLF CR	06.00S38.00E-11-NWNW	ID	1.21	1.21	N	
8252	WOLF CR	06.00S38.00E-11-NWNW	ID	0.53	0.53	N	
4324	WOLF CR	06.00S38.00E-11-SWSE	IR	26.53	26.53	N	
4324	WOLF CR	06.00S38.00E-11-SWSE	IR	26.53	26.53	N	
72195	WOLF CR	06.00S38.00E-11-SWSE	IR	3.41	0.00	Y	
	ANTHONY FORK	06.00S38.00E-11-SWSE	IC	0.00	0.00	N	
	ANTHONY FORK	06.00S38.00E-11-SWSE	RC	0.00	0.00	N	750
	WOLF CR	06.00S38.00E-11-SWSE	IC	0.00	0.00	N	
	WOLF CR	06.00S38.00E-11-SWSE	RC	0.00	0.00	N	750
	WOLF CR	06.00S38.00E-11-SWSE	IC	30.00	30.00	N	
	WOLF CR RES	06.00S38.00E-11-SWSE	IS	0.00	0.00	N	
	WOLF CR RES	06.00S38.00E-11-SWSE	RC	0.00	0.00	N	750
	ANTHONY CRK/RES	06.00S38.00E-11-SWSE	IC	144.83	####	N	
4195	WOLF CR	06.00S38.00E-12-SWSE	IR	0.20	0.20	N	
4462	WOLF CR	06.00S38.00E-12-SWSW	IR	3.30	3.30	N	
4462	WOLF CR	06.00S38.00E-12-SWSW	IR	3.30	3.30	N	
4462	WOLF CR	06.00S38.00E-12-SWSW	IR	3.30	3.30	N	
4462	WOLF CR	06.00S38.00E-12-SWSW	IR	3.30	3.30	N	
27738	WOLF CR	06.00S38.00E-12-SWSW	IR	18.20	18.20	N	
27738	WOLF CR	06.00S38.00E-12-SWSW	IR	18.20	18.20	N	
27738	WOLF CR	06.00S38.00E-12-SWSW	IR	18.20	18.20	N	
	ANTHONY FK	06.00S38.00E-13-SENW	IC	300.00	####	N	
68786	UNN STR	06.00S38.00E-15-SESE	LW	0.00	0.00	N	0.25
68786	UNN STR	06.00S38.00E-15-SESE	LW	0.00	0.00	N	0.25
69534	UNN STR/RES 4	06.00S38.00E-16-NENE	LW	0.00	0.00	N	2.13
	RUNOFF	06.00S38.00E-16-NENE	MP			N	9
	RUNOFF	06.00S38.00E-16-NENE	MP			N	9
11483	DALEY CR	06.00S38.00E-16-NWSW	IS	1.43	1.43	N	
	PILCHER CR	06.00S38.00E-16-NWSW	IC	50.00	50.00	N	
	PILCHER CR RES	06.00S38.00E-16-NWSW	IS	0.00	0.00	N	5910
	ANTHONY FORK	06.00S38.00E-16-SWSW	IR	0.00	0.00	N	4270
	ANTHONY FORK	06.00S38.00E-16-SWSW	IR	0.00	0.00	N	1230
	ANTHONY FORK	06.00S38.00E-16-SWSW	IR	0.00	0.00	N	410
	ANTHONY FORK	06.00S38.00E-16-SWSW	IR	0.00	0.00	N	4270
	ANTHONY FORK	06.00S38.00E-16-SWSW	IR	0.00	0.00	N	1230
	ANTHONY FORK	06.00S38.00E-16-SWSW	IR	0.00	0.00	N	410
73687	ANTHONY CR/RES 25	06.00S38.00E-17-NWNE	LW	0.00	0.00	N	1.47
73687	ANTHONY CR/RES 25	06.00S38.00E-17-NWNE	LW	0.00	0.00	N	1.47
3320	ANTHONY FK	06.00S38.00E-17-NWSW	IR	8.25	8.25	N	
10091	ANTHONY FK	06.00S38.00E-17-NWSW	IR	1.00	1.00	N	
62531	UNN STR	06.00S38.00E-17-NWSW	IR	0.77	0.77	N	
66118	ANTHONY FK	06.00S38.00E-17-NWSW	IS	2.65	2.65	N	
75592	ANTHONY FK	06.00S38.00E-17-NWSW	IR	2.57	2.57	N	

Certificate	ACF	ACF Estimated	Season	Remarks
4172		N	1/1 - 12/31	
4172		N	1/1 - 12/31	
4178		N	1/1 - 12/31	
4178		N	1/1 - 12/31	
4178		N	1/1 - 12/31	
4428		N	1/1 - 12/31	
8251		N	1/1 - 12/31	
8252		N	1/1 - 12/31	
4324		N	1/1 - 12/31	
4324		N	1/1 - 12/31	
72195		N	1/1 - 12/31	
		N	1/1 - 12/31	
	0	Y	1/1 - 12/31	
		N	1/1 - 12/31	
	750	N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
	750	N	1/1 - 12/31	
		N	1/1 - 12/31	
4195		N	1/1 - 12/31	
4462		N	1/1 - 12/31	
4462		N	1/1 - 12/31	
4462		N	1/1 - 12/31	
4462		N	1/1 - 12/31	
27738		N	1/1 - 12/31	
27738		N	1/1 - 12/31	
27738		N	1/1 - 12/31	
		N	1/1 - 12/31	CARNES
68786	0.25	N	1/1 - 12/31	
68786	0.25	N	1/1 - 12/31	
69534	2.13	N	1/1 - 12/31	
	9	N	11/1 - 11/30	
	9	N	2/1 - 4/14	
11483		N	1/1 - 12/31	3/1 7/1; 1/80, 7/1 10/1
		N	1/1 - 12/31	
	5910	N	1/1 - 12/31	
	4270	N	1/1 - 12/31	
	1230	N	1/1 - 12/31	
	410	N	1/1 - 12/31	
	4270	N	1/1 - 12/31	
	1230	N	1/1 - 12/31	
	410	N	1/1 - 12/31	
73687	1.47	N	1/1 - 12/31	
73687	1.47	N	1/1 - 12/31	
3320		N	1/1 - 12/31	
10091		N	1/1 - 12/31	
62531		N	1/1 - 12/31	
66118		N	1/1 - 12/31	
75592		N	1/1 - 12/31	3/1 7/1;1.22 CFS 7/1 10/1;NOT TO EXCEED 243 AF IF AVAILABLE AT ORIG POD

Certificate	Condition Code
4172	
4172	
4178	
4178	
4178	
4428	
8251	
8252	
4324	
4324	
72195	
4195	
4462	
4462	
4462	
4462	
27738	
27738	
27738	
68786	
68786	
69534	
11483	
73687	
73687	
3320	
10091	
62531	
66118	
75592	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
75592			N Powder R	T 4938	1884	1	Michael Mason	72165
79884			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
79884			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
79884			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
79884			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
79884			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
79884			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
79885			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
79885			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
79885			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
79885			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
79885			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
79885			N Powder R,1916	T 6218	1898	2	Powder Valley WCD	72165
	S 50717				1983	3	Powder Valley WCD	72165
	S 52948				1991	1	Wilson Family Ranches LLC, Northwest Farm Credit Serv	72165
	R 8353				1963	2	Powder Valley WCD	72165
	R 8353				1965	2	Powder Valley WCD	72165
	R 8353				1982	2	Powder Valley WCD	72165
	R 8353				1963	2	Powder Valley WCD	72188
	R 8353				1965	2	Powder Valley WCD	72188
	R 8353				1982	2	Powder Valley WCD	72188
1526			N Powder R		1871	1	William Anthony	72165
1527			N Powder R		1871	1	Sarah Anthony Estate	72165
1532			N Powder R		1872	1	A K Dryborough	72165
1534			N Powder R		1883	1	Lewis Klinefelter	72165
1537			N Powder R		1871	2	Thomas H Parker	72165
50928			N Powder R	T 4938	1870	1	James A Pilcher	72165
50928			N Powder R	T 4938	1884	1	James A Pilcher	72165
62519	S 44473				1979	1	Michael Mason	72165
75592			N Powder R	T 4938	1870	2	Michael Mason	72165
75592			N Powder R	T 4938	1884	2	Michael Mason	72165
75592			N Powder R	T 4938	1884	99	Michael Mason	72165
	S 50717				1983	4	Powder River WCD	72165
1533			N Powder R		1890	1	C Garwood	72165
1537			N Powder R		1905	1	Thomas H Parker	72165
1540			N Powder R		1890	1	Juliette E Tenbroeck	72165
1540			N Powder R		1904	1	Juliette E Tenbroeck	72165
31901	S 25449				1958	1	Mr/Mrs Glenn L Pratt	72165
40476	S 32178				1966	1	H C Schwabrow	72165
	S 42690				1977	3	Powder Valley WCD	72165
	S 50717				1983	2	Powder River WCD	72165
				T 6219	1898	2	Powder Valley WCD	72165
				T 6219	1898	2	Powder Valley WCD	72165
				T 6219	1908	2	Powder Valley WCD	72165
				T 6219	1898	2	Powder Valley WCD	72165
				T 6219	1906	2	Powder Valley WCD	72165
				T 6219	1905	2	Powder Valley WCD	72165
1474			N Powder R		1896	1	Will F Hutchinson	72165
75591			N Powder R	P 37	1890	1	Louis F & G W Pratt	72165

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
75592	ANTHONY FK	06.00S38.00E-17-NWSW	IR	2.57	0.00	Y	
79884	ANTHONY FK	06.00S38.00E-17-NWSW	DO	2.49	0.42	Y	
79884	ANTHONY FK	06.00S38.00E-17-NWSW	DO	4.00	0.67	Y	
79884	ANTHONY FK	06.00S38.00E-17-NWSW	IR	2.49	0.42	Y	
79884	ANTHONY FK	06.00S38.00E-17-NWSW	IR	4.00	0.67	Y	
79884	ANTHONY FK	06.00S38.00E-17-NWSW	LV	2.49	0.42	Y	
79884	ANTHONY FK	06.00S38.00E-17-NWSW	LV	4.00	0.67	Y	
79885	ANTHONY FK	06.00S38.00E-17-NWSW	DO	1.80	0.30	Y	
79885	ANTHONY FK	06.00S38.00E-17-NWSW	DO	3.50	0.58	Y	
79885	ANTHONY FK	06.00S38.00E-17-NWSW	IR	1.80	0.30	Y	
79885	ANTHONY FK	06.00S38.00E-17-NWSW	IR	3.50	0.58	Y	
79885	ANTHONY FK	06.00S38.00E-17-NWSW	LV	1.80	0.30	Y	
79885	ANTHONY FK	06.00S38.00E-17-NWSW	LV	3.50	0.58	Y	
	ANTHONY FK	06.00S38.00E-17-NWSW	IC	300.00	0.00	Y	
	ANTHONY CR	06.00S38.00E-17-NWSW	IS	2.72	2.72	N	
	PILCHER CR	06.00S38.00E-17-SESE	IR	0.00	0.00	N	4270
	PILCHER CR	06.00S38.00E-17-SESE	IR	0.00	0.00	N	1230
	PILCHER CR	06.00S38.00E-17-SESE	IR	0.00	0.00	N	410
	PILCHER CR	06.00S38.00E-17-SESE	IR	0.00	0.00	N	4270
	PILCHER CR	06.00S38.00E-17-SESE	IR	0.00	0.00	N	1230
	PILCHER CR	06.00S38.00E-17-SESE	IR	0.00	0.00	N	410
1526	ANTHONY FK	06.00S38.00E-17-SESW	I*	1.00	1.00	N	
1527	ANTHONY FK	06.00S38.00E-17-SESW	I*	1.00	1.00	N	
1532	ANTHONY FK	06.00S38.00E-17-SESW	I*	1.46	1.46	N	
1534	ANTHONY FK	06.00S38.00E-17-SESW	IR	1.08	1.08	N	
1537	ANTHONY FK	06.00S38.00E-17-SESW	IR	0.35	0.35	N	
50928	ANTHONY FK	06.00S38.00E-17-SESW	I*	0.10	0.10	N	
50928	ANTHONY FK	06.00S38.00E-17-SESW	I*	0.10	0.00	Y	
62519	ANTHONY FK	06.00S38.00E-17-SESW	IR	1.55	1.55	N	
75592	ANTHONY FK	06.00S38.00E-17-SESW	IR	2.57	0.00	Y	
75592	ANTHONY FK	06.00S38.00E-17-SESW	IR	2.57	0.00	Y	
75592	ANTHONY FK	06.00S38.00E-17-SESW	IR	2.57	0.00	Y	
	ANTHONY FK	06.00S38.00E-17-SESW	IC	300.00	0.00	Y	
1533	ANTHONY FK	06.00S38.00E-18-NENW	IR	1.00	1.00	N	
1537	ANTHONY FK	06.00S38.00E-18-NENW	IR	0.35	0.35	N	
1540	ANTHONY FK	06.00S38.00E-18-NENW	I*	1.75	1.75	N	
1540	ANTHONY FK	06.00S38.00E-18-NENW	I*	0.43	0.43	N	
31901	ANTHONY FK	06.00S38.00E-18-NENW	IR	4.09	4.09	N	
40476	ANTHONY FK	06.00S38.00E-18-NENW	IR	2.54	2.54	N	
	ANTHONY CRK/RES	06.00S38.00E-18-NENW	IC	144.83	0.00	Y	
	ANTHONY FK	06.00S38.00E-18-NENW	IC	300.00	0.00	Y	
	ANTHONY FK	06.00S38.00E-18-NENW	IR	7.50	0.00	Y	
	ANTHONY FK	06.00S38.00E-18-NENW	IR	7.50	0.00	Y	
	ANTHONY FK	06.00S38.00E-18-NENW	I*	1.00	0.00	Y	
	ANTHONY FK	06.00S38.00E-18-NENW	I*	3.64	0.00	Y	
	ANTHONY FK	06.00S38.00E-18-NENW	I*	3.64	0.00	Y	
	ANTHONY FK	06.00S38.00E-18-NENW	I*	2.23	0.00	Y	
1474	ANTHONY FK	06.00S38.00E-18-SWNE	IR	3.56	3.56	N	
75591	ANTHONY FK	06.00S38.00E-18-SWNE	IR	0.87	0.87	N	

Certificate	ACF	ACF Estimated	Season	Remarks
75592		N	1/1 - 12/31	3/1 7/1;1.22 CFS 7/1 10/1;NOT TO EXCEED 243 AF IF AVAILABLE AT ORIG POD
79884		N	7/2 - 10/1	
79884		N	3/1 - 7/1	
79884		N	7/2 - 10/1	
79884		N	3/1 - 7/1	
79884		N	7/2 - 10/1	
79884		N	3/1 - 7/1	
79885		N	7/2 - 10/1	
79885		N	3/1 - 7/1	
79885		N	7/2 - 10/1	
79885		N	3/1 - 7/1	
79885		N	7/2 - 10/1	
79885		N	3/1 - 7/1	
		N	1/1 - 12/31	LONE PINE
		N	1/1 - 12/31	3/1 6/30
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
1526		N	1/1 - 12/31	0.25 CFS 3/1 7/1; 0.13 CFS 7/1 10/1; 25 AF
1527		N	1/1 - 12/31	0.75 CFS 3/1 7/1; 0.39 CFS 7/1 10/1; 78 AF
1532		N	1/1 - 12/31	1.46 CFS 3/1 7/1; 0.73 CFS 7/1 10/1; 146 AF
1534		N	1/1 - 12/31	1.08 CFS 3/1 7/1; 0.54 CFS 7/1 10/1; 108 AF
1537		N	1/1 - 12/31	0.16 CFS 3/1 7/1; 0.08 CFS 7/1 10/1; 18 AF
50928		N	1/1 - 12/31	.10CFS 3/1 TO 7/1; .5CFS 7/1 TO 10/1; 10AF TOTAL
50928		N	1/1 - 12/31	.10CFS 3/1 TO 7.1; .5CFS 7/1 TO 10/1; 10AF TOTAL
62519		N	1/1 - 12/31	
75592		N	1/1 - 12/31	3/1 7/1;1.22 CFS 7/1 10/1;NOT TO EXCEED 243 AF IF AVAILABLE AT ORIG POD
75592		N	1/1 - 12/31	3/1 7/1;1.22 CFS 7/1 10/1;NOT TO EXCEED 243 AF IF AVAILABLE AT ORIG POD
75592		N	1/1 - 12/31	
		N	1/1 - 12/31	PILCHER DRYBOROUGH
1533		N	1/1 - 12/31	0.85 CFS 3/1 7/1L; 0.43 CFS 7/1 10/1; 85 AF
1537		N	1/1 - 12/31	0.18 CFS 3/1 7/1; 0.09 CFS 7/1 10/1; 18 AF
1540		N	1/1 - 12/31	1.75 CFS 3/1 7/1; 0.88 CFS 7/1 10/1; 175 AF
1540		N	1/1 - 12/31	0.43 CFS 3/1 7/1; 0.21 CFS 7/1 10/1; 43 AF
31901		N	1/1 - 12/31	
40476		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	COUGHANOUR
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIG POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIG POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIG POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
1474		N	1/1 - 12/31	3.56 CFS FM 3/1 7/1;1.78 CFS FM 7/1 10/1;356 AF TOTAL
75591		N	1/1 - 12/31	3/1 7/1;0.41 CFS 7/1 10/1;NOT TO EXCEED 83 AF IF AVAIL AT ORIG POD

Certificate	Condition Code
75592	
79884	
79884	
79884	
79884	
79884	
79884	
79885	
79885	
79885	
79885	
79885	
79885	
1526	
1527	
1532	
1534	
1537	
50928	
50928	
62519	
75592	
75592	
75592	
1533	
1537	
1540	
1540	
31901	
40476	
1474	
75591	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
				P 37	1890	1	James Pilcher	72165
3384	E 114			D 4	1911	1	Adam K Dryborough	72165
	S 50717				1983	5	Powder River WCD	72165
5043	S 6139				1923	1	L Klinefelter	72165
10072	S 10552				1932	1	A K Dryborough	72165
61922	S 44324				1978	1	ODFW	72165
11483	S 11025				1933	2	H H Parker	72165
11483	S 11025				1933	2	H H Parker	72188
70353					1993	1	Mary Lundeen Lewis	72165
70353					1993	1	Mary Lundeen Lewis	72188
11483	S 11025				1933	3	H H Parker	72188
69533					1993	2	Chris & Donna Heffernan	72188
69534					1993	1	Chris & Donna Heffernan	72188
69533					1993	1	Chris & Donna Heffernan	72188
40474	R 5092				1967	1	Henry C Schwabrow	72188
65383	S 46691				1982	1	Jerry C Bruton	72188
	R 11741				1992	1	Wilson Family Ranches LLC, Northwest Farm Credit Serv	72188
1459			N Powder R		1906	2	J L Dodson	72188
1504			N Powder R		1869	1	J O Pilcher	72188
1506			N Powder R		1869	1	John Powers	72188
	S 50717				1983	9	Powder River WCD	72188
				T 7749	1887	1	Wilson Cattle Co Inc	72188
				T 3889	1872	4	J H Hutchinson, Ernest Kirkland, Francis Dobbin	72188
73328					1992	1		72188
73328					1992	1		72188
73328					1992	1		72188
73328					1992	1		72188
73328					1992	1		72188
73328					1992	1		72188
73328					1992	1		72188
73328					1992	1		72188
73328					1992	1		72188
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73328					1992	1		72188
73328					1992	1		72188
73328					1992	1		72188
73328					1992	1		72188
69288					1993	1	Daniel Thee	72188
	S 50717				1983	6	Powder River WCD	72165

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
	ANTHONY CR	06.00S38.00E-18-SWNE	IR	0.87	0.87	N	
3384	ANTHONY FK	06.00S38.00E-20-NENW	IR	0.39	0.39	N	
	ANTHONY FK	06.00S38.00E-20-NENW	IC	300.00	0.00	Y	
5043	ANTHONY FK	06.00S38.00E-20-NWSE	IR	0.35	0.35	N	
10072	ANTHONY FK	06.00S38.00E-20-SENW	IR	0.59	0.59	N	
61922	BAKER CR	06.00S38.00E-20-SENW	IS	0.80	0.80	N	
11483	DALEY CR	06.00S38.00E-21-NENW	IR	1.43	0.00	Y	
11483	DALEY CR	06.00S38.00E-21-NENW	IR	1.43	0.00	Y	
70353	RUNOFF/RES	06.00S38.00E-21-NENW	WI	0.00	0.00	N	0.54
70353	RUNOFF/RES	06.00S38.00E-21-NENW	WI	0.00	0.00	N	0.54
11483	DALEY CR	06.00S38.00E-22-NWSW	IR	1.43	0.00	Y	
69533	UNN STR/RES 2	06.00S38.00E-23-NENW	LW	0.00	0.00	N	1.6
69534	UNN STR/RES 3	06.00S38.00E-23-NWNW	LW	0.00	0.00	N	0.5
69533	UNN STR/RES 1	06.00S38.00E-23-SWNE	LW	0.00	0.00	N	3
40474	A SPR	06.00S38.00E-24-NENW	LV	0.00	0.00	N	3.2
65383	UNN STR	06.00S38.00E-24-NENW	IS	0.16	0.16	N	
	A SPR/RES	06.00S38.00E-27-NWNW	LV	0.00	0.00	N	1.5
1459	N POWDER R	06.00S38.00E-27-NWSW	ID	0.75	0.75	N	
1504	N POWDER R	06.00S38.00E-27-NWSW	I*	1.85	1.85	N	
1506	N POWDER R	06.00S38.00E-27-NWSW	I*	2.06	2.06	N	
	N POWDER R	06.00S38.00E-27-NWSW	IC	25.60	0.00	Y	
	N POWDER R	06.00S38.00E-27-NWSW	IR	0.75	0.75	N	
	N POWDER R	06.00S38.00E-27-NWSW	I*	1.41	1.41	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	0.80	0.80	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	0.80	0.80	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	0.90	0.90	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	0.90	0.90	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	1.00	1.00	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	1.00	1.00	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	1.30	1.30	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	1.30	1.30	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	1.70	1.70	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	1.70	1.70	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	1.80	1.80	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	1.80	1.80	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	2.00	2.00	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	2.00	2.00	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	2.00	2.00	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	2.80	2.80	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	4.00	4.00	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	5.90	5.90	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	5.90	5.90	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	7.00	7.00	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	7.00	7.00	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	7.00	7.00	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	7.00	7.00	N	
73328	CLEAR CR	06.00S38.00E-27-SWNW	F8	7.00	7.00	N	
69288	A SPR/STOCK POND RES	06.00S38.00E-28-NESE	LV	0.00	0.00	N	1.96
	ANTHONY FK	06.00S38.00E-28-NWNW	IC	300.00	0.00	Y	

Certificate	ACF	ACF Estimated	Season	Remarks
		N	1/1 - 12/31	.87 CFS 3/1 7/1; THEN .41 CFS TIL 10/1; LMT ORIG POD
3384		N	1/1 - 12/31	
		N	1/1 - 12/31	PUNCH & KELLOG
5043		N	1/1 - 12/31	
10072		N	1/1 - 12/31	
61922		N	1/1 - 12/31	
11483		N	1/1 - 12/31	3/1 7/1; 1/80, 7/1 10/1
11483		N	1/1 - 12/31	3/1 7/1; 1/80, 7/1 10/1
70353	0.54	N	1/1 - 12/31	
70353	0.54	N	1/1 - 12/31	
11483		N	1/1 - 12/31	3/1 7/1; 1/80, 7/1 10/1
69533	1.6	N	1/1 - 12/31	
69534	0.5	N	1/1 - 12/31	
69533	3	N	1/1 - 12/31	
40474	3.2	N	1/1 - 12/31	
65383		N	1/1 - 12/31	
	1.5	N	1/1 - 12/31	APPROPRIATED FOR STORAGE 10/1 4/15
1459		N	1/1 - 12/31	0.75 CFS 3/1 7/1; 0.375 CFS 7/1 10/1; 75 AF TOTAL
1504		N	1/1 - 12/31	1.85 CFS 3/1 7/1; 0.93 CFS 7/1 10/1; 185 AF TOTAL
1506		N	1/1 - 12/31	2.06 CFS 3/1 7/1;1.03 CFS 7/1 10/1;206.25 AF TOTAL
		N	1/1 - 12/31	DALEY
		N	1/1 - 12/31	0.75 CFS 3/1 7/1; 0.38 CFS 7/1 10/1;NOT TO EXCEED 75.0 ACRE FEET
		N	1/1 - 12/31	1.41 CFS FM 3/1 7/1; .7 CFS TIL 10/1; 56.5 ACRES
73328		N	9/1 - 9/15	
73328		N	9/16 - 9/30	
73328		N	10/1 - 10/15	
73328		N	10/16 - 10/31	
73328		N	8/1 - 8/15	
73328		N	8/16 - 8/30	
73328		N	11/1 - 11/15	
73328		N	11/16 - 11/30	
73328		N	12/1 - 12/15	
73328		N	12/16 - 12/31	
73328		N	1/1 - 1/15	
73328		N	1/15 - 1/31	
73328		N	2/1 - 2/15	
73328		N	7/1 - 7/15	
73328		N	7/16 - 7/31	
73328		N	2/16 - 2/29	
73328		N	6/16 - 6/30	
73328		N	3/1 - 3/15	
73328		N	3/16 - 3/31	
73328		N	4/1 - 4/15	
73328		N	4/16 - 4/30	
73328		N	5/1 - 5/15	
73328		N	5/16 - 5/31	
73328		N	6/1 - 6/15	
69288	1.96	N	1/1 - 12/31	
		N	1/1 - 12/31	MASON

Certificate	Condition Code
3384	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
1496			N Powder R,1916		1869	3	W L Miller	72187
1496			N Powder R,1916		1869	3	W L Miller	72188
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72188
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72188
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72188
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72188
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72188
79576			N Powder R,1916	T 7288	1869	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1865	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72188
79577			N Powder R,1916	T 7289	1890	1	Daniel Thee	72188
62486	G 9226				1981	1	Michael Mason	72165
62486	G 9226				1981	1	Michael Mason	72188
62520	S 44376				1979	1	Michael Mason	72165
69309					1993	1	ODFW	72187
	S 51779				1991	1	ODFW	72187
	S 51779				1991	1	ODFW	72188
1458			N Powder R	D 3	1873	2	Laura A Dodson	72187
1459			N Powder R		1884	1	J L Dodson	72187
1459			N Powder R		1906	3	J L Dodson	72187
1496			N Powder R,1916		1890	4	W L Miller	72187
5038	S 5972				1923	1	Charles E Hutchinson	72187

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
1496	N POWDER R	06.00S38.00E-28-SESW	I*	0.95	0.95	N	
1496	N POWDER R	06.00S38.00E-28-SESW	I*	0.95	0.95	N	
79576	N POWDER R	06.00S38.00E-28-SESW	DO	0.48	0.08	Y	
79576	N POWDER R	06.00S38.00E-28-SESW	DO	0.95	0.16	Y	
79576	N POWDER R	06.00S38.00E-28-SESW	IR	0.48	0.08	Y	
79576	N POWDER R	06.00S38.00E-28-SESW	IR	0.95	0.16	Y	
79576	N POWDER R	06.00S38.00E-28-SESW	LV	0.48	0.08	Y	
79576	N POWDER R	06.00S38.00E-28-SESW	LV	0.95	0.16	Y	
79576	N POWDER R	06.00S38.00E-28-SESW	DO	0.48	0.08	Y	
79576	N POWDER R	06.00S38.00E-28-SESW	DO	0.95	0.16	Y	
79576	N POWDER R	06.00S38.00E-28-SESW	IR	0.48	0.08	Y	
79576	N POWDER R	06.00S38.00E-28-SESW	IR	0.95	0.16	Y	
79576	N POWDER R	06.00S38.00E-28-SESW	LV	0.48	0.08	Y	
79576	N POWDER R	06.00S38.00E-28-SESW	LV	0.95	0.16	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	DO	0.17	0.03	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	DO	0.35	0.06	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	IR	0.17	0.03	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	IR	0.35	0.06	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	LV	0.17	0.03	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	LV	0.35	0.06	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	DO	0.39	0.07	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	DO	0.79	0.13	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	IR	0.39	0.07	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	IR	0.79	0.13	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	LV	0.39	0.07	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	LV	0.79	0.13	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	DO	0.17	0.03	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	DO	0.35	0.06	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	IR	0.17	0.03	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	IR	0.35	0.06	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	LV	0.17	0.03	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	LV	0.35	0.06	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	DO	0.39	0.07	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	DO	0.79	0.13	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	IR	0.39	0.07	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	IR	0.79	0.13	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	LV	0.39	0.07	Y	
79577	N POWDER R	06.00S38.00E-28-SESW	LV	0.79	0.13	Y	
62486	A WELL	06.00S38.00E-28-SWNE	IS	0.52	0.52	N	
62486	A WELL	06.00S38.00E-28-SWNE	IS	0.52	0.52	N	
62520	ANTHONY FK	06.00S38.00E-29-NENE	IR	1.35	1.35	N	
69309	GORHAM GULCH/RES 16	06.00S38.00E-31-SESE	LW	0.00	0.00	N	0.23
	N POWDER R	06.00S38.00E-32-SENE	IR	0.42	0.42	N	
	N POWDER R	06.00S38.00E-32-SENE	IR	0.42	0.42	N	
1458	N POWDER R	06.00S38.00E-32-SWSE	ID	3.50	3.50	N	
1459	N POWDER R	06.00S38.00E-32-SWSE	ID	2.50	2.50	N	
1459	N POWDER R	06.00S38.00E-32-SWSE	ID	0.75	0.00	Y	
1496	N POWDER R	06.00S38.00E-32-SWSE	I*	3.70	3.70	N	
5038	N POWDER R	06.00S38.00E-32-SWSE	IR	0.36	0.36	N	

Certificate	ACF	ACF Estimated	Season	Remarks
1496		N	1/1 - 12/31	0.95 CFS 3/1 7/1; 0.48 CFS 7/1 10/1; 95 AF TOTAL
1496		N	1/1 - 12/31	0.95 CFS 3/1 7/1; 0.48 CFS 7/1 10/1; 95 AF TOTAL
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
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79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
62486		N	1/1 - 12/31	
62486		N	1/1 - 12/31	
62520		N	1/1 - 12/31	
69309	0.23	N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 5/31
		N	1/1 - 12/31	3/1 5/31
1458		N	1/1 - 12/31	3.5 CFS 3/1 7/1; 1.75 CFS 7/1 10/1; 350 AF TOTAL
1459		N	1/1 - 12/31	2.5 CFS 3/1 7/1; 1.25 CFS 7/1 10/1; 250 AF TOTAL
1459		N	1/1 - 12/31	0.75 CFS2.5 CFS 3/1 7/1; 1.25 CFS 7/1 10/1; 250 AF TOTAL
1496		N	1/1 - 12/31	3.7 CFS 3/1 7/1; 1.85 CF 7/1 10/1; 370 AF TOTAL
5038		N	1/1 - 12/31	

Certificate	Condition Code
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5038	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
28769	S 21069				1952	1	William/Fay Christensen	72187
72201			N Powder R		1884	1	ODFW	72187
72203			N Powder R		1870	2	Gerald Loennig	72187
72203			N Powder R		1884	2	Gerald Loennig	72187
72203			N Powder R		1884	2	Gerald Loennig	72187
76952			N Powder R	T 8346	1874	2	Peter W Schoeningh Jr	72187
76952			N Powder R	T 8346	1881	2	Peter W Schoeningh Jr	72187
79578			N Powder R,1916		1865	1	Henry Steele	72187
79578			N Powder R,1916		1865	1	Henry Steele	72187
79578			N Powder R,1916		1865	1	Henry Steele	72187
79578			N Powder R,1916		1865	1	Henry Steele	72187
79578			N Powder R,1916		1865	1	Henry Steele	72187
79578			N Powder R,1916		1865	1	Henry Steele	72187
79578			N Powder R,1916		1871	1	Henry Steele	72187
79578			N Powder R,1916		1871	1	Henry Steele	72187
79578			N Powder R,1916		1871	1	Henry Steele	72187
79578			N Powder R,1916		1871	1	Henry Steele	72187
79578			N Powder R,1916		1871	1	Henry Steele	72187
79578			N Powder R,1916		1871	1	Henry Steele	72187
79578			N Powder R,1916		1875	1	Henry Steele	72187
79578			N Powder R,1916		1875	1	Henry Steele	72187
79578			N Powder R,1916		1875	1	Henry Steele	72187
79578			N Powder R,1916		1875	1	Henry Steele	72187
79578			N Powder R,1916		1875	1	Henry Steele	72187
79578			N Powder R,1916		1875	1	Henry Steele	72187
79578			N Powder R,1916		1890	1	Henry Steele	72187
79578			N Powder R,1916		1890	1	Henry Steele	72187
79578			N Powder R,1916		1890	1	Henry Steele	72187
79578			N Powder R,1916		1890	1	Henry Steele	72187
79578			N Powder R,1916		1890	1	Henry Steele	72187
79578			N Powder R,1916		1890	1	Henry Steele	72187
79578			N Powder R,1916		1865	2	Henry Steele	72187
79578			N Powder R,1916		1865	2	Henry Steele	72187
79578			N Powder R,1916		1865	2	Henry Steele	72187
79578			N Powder R,1916		1865	2	Henry Steele	72187
79578			N Powder R,1916		1865	2	Henry Steele	72187
79578			N Powder R,1916		1865	2	Henry Steele	72187
79578			N Powder R,1916		1871	2	Henry Steele	72187
79578			N Powder R,1916		1871	2	Henry Steele	72187
79578			N Powder R,1916		1871	2	Henry Steele	72187
79578			N Powder R,1916		1871	2	Henry Steele	72187
79578			N Powder R,1916		1871	2	Henry Steele	72187
79578			N Powder R,1916		1871	2	Henry Steele	72187
79578			N Powder R,1916		1875	2	Henry Steele	72187
79578			N Powder R,1916		1875	2	Henry Steele	72187
79578			N Powder R,1916		1875	2	Henry Steele	72187
79578			N Powder R,1916		1875	2	Henry Steele	72187
79578			N Powder R,1916		1875	2	Henry Steele	72187
79578			N Powder R,1916		1875	2	Henry Steele	72187

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
28769	VAN PATTON L RES	06.00S38.00E-32-SWSE	IS	0.00	0.00	N	4
72201	N POWDER R	06.00S38.00E-32-SWSE	I*	0.15	0.15	N	
72203	N POWDER R	06.00S38.00E-32-SWSE	IR	3.02	0.00	Y	
72203	N POWDER R	06.00S38.00E-32-SWSE	DS	3.02	0.00	Y	
72203	N POWDER R	06.00S38.00E-32-SWSE	IL	3.02	0.00	Y	
76952	N POWDER R	06.00S38.00E-32-SWSE	I*	4.73	0.00	Y	
76952	N POWDER R	06.00S38.00E-32-SWSE	I*	4.73	0.00	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.45	0.08	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.90	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.45	0.08	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.90	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.45	0.08	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.90	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.31	0.05	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.63	0.11	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.31	0.05	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.63	0.11	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.31	0.05	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.63	0.11	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.45	0.08	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.45	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.45	0.08	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.90	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.45	0.08	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.90	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	1.46	0.24	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	2.91	0.49	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	1.46	0.24	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	2.91	0.49	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.73	0.24	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	2.91	0.24	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.45	0.08	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.90	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.45	0.08	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.90	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.90	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.90	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.31	0.05	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.63	0.11	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.31	0.05	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.63	0.11	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.31	0.05	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.63	0.11	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.45	0.08	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	0.90	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.45	0.08	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	0.90	0.15	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.45	0.08	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	0.90	0.15	Y	

Certificate	ACF	ACF Estimated	Season	Remarks
28769	4	N	1/1 - 12/31	
72201		N	1/1 - 12/31	3/1-7/1
72203		N	1/1 - 12/31	3/1 7/1;1.51 CFS 7/1 10/1
72203		N	1/1 - 12/31	3/1 7/1;1.51 CFS 7/1 10/1
72203		N	1/1 - 12/31	3/1 7/1;1.51 CFS 7/1 10/1
76952		N	1/1 - 12/31	3/1-7/1; 2.37 CFS 7/1-10/1; NOT TO EXCEED 470.0 AF
76952		N	1/1 - 12/31	3/1-7/1; 2.37 CFS 7/1-10/1; NOT TO EXCEED 470.0 AF
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
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79578		N	7/2 - 10/1	
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79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
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79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	
79578		N	7/2 - 10/1	
79578		N	3/1 - 7/1	

Certificate	Condition Code
28769	
72201	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
79578			N Powder R,1916		1890	2	Henry Steele	72187
79578			N Powder R,1916		1890	2	Henry Steele	72187
79578			N Powder R,1916		1890	2	Henry Steele	72187
79578			N Powder R,1916		1890	2	Henry Steele	72187
79578			N Powder R,1916		1890	2	Henry Steele	72187
79578			N Powder R,1916		1890	2	Henry Steele	72187
	S 50717				1983	8	Powder River WCD	72187
				T 3889	1871	2	J H Hutchinson, Ernest Kirkland, Francis Dobbin	72187
				T 3889	1882	2	J H Hutchinson, Ernest Kirkland, Francis Dobbin	72187
76107			N Powder R		1862	1	William N Gardner	72187
76107			N Powder R		1871	1	William N Gardner	72187
76107			N Powder R		1875	1	William N Gardner	72187
76107			N Powder R		1895	1	William N Gardner	72187
1458			N Powder R	D 3	1865	1	Laurn A Dodson	72188
1458			N Powder R	D 3	1886	3	Laurn A Dodson	72188
	S 50717				1983	10	Powder River WCD	72188
64219			N Powder R		1889	1	Chris Peterson	72188
64219			N Powder R		1898	1	Chris Peterson	72188
64219			N Powder R		1904	1	Chris Peterson	72188
	S 44222				1977	1	Elmer & Peggy Satterberg	72188
	S 44222				1977	1	Elmer & Peggy Satterberg	72191
1524			N Powder R		1889	1	James B Wilson	72188
64971			N Powder R		1887	1	Charles E Hutchinson, Estate of L S Kelsey	72188
64971			N Powder R		1902	1	Charles E Hutchinson, Estate of L S Kelsey	72188
75629			N Powder R	T 7749	1874	1	Wilson Cattle Co Inc	72188
75629			N Powder R	T 7749	1887	2	Wilson Cattle Co Inc	72188
	S 50717				1983	11	Powder River WCD	72188
	S 50717				1983	12	Powder River WCD	72188
1317	S 1222				1912	1	Eliza Hess	72188
1318	S 1223				1912	1	John E Lindley	72188
46628	S 35435				1970	2	Eugene C & Frances McIntyre	72188
46832	S 35008				1970	2	Don D Dodson	72188
64219			N Powder R		1889	2	Chris Peterson	72188
64219			N Powder R		1898	2	Chris Peterson	72188
64219			N Powder R		1904	2	Chris Peterson	72188
64971			N Powder R		1880	5	Charles E Hutchinson, Estate of L S Kelsey	72188
	S 50717				1983	13	Powder River WCD	72188
	S 52676				1989	1	William L & Hilda M Knight	72188
	S 52948				1991	2	Wilson Family Ranches LLC, Northwest Farm Credit Serv	72188
1462			N Powder R		1903	1	B P Doherty	72188
1462			N Powder R		1903	1	B P Doherty	72191
1475			Powder River		1896	2	Albert Hutchinson	72188
1475			Powder River		1896	2	Albert Hutchinson	72191
1498			N Powder R		1901	1	G W Neill	72188
1498			N Powder R		1901	1	G W Neill	72191
1511			N Powder R		1888	1	P L Smith	72188
1511			N Powder R		1888	1	P L Smith	72191
34740	S 30385				1965	1	Marion Inman	72188
34740	S 30385				1965	1	Marion Inman	72191

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	1.46	0.24	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	DO	2.91	0.49	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	1.46	0.24	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	IR	2.91	0.49	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	1.46	0.24	Y	
79578	N POWDER R	06.00S38.00E-32-SWSE	LV	2.91	0.49	Y	
	N POWDER R	06.00S38.00E-32-SWSE	IC	25.60	0.00	Y	
	N POWDER R	06.00S38.00E-32-SWSE	I*	8.64	8.64	N	
	N POWDER R	06.00S38.00E-32-SWSE	I*	2.50	2.50	N	
76107	N POWDER R	06.00S38.00E-32-SWSW	DS	2.18	0.00	Y	
76107	N POWDER R	06.00S38.00E-32-SWSW	IR	2.18	2.18	N	
76107	N POWDER R	06.00S38.00E-32-SWSW	IR	2.18	0.00	Y	
76107	N POWDER R	06.00S38.00E-32-SWSW	IR	2.18	0.00	Y	
1458	N POWDER R	06.00S38.00E-34-NENE	ID	1.33	1.33	N	
1458	N POWDER R	06.00S38.00E-34-NENE	ID	0.53	0.53	N	
	N POWDER R	06.00S38.00E-35-NWNW	IC	25.60	0.00	Y	
64219	N POWDER R	06.00S38.00E-35-SENW	IR	8.78	8.78	N	
64219	N POWDER R	06.00S38.00E-35-SENW	IR	8.78	0.00	Y	
64219	N POWDER R	06.00S38.00E-35-SENW	IR	8.78	0.00	Y	
	STREAM 1	06.00S38.00E-35-SESE	IS	4.76	4.76	N	
	STREAM 1	06.00S38.00E-35-SESE	IS	4.76	4.76	N	
1524	N POWDER R	06.00S38.00E-35-SWNE	I*	9.75	9.75	N	
64971	N POWDER R	06.00S38.00E-35-SWNE	IR	2.00	2.00	N	
64971	N POWDER R	06.00S38.00E-35-SWNE	IR	1.05	1.05	N	
75629	N POWDER R	06.00S38.00E-35-SWNE	IR	2.10	2.10	N	
75629	N POWDER R	06.00S38.00E-35-SWNE	IR	4.83	4.83	N	
	N POWDER R	06.00S38.00E-35-SWNE	IC	25.60	0.00	Y	
	N POWDER R	06.00S38.00E-35-SWNE	IC	25.60	0.00	Y	
1317	N POWDER R	06.00S38.00E-36-NWSW	IR	1.25	1.25	N	
1318	N POWDER R	06.00S38.00E-36-NWSW	IR	1.88	1.88	N	
46628	N POWDER R	06.00S38.00E-36-NWSW	IR	0.66	0.66	N	
46832	N POWDER R	06.00S38.00E-36-NWSW	IR	1.17	1.17	N	
64219	N POWDER R	06.00S38.00E-36-NWSW	IR	8.78	0.00	Y	
64219	N POWDER R	06.00S38.00E-36-NWSW	IR	8.78	0.00	Y	
64219	N POWDER R	06.00S38.00E-36-NWSW	IR	8.78	0.00	Y	
64971	N POWDER R	06.00S38.00E-36-NWSW	IR	1.56	1.56	N	
	N POWDER R	06.00S38.00E-36-NWSW	IC	25.60	0.00	Y	
	N POWDER R	06.00S38.00E-36-NWSW	IR	0.88	0.88	N	
	ANTHONY CR	06.00S38.00E-36-NWSW	IS	2.72	0.00	Y	
1462	N POWDER R	06.00S38.00E-36-SESW	IL	1.00	1.00	N	
1462	N POWDER R	06.00S38.00E-36-SESW	IL	1.00	1.00	N	
1475	N POWDER R	06.00S38.00E-36-SESW	IR	1.45	1.45	N	
1475	N POWDER R	06.00S38.00E-36-SESW	IR	1.45	1.45	N	
1498	N POWDER R	06.00S38.00E-36-SESW	IL	4.80	4.80	N	
1498	N POWDER R	06.00S38.00E-36-SESW	IL	4.80	4.80	N	
1511	N POWDER R	06.00S38.00E-36-SESW	I*	2.00	2.00	N	
1511	N POWDER R	06.00S38.00E-36-SESW	I*	2.00	2.00	N	
34740	N POWDER R	06.00S38.00E-36-SESW	IR	0.48	0.48	N	
34740	N POWDER R	06.00S38.00E-36-SESW	IR	0.48	0.48	N	

Certificate	ACF	ACF Estimated	Season	Remarks
79578		N	3/1 – 7/1	
79578		N	3/1 – 7/1	
79578		N	7/2 – 10/1	
79578		N	3/1 – 7/1	
79578		N	7/2 – 10/1	
79578		N	3/1 – 7/1	
		N	1/1 – 12/31	POWERS CO
		N	1/1 – 12/31	8.64 CFS FM 3/1 7/1; 4.32 TIL 10/1; 345.5 ACRES
		N	1/1 – 12/31	2.5 CFS FM 3/1 7/1; 1.25 TIL 10/1; 100 ACRES
76107		N	1/1 – 12/31	
76107		N	1/1 – 12/31	3/1 7/1; 1.09 CFS 7/1 10/1; NOT TO EXCEED 217.5 AF DURING IR SEASON
76107		N	1/1 – 12/31	3/1 7/1; 1.09 CFS 7/1 10/1; NOT TO EXCEED 217.5 AF DURING IR SEASON
76107		N	1/1 – 12/31	3/1 7/1; 1.09 CFS 7/1 10/1; NOT TO EXCEED 217.5 AF DURING IR SEASON
1458		N	1/1 – 12/31	1.33 CFS 3/1 7/1; 0.66 CFS 7/1 10/1; 132.5 AF TOTAL
1458		N	1/1 – 12/31	0.525 CFS 3/1 7/1; 0.26 CFS 7/1 10/1; 52.5 AF TOTAL
		N	1/1 – 12/31	DODSON DALTON
64219		N	1/1 – 12/31	4.39 CFS 7/110/1
64219		N	1/1 – 12/31	4.39 CFS 7/110/1
64219		N	1/1 – 12/31	4.39 CFS 7/110/1
		N	1/1 – 12/31	ALSO LOCATED IN SWSW,SESW,S.36
		N	1/1 – 12/31	ALSO LOCATED IN SWSW,SESW,S.36
1524		N	1/1 – 12/31	9.75 CFS 3/1 7/1; 4.88 CFS THEREAFTER; 975 AF TOTAL
64971		N	1/1 – 12/31	80.032.02 CFS 3/1 7/1;16.01 CFS 7/1 10/1;2538.5 AF TOTAL
64971		N	1/1 – 12/31	42.032.02 CFS 3/1 7/1;16.01 CFS 7/1 10/1;2538.5 AF TOTAL
75629		N	1/1 – 12/31	3/1-7/1; 1.05 CFS 7/1-10/1; NOT TO EXCEED 210.0 AF
75629		N	1/1 – 12/31	3/1-7/1; 2.42 CFS 7/1-10/1; NOT TO EXCEED 483.0 AF
		N	1/1 – 12/31	DAVIS KELSEY
		N	1/1 – 12/31	DAVIS DALTON
1317		N	1/1 – 12/31	
1318		N	1/1 – 12/31	
46628		N	1/1 – 12/31	
46832		N	1/1 – 12/31	
64219		N	1/1 – 12/31	4.39 CFS 7/110/1
64219		N	1/1 – 12/31	4.39 CFS 7/110/1
64219		N	1/1 – 12/31	4.39 CFS 7/110/1
64971		N	1/1 – 12/31	62.532.02 CFS 3/1 7/1;16.01 CFS 7/1 10/1;2538.5 AF TOTAL
		N	1/1 – 12/31	SUNNYSLOPE
		N	1/1 – 12/31	3/1 5/31
		N	1/1 – 12/31	3/1 6/30
1462		N	1/1 – 12/31	0.96 CFS 3/1 10/1; 0.48 CFS 7/1 10/1; 46.25 AF TOTAL
1462		N	1/1 – 12/31	0.96 CFS 3/1 10/1; 0.48 CFS 7/1 10/1; 46.25 AF TOTAL
1475		N	1/1 – 12/31	1.45 CFS 3/1 7/1; 0.725 CFS 7/1 10/1; 145 AF TOTAL
1475		N	1/1 – 12/31	1.45 CFS 3/1 7/1; 0.725 CFS 7/1 10/1; 145 AF TOTAL
1498		N	1/1 – 12/31	4.8 CFS 3/1 7/1; 2.4 CFS 7/1 01/1; 480 AF TOTAL
1498		N	1/1 – 12/31	4.8 CFS 3/1 7/1; 2.4 CFS 7/1 01/1; 480 AF TOTAL
1511		N	1/1 – 12/31	2.0 CFS 31/ 7/1; 1.0 CF THEREAFTER; 200 AF TOTAL
1511		N	1/1 – 12/31	2.0 CFS 31/ 7/1; 1.0 CF THEREAFTER; 200 AF TOTAL
34740		N	1/1 – 12/31	
34740		N	1/1 – 12/31	

Certificate	Condition Code
79578	
79578	
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76107	
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1458	
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75629	
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46832	
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64971	
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1511	
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34740	
34740	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
38406	S 30499				1965	2	Merton A/Ehrman Davis	72188
38406	S 30499				1965	2	Merton A/Ehrman Davis	72191
64971			N Powder R		1886	2	Charles E Hutchinson, Estate of L S Kelsey	72188
64971			N Powder R		1883	3	Charles E Hutchinson, Estate of L S Kelsey	72188
64971			N Powder R		1886	4	Charles E Hutchinson, Estate of L S Kelsey	72188
64971			N Powder R		1886	2	Charles E Hutchinson, Estate of L S Kelsey	72191
64971			N Powder R		1883	3	Charles E Hutchinson, Estate of L S Kelsey	72191
64971			N Powder R		1886	4	Charles E Hutchinson, Estate of L S Kelsey	72191
72429			N Powder R	T 6365	1888	1	Louis E Marks	72188
72429			N Powder R	T 6365	1888	1	Louis E Marks	72191
	S 50717				1983	14	Powder River WCD	72188
	S 50717				1983	14	Powder River WCD	72191
	S 52948				1991	5	Wilson Family Ranches LLC, Northwest Farm Credit Serv	72188
	S 52948				1991	5	Wilson Family Ranches LLC, Northwest Farm Credit Serv	72191
65929	G 7978				1978	1	Lula A & William J Cantrell	72188
68875					1993	4	Seven Diamond Ranch	3.1E+07
68875					1993	2	Seven Diamond Ranch	3.1E+07
68875					1993	3	Seven Diamond Ranch	3.1E+07
68875					1993	3	Seven Diamond Ranch	3.1E+07
68875					1993	6	Seven Diamond Ranch	72191
68875					1993	5	Seven Diamond Ranch	72191
13385	S 14228				1939	1	T B Haynes	72191
13385	S 14228				1939	1	T B Haynes	3.1E+07
61383	G 9272				1980	1	Rufenacht & Rode Cattle Co	72163
4027			Powder River		1893	1	Wm Brant	72163
	R 11592				1994	1	Gerald H Gray	72163
	R 11592				1994	1	Gerald H Gray	72163
65115	S 42937				1977	1	Gerald H & June H Gray	72163
65115	S 42937				1977	2	Gerald H & June H Gray	72163
4026			Powder River		1909	2	John Brant	72163
4026			Powder River		1909	2	John Brant	72163
1884	S 1817				1913	1	James E Wicks	72163
4561			Powder River		1884	1	Jas E Wicks	72163
41043	G 3018				1965	1	Eugene/Frances McIntyre	72191
14421	S 13070				1938	2	Violet Parker	72188
14421	S 13070				1938	2	Violet Parker	72191
66038	S 45716				1981	1	Don Dodson	72163
66038	S 45716				1981	1	Don Dodson	72191
65415	G 7831				1977	1	Merlyn L McGarry	72163
50173			Powder River	T 4669	1882	1	C R Hibberd	72163
50173			Powder River	T 4669	1883	1	C R Hibberd	72163
50173			Powder River	T 4669	1882	1	C R Hibberd	72191
50173			Powder River	T 4669	1883	1	C R Hibberd	72191
79910			Powder R, Consol	T 4669	1879	1	Don Dodson	72163
79910			Powder R, Conso	T 4669	1879	1	Don Dodson	72191

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
38406	N POWDER R	06.00S38.00E-36-SESW	IR	4.97	0.00	Y	
38406	N POWDER R	06.00S38.00E-36-SESW	IR	4.97	0.00	Y	
64971	N POWDER R	06.00S38.00E-36-SESW	IR	12.60	12.60	N	
64971	N POWDER R	06.00S38.00E-36-SESW	IR	2.11	2.11	N	
64971	N POWDER R	06.00S38.00E-36-SESW	IR	2.95	2.95	N	
64971	N POWDER R	06.00S38.00E-36-SESW	IR	12.60	12.60	N	
64971	N POWDER R	06.00S38.00E-36-SESW	IR	2.11	2.11	N	
64971	N POWDER R	06.00S38.00E-36-SESW	IR	2.95	2.95	N	
72429	N POWDER R	06.00S38.00E-36-SESW	IR	1.38	1.38	N	
72429	N POWDER R	06.00S38.00E-36-SESW	IR	1.38	1.38	N	
	N POWDER R	06.00S38.00E-36-SESW	IC	25.60	0.00	Y	
	N POWDER R	06.00S38.00E-36-SESW	IC	25.60	0.00	Y	
	N POWDER R	06.00S38.00E-36-SESW	IR	3.82	0.00	Y	
	N POWDER R	06.00S38.00E-36-SESW	IR	3.82	0.00	Y	
65929	A SUMP	06.00S38.00E-36-SWNW	IR	0.13	0.13	N	
68875	UNN STR/RES 74	06.00S39.00E-1-NESW	LV	0.00	0.00	N	5
68875	UNN STR/RES 73	06.00S39.00E-1-NWNE	LV	0.00	0.00	N	5
68875	UNN STR/RES 77	06.00S39.00E-1-SWNE	LV	0.00	0.00	N	5
68875	UNN STR/RES 77	06.00S39.00E-1-SWNE	LV	0.00	0.00	N	5
68875	UNN STR/RES 76	06.00S39.00E-2-NWSE	LV	0.00	0.00	N	5
68875	UNN STR/RES 75	06.00S39.00E-2-NWSW	LV	0.00	0.00	N	5
13385	JIMMY CR	06.00S39.00E-2-SENE	IR	1.68	1.68	N	
13385	JIMMY CR	06.00S39.00E-2-SENE	IR	1.68	1.68	N	
61383	A WELL	06.00S39.00E-4-SWSE	IC	3.80	3.80	N	
4027	WOLF CR	06.00S39.00E-8-NWSW	IR	6.00	6.00	N	
	WASTEWATER	06.00S39.00E-8-SESE	LV	0.00	0.00	N	1.5
	WASTEWATER	06.00S39.00E-8-SESE	RC	0.00	0.00	N	1.5
65115	LITTLE CR	06.00S39.00E-9-NESW	IS	2.50	2.50	N	
65115	SPRS	06.00S39.00E-9-NESW	IS	2.50	0.00	Y	
4026	LITTLE CR	06.00S39.00E-9-NWNE	IR	27.50	0.00	Y	
4026	LITTLE CR	06.00S39.00E-9-NWNE	IS	27.50	0.00	Y	
1884	WOLF CR	06.00S39.00E-9-SWSE	IR	0.70	0.70	N	
4561	WOLF CR	06.00S39.00E-9-SWSE	IR	4.15	4.15	N	
41043	A WELL	06.00S39.00E-11-NENW	IR	1.25	1.25	N	
14421	WASTE WATER	06.00S39.00E-14-SESW	IR	0.39	0.39	N	
14421	WASTE WATER	06.00S39.00E-14-SESW	IR	0.39	0.39	N	
66038	A SPR	06.00S39.00E-14-SWNE	IC	0.18	0.18	N	
66038	A SPR	06.00S39.00E-14-SWNE	IC	0.18	0.18	N	
65415	A SUMP POND	06.00S39.00E-15-NENW	IS	2.70	2.70	N	
50173	WOLF CR	06.00S39.00E-15-NESW	IR	3.38	3.38	N	
50173	WOLF CR	06.00S39.00E-15-NESW	IR	2.69	2.69	N	
50173	WOLF CR	06.00S39.00E-15-NESW	IR	3.38	3.38	N	
50173	WOLF CR	06.00S39.00E-15-NESW	IR	2.69	2.69	N	
79910	WOLF CR	06.00S39.00E-15-NESW	IR	2.75	2.75	N	
79910	WOLF CR	06.00S39.00E-15-NESW	IR	2.75	2.75	N	

Certificate	ACF	ACF Estimated	Season	Remarks
38406		N	1/1 - 12/31	
38406		N	1/1 - 12/31	
64971		N	1/1 - 12/31	504.32.02 CFS 3/1 7/1;16.01 CFS 7/1 10/1;2538.5 AF TOTAL
64971		N	1/1 - 12/31	84.532.02 CFS 3/1 7/1;16.01 CFS 7/1 10/1;2538.5 AF TOTAL
64971		N	1/1 - 12/31	118.32.02 CFS 3/1 7/1;16.01 CFS 7/1 10/1;2538.5 AF TOTAL
64971		N	1/1 - 12/31	504.32.02 CFS 3/1 7/1;16.01 CFS 7/1 10/1;2538.5 AF TOTAL
64971		N	1/1 - 12/31	84.532.02 CFS 3/1 7/1;16.01 CFS 7/1 10/1;2538.5 AF TOTAL
64971		N	1/1 - 12/31	118.32.02 CFS 3/1 7/1;16.01 CFS 7/1 10/1;2538.5 AF TOTAL
72429		N	1/1 - 12/31	3/1 7/1;0.69 CFS 7/1 10/1
72429		N	1/1 - 12/31	3/1 7/1;0.69 CFS 7/1 10/1
		N	1/1 - 12/31	KELSEY & KELSEY WILSON
		N	1/1 - 12/31	KELSEY & KELSEY WILSON
		N	1/1 - 12/31	3/1 6/30
		N	1/1 - 12/31	3/1 6/30
65929		N	1/1 - 12/31	
68875	0	Y	1/1 - 12/31	
68875	0	Y	1/1 - 12/31	
68875	0	Y	1/1 - 12/31	
68875	0	Y	1/1 - 12/31	
68875	0	Y	1/1 - 12/31	
68875	0	Y	1/1 - 12/31	
13385		N	1/1 - 12/31	
13385		N	1/1 - 12/31	
61383		N	1/1 - 12/31	
4027		N	1/1 - 12/31	
	0.75	Y	1/1 - 12/31	TO BE APPROPRIATED WHEN WASTEWATER AVAILABLE
	0.75	Y	1/1 - 12/31	TO BE APPROPRIATED WHEN WASTEWATER AVAILABLE
65115		N	1/1 - 12/31	
65115		N	1/1 - 12/31	
4026		N	1/1 - 12/31	
4026		N	1/1 - 12/31	
1884		N	1/1 - 12/31	
4561		N	1/1 - 12/31	
41043		N	1/1 - 12/31	
14421		N	1/1 - 12/31	3/1-7/1; THEN 1/80 7/1-10/1
14421		N	1/1 - 12/31	3/1-7/1; THEN 1/80 7/1-10/1
66038		N	1/1 - 12/31	
66038		N	1/1 - 12/31	
65415		N	1/1 - 12/31	
50173		N	1/1 - 12/31	
50173		N	1/1 - 12/31	
50173		N	1/1 - 12/31	
50173		N	1/1 - 12/31	
79910		N	3/1 - 11/1	
79910		N	3/1 - 11/1	

Certificate	Condition Code
38406	
38406	
64971	
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72429	
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68875	
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13385	
13385	
61383	
4027	
65115	
65115	
4026	
4026	
1884	
4561	
41043	
14421	
14421	
66038	
66038	
65415	
50173	
50173	
50173	
50173	
79910	
79910	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
	S 53692				1998	1	Oregon Trail Mtn Spg Water, Ken Holman	72163
				T 8095	1871	2	Harrison & Clarence Wicks	72163
26810	U 412				1951	1	A S Boyd	72163
4344			Powder River		1882	1	C D McCurry	72163
4344			Powder River		1888	1	C D McCurry	72163
4344			Powder River		1905	1	C D McCurry	72163
5338	S 5987				1923	1	Charles E Hutchinson	72163
6685	S 6002				1923	1	Olof P Dahlstrom	72163
46628	S 35435				1970	1	Eugene C & Frances McIntyre	72163
46832	S 35008				1970	1	Don D Dodson	72163
72195	S 2173			T 6314	1911	1	Don & Louise Dodson, Zelda Joy Harrod	72163
	R 13616				2003	1	Fred Colton, Union SWCD	72163
	R 13617				2003	1	Fred Colton, Union SWCD	72163
	R 13618				2003	1	Fred Colton, Union SWCD	72163
4459			Powder River		1872	1	J C Sheilds	72163
4459			Powder River		1876	1	J C Sheilds	72163
4363			Powder River		1869	1	Orson Moody	72163
51318			Powder River	M 33	1892	2	S C Mann	72163
51318			Powder River	M 33	1892	2	S C Mann	72188
60466	R 6589				1977	1	Ronald V Moe	72188
60467	S 41563				1977	1	Ronald V Moe	72188
31900	G 437				1957	2	Mr/Mrs Glenn L Pratt	72188
31900	G 437				1957	1	Mr/Mrs Glenn L Pratt	72188
1500			N Powder R		1904	1	City of North Powder	72188
7824	S 8018				1927	1	H A Monday	72188
8910	S 8094				1928	1	Jacobs Brothers	72188
9398	S 8754				1928	1	Gerald L Petersen	72188
62276	S 45715				1981	1	Don D Dodson	72188
62276	S 45715				1981	1	Don D Dodson	72188
62276	S 45715				1981	1	Don D Dodson	72188
65022	S 46184				1981	1	US Dept of Agriculture	72188
65022	S 46184				1981	2	US Dept of Agriculture	72188
	S 50717				1983	20	Powder River WCD	72188
	S 50717				1983	21	Powder River WCD	72188
9465	S 3636			P 2	1917	1	Pacific Fruit Express Co	72188
				T 7504	1890	3	Agri Fruit Express Co	72188
62437	G 5931				1973	1	Elmer hill	72188
62437	G 5931				1973	1	Elmer hill	72191
65088	G 10589				1985	1	City of North Powder	72188
40599	G 4829				1970	1	City of North Powder	72188
		GR2944			1919	1	City of North Powder	72188
		GR2945			1915	1	City of North Powder	72188
62460	G 8871				1979	1	Elmer hill	72188
79878			N Powder R,1916	T 7559	1870	1	Elmer hill	72188
79878			N Powder R,1916	T 7559	1870	1	Elmer hill	72188
				T 5483	1870	1	Elmer D Hill	72188
				T 7504	1890	2	Agri Star Corp	72188
				T 5484	1887	3	Elmer D Hill	72188
				T 5484	1881	4	Elmer D Hill	72188
9465	S 3636			P 2	1917	2	Pacific Fruit Express Co	72188
55556	G 7330				1977	1	William R Lewis	72191
	S 50717				1983	19	Powder River WCD	72188

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
	PARKER SPR	06.00S39.00E-16-NENE	IM	0.22	0.22	N	
	PARKER SPRS	06.00S39.00E-16-NENE	IR	4.70	0.00	Y	
26810	A WELL	06.00S39.00E-16-NWNW	IS	0.42	0.42	N	
4344	WOLF CR	06.00S39.00E-16-SWNW	IR	7.05	7.05	N	
4344	WOLF CR	06.00S39.00E-16-SWNW	IR	7.05	7.05	N	
4344	WOLF CR	06.00S39.00E-16-SWNW	IR	7.05	7.05	N	
5338	WOLF CR	06.00S39.00E-16-SWNW	IR	0.79	0.79	N	
6685	WOLF CR	06.00S39.00E-16-SWNW	IR	0.40	0.40	N	
46628	WOLF CR	06.00S39.00E-16-SWNW	IR	1.06	1.06	N	
46832	WOLF CR	06.00S39.00E-16-SWNW	IR	0.76	0.76	N	
72195	WOLF CR	06.00S39.00E-16-SWNW	IR	3.41	3.41	N	
	RUNOFF	06.00S39.00E-17-NESE	WI			N	6
	RUNOFF	06.00S39.00E-17-NESE	WI			N	4
	RUNOFF	06.00S39.00E-17-NESE	WI			N	3
4459	WOLF CR	06.00S39.00E-18-NESE	IR	6.00	6.00	N	
4459	WOLF CR	06.00S39.00E-18-NESE	IR	6.00	6.00	N	
4363	WOLF CR	06.00S39.00E-18-SWNE	IR	10.00	10.00	N	
51318	A SPR	06.00S39.00E-18-SWSW	IR	25.80	0.00	Y	
51318	A SPR	06.00S39.00E-18-SWSW	IR	25.80	0.00	Y	
60466	UNN STR	06.00S39.00E-19-NESW	IR	0.00	0.00	N	7
60467	UNN STR/RES	06.00S39.00E-19-NESW	IS	1.60	1.60	N	
31900	WELL 2	06.00S39.00E-20-NENW	IR	4.50	0.00	Y	
31900	WELL 1	06.00S39.00E-20-SWSE	IR	4.50	4.50	N	
1500	N POWDER R	06.00S39.00E-22-NESE	IR	2.00	2.00	N	
7824	N POWDER R	06.00S39.00E-22-NESE	IR	0.25	0.25	N	
8910	MILL RACE	06.00S39.00E-22-NESE	IM	0.15	0.15	N	
9398	N POWDER R	06.00S39.00E-22-NESE	IR	3.09	3.09	N	
62276	N POWDER R	06.00S39.00E-22-NESE	IC	1.80	1.80	N	
62276	N POWDER R	06.00S39.00E-22-NESE	IC	2.70	2.70	N	
62276	N POWDER R	06.00S39.00E-22-NESE	LV	0.50	0.50	N	
65022	N POWDER R	06.00S39.00E-22-NESE	IC	8.71	8.71	N	
65022	N POWDER R	06.00S39.00E-22-NESE	IC	8.71	0.00	Y	
	N POWDER R	06.00S39.00E-22-NESE	IC	25.60	0.00	Y	
	N POWDER R	06.00S39.00E-22-NESE	IC	25.60	0.00	Y	
9465	N POWDER R	06.00S39.00E-22-NWSE	IM	9.00	9.00	N	
	N POWDER R	06.00S39.00E-22-NWSE	IL	4.00	0.00	Y	
62437	SUMP 2	06.00S39.00E-22-SESE	IC	1.85	1.85	N	
62437	SUMP 2	06.00S39.00E-22-SESE	IC	1.85	1.85	N	
65088	A WELL	06.00S39.00E-22-SESW	MU	2.20	2.20	N	
40599	A WELL	06.00S39.00E-22-SWNE	MU	0.39	0.39	N	
	WELL 1	06.00S39.00E-22-SWNE	MU	3.34	3.34	N	
	WELL 2	06.00S39.00E-22-SWNE	MU	1.56	1.56	N	
62460	A SUMP	06.00S39.00E-22-SWSE	IS	0.67	0.67	N	
79878	N POWDER R	06.00S39.00E-22-SWSE	IR	0.18	0.18	N	
79878	N POWDER R	06.00S39.00E-22-SWSE	IR	0.35	0.35	N	
	N POWDER R	06.00S39.00E-22-SWSE	IL	0.22	0.22	N	
	N POWDER R	06.00S39.00E-22-SWSE	IL	4.00	0.00	Y	
	N POWDER R	06.00S39.00E-22-SWSE	IL	3.95	0.00	Y	
	N POWDER R	06.00S39.00E-22-SWSE	IL	0.10	0.10	N	
9465	N POWDER R	06.00S39.00E-22-SWSW	IM	9.00	0.00	Y	
55556	A SUMP	06.00S39.00E-26-NESE	IR	3.40	3.40	N	
	N POWDER R	06.00S39.00E-27-SWNW	IC	25.60	0.00	Y	

Certificate	ACF	ACF Estimated	Season	Remarks
		N	1/1 - 12/31	11/1 11/30 AND 1/1 2/28
		N	1/1 - 12/31	
26810		N	1/1 - 12/31	
4344		N	1/1 - 12/31	
4344		N	1/1 - 12/31	
4344		N	1/1 - 12/31	
5338		N	1/1 - 12/31	
6685		N	1/1 - 12/31	
46628		N	1/1 - 12/31	
46832		N	1/1 - 12/31	
72195		N	1/1 - 12/31	
	6	N	4/1 - 4/14	
	4	N	4/1 - 4/14	
	3	N	4/1 - 4/14	
4459		N	1/1 - 12/31	
4459		N	1/1 - 12/31	
4363		N	1/1 - 12/31	
51318		N	1/1 - 12/31	
51318		N	1/1 - 12/31	
60466	7	N	1/1 - 12/31	
60467		N	1/1 - 12/31	
31900		N	1/1 - 12/31	
31900		N	1/1 - 12/31	
1500		N	1/1 - 12/31	2.0 CFS 3/1 7/1; 1.0 CFS 7/1 10/1; 200 AF TOTAL
7824		N	1/1 - 12/31	
8910		N	1/1 - 12/31	
9398		N	1/1 - 12/31	
62276		N	1/1 - 12/31	3/1-6/30
62276		N	1/1 - 12/31	7/1-9/30
62276		N	1/1 - 12/31	
65022		N	1/1 - 12/31	3/1 7/1; 1/80 7/1 10/1
65022		N	1/1 - 12/31	3/1 7/1; 1/80 7/1 10/1
		N	1/1 - 12/31	HOLMES
		N	1/1 - 12/31	PETERSON
9465		N	1/1 - 12/31	
		N	1/1 - 12/31	2.75 CFS 3/1 6/30;1.37CFS 7/1 10/1
62437		N	1/1 - 12/31	
62437		N	1/1 - 12/31	
65088		N	1/1 - 12/31	
40599		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
62460		N	1/1 - 12/31	
79878		N	7/2 - 10/1	NOT TO EXCEED 35 AF
79878		N	3/1 - 7/1	NOT TO EXCEED 35 AF
		N	1/1 - 12/31	.22CFS3/1 7/1;.11CFS7/1 10/1; DIV LTD QUAN AT ORIG POD
		N	1/1 - 12/31	2.75 CFS 3/1 6/30;1.37CFS 7/1 10/1
		N	1/1 - 12/31	.1CFS3/1 7/1;.5CFS7/1 10/1; LTD TO QUAN AT ORIG POD
		N	1/1 - 12/31	
9465		N	1/1 - 12/31	
55556		N	1/1 - 12/31	
		N	1/1 - 12/31	LUN

Certificate	Condition Code
26810	
4344	
4344	
4344	
5338	
6685	
46628	
46832	
72195	
4459	
4459	
4363	
51318	
51318	
60466	
60467	
31900	
31900	
1500	
7824	
8910	
9398	
62276	
62276	
62276	
65022	
65022	
9465	
62437	
62437	
65088	
40599	
62460	
79878	
79878	
9465	
55556	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
			N Powder R,1916	T 8235	1870	1	P & B Inc	72188
			N Powder R,1916	T 8235	1870	1	P & B Inc	72188
			N Powder R,1916	T 8235	1884	1	P & B Inc	72188
			N Powder R,1916	T 8235	1884	1	P & B Inc	72188
				T 7504	1890	1	Agri Star Corp	72191
14421	S 13070				1938	1	Violet Parker	72188
14421	S 13070				1938	1	Violet Parker	72188
79534			N Powder R,1916	T 8235	1870	1	Andrew Lun	72188
79534			N Powder R,1916	T 8235	1870	1	Andrew Lun	72188
79534			N Powder R,1916	T 8235	1870	1	Andrew Lun	72188
79534			N Powder R,1916	T 8235	1870	1	Andrew Lun	72188
79534			N Powder R,1916	T 8235	1870	1	Andrew Lun	72188
79534			N Powder R,1916	T 8235	1870	1	Andrew Lun	72188
74072	S 49603				1985	1	William L & Hilda Knight	72188
9465	S 3636			P 2	1917	3	Pacific Fruit Express Co	72188
			N Powder R,1916	T 8235	1870	2	P & B Inc	72188
			N Powder R,1916	T 8235	1870	2	P & B Inc	72188
			N Powder R,1916	T 8235	1884	2	P & B Inc	72188
			N Powder R,1916	T 8235	1884	2	P & B Inc	72188
1483			N Powder R	D 44	1887	3	S W Holmes	72188
1484			N Powder R		1893	2	Chris Johnson	72188
1485			N Powder R,1916	T 6572	1890	1	C E Jacobson	72188
1485			N Powder R,1916	T 6572	1893	1	C E Jacobson	72188
1493			N Powder R		1893	1	Frank McAllister	72188
	S 50717				1983	17	Powder River WCD	72188
1483			N Powder R	D 44	1887	1	S W Holmes	72188
1484			N Powder R		1893	1	Chris Johnson	72188
1493			N Powder R		1893	2	Frank McAllister	72188
52515			N Powder R	T 5484	1881	1	M F Wilcox	72188
52515			N Powder R	T 5484	1887	1	M F Wilcox	72188
	S 50717				1983	18	Powder River WCD	72188
				T 5484	1881	1	Elmer D Hill	72188
				T 5484	1887	2	Elmer D Hill	72188
64218			N Powder R		1904	1	Grant Dalton	72188
64218			N Powder R		1904	1	Grant Dalton	72188
64220			N Powder R		1893	1	Henry Pearson	72188
64220			N Powder R		1900	1	Henry Pearson	72188
1462			N Powder R		1893	2	B P Doherty	72188
1463			N Powder R		1898	1	L M Dougherty	72188
1511			N Powder R		1889	3	P L Smith	72188
1525			N Powder R		1892	1	James T York, Charles Dustin	72188
1525			N Powder R		1892	1	James T York, Charles Dustin	72188
1525			N Powder R		1902	1	James T York, Charles Dustin	72188
1982	S 3041				1916	2	George F Young	72188
3857	S 4817				1920	1	Geo F Young	72188
5053			N Powder R		1901	1	Geo F Young	72188
36834	S 30456				1965	1	George Geils	72188
52745	S 39003				1974	1	Garl L Kramer	72188
53300	S 41203				1976	1	Garl L Kramer	72188

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
	N POWDER R	06.00S39.00E-27-SWNW	IR	1.46	0.37	Y	
	N POWDER R	06.00S39.00E-27-SWNW	IR	2.93	0.73	Y	
	N POWDER R	06.00S39.00E-27-SWNW	IR	1.46	0.37	Y	
	N POWDER R	06.00S39.00E-27-SWNW	IR	2.93	0.73	Y	
	N POWDER R	06.00S39.00E-27-SWSE	I*	4.00	4.00	N	
14421	N POWDER R	06.00S39.00E-28-NESE	IR	0.43	0.00	Y	
14421	N POWDER R	06.00S39.00E-28-NESE	IR	0.43	0.43	N	
79534	N POWDER R	06.00S39.00E-28-NESE	DO	1.03	0.34	Y	
79534	N POWDER R	06.00S39.00E-28-NESE	DO	2.05	0.68	Y	
79534	N POWDER R	06.00S39.00E-28-NESE	IR	1.03	0.34	Y	
79534	N POWDER R	06.00S39.00E-28-NESE	IR	2.05	0.68	Y	
79534	N POWDER R	06.00S39.00E-28-NESE	LV	1.03	0.34	Y	
79534	N POWDER R	06.00S39.00E-28-NESE	LV	2.05	0.68	Y	
74072	UNN STR	06.00S39.00E-28-NWSW	IC	1.76	1.76	N	
9465	UNN STR	06.00S39.00E-28-SENE	IM	9.00	0.00	Y	
	N POWDER R	06.00S39.00E-28-SENE	IR	1.46	0.37	Y	
	N POWDER R	06.00S39.00E-28-SENE	IR	2.93	0.73	Y	
	N POWDER R	06.00S39.00E-28-SENE	IR	1.46	0.37	Y	
	N POWDER R	06.00S39.00E-28-SENE	IR	2.93	0.73	Y	
1483	N POWDER R	06.00S39.00E-28-SESW	IL	4.33	4.33	N	
1484	N POWDER R	06.00S39.00E-28-SESW	IL	2.50	2.50	N	
1485	N POWDER R	06.00S39.00E-28-SESW	IL	3.50	3.50	N	
1485	N POWDER R	06.00S39.00E-28-SESW	IL	5.91	5.91	N	
1493	N POWDER R	06.00S39.00E-28-SESW	IR	4.75	4.75	N	
	N POWDER R	06.00S39.00E-28-SESW	IC	25.60	0.00	Y	
1483	N POWDER R	06.00S39.00E-28-SWSE	IL	6.50	6.50	N	
1484	N POWDER R	06.00S39.00E-28-SWSE	IL	1.50	1.50	N	
1493	N POWDER R	06.00S39.00E-28-SWSE	IR	4.75	0.00	Y	
52515	N POWDER R	06.00S39.00E-28-SWSE	I*	1.30	1.30	N	
52515	N POWDER R	06.00S39.00E-28-SWSE	I*	2.55	2.55	N	
	N POWDER R	06.00S39.00E-28-SWSE	IC	25.60	0.00	Y	
	N POWDER R	06.00S39.00E-28-SWSE	I*	3.95	3.95	N	
	N POWDER R	06.00S39.00E-28-SWSE	I*	3.95	0.00	Y	
64218	N POWDER R	06.00S39.00E-31-NESE	IR	0.89	0.89	N	
64218	N POWDER R	06.00S39.00E-31-NESE	IR	1.34	1.34	N	
64220	N POWDER R	06.00S39.00E-31-NESE	IR	3.50	1.75	Y	
64220	N POWDER R	06.00S39.00E-31-NESE	IR	3.50	1.75	Y	
1462	N POWDER R	06.00S39.00E-32-NWSW	IL	2.80	2.80	N	
1463	N POWDER R	06.00S39.00E-32-NWSW	I*	3.13	3.13	N	
1511	N POWDER R	06.00S39.00E-32-NWSW	I*	7.75	7.75	N	
1525	N POWDER R	06.00S39.00E-32-NWSW	I*	5.00	5.00	N	
1525	N POWDER R	06.00S39.00E-32-NWSW	I*	8.55	8.55	N	
1525	N POWDER R	06.00S39.00E-32-NWSW	I*	1.28	1.28	N	
1982	N POWDER R	06.00S39.00E-32-NWSW	IR	1.56	0.00	Y	
3857	N POWDER R	06.00S39.00E-32-NWSW	IR	0.51	0.51	N	
5053	N POWDER R	06.00S39.00E-32-NWSW	IR	1.00	1.00	N	
36834	N POWDER R	06.00S39.00E-32-NWSW	IR	0.61	0.61	N	
52745	N POWDER R	06.00S39.00E-32-NWSW	IR	0.30	0.30	N	
53300	N POWDER R	06.00S39.00E-32-NWSW	IR	2.80	2.80	N	

Certificate	ACF	ACF Estimated	Season	Remarks
		N	7/1 - 10/1	
		N	3/1 - 6/30	
		N	7/1 - 10/1	
		N	3/1 - 6/30	
		N	1/1 - 12/31	4CFS 3.1 7/1;2CFS 7/1 10/1;400 AF TOTAL
14421		N	1/1 - 12/31	3/1-7/1; THEN 1/80 7/1-10/1
14421		N	1/1 - 12/31	3/1-7/1; THEN 1/80 7/1-10/1; NOT TO EXCEED 0.82 CFS
79534		N	7/1 - 10/1	
79534		N	3/1 - 6/30	
79534		N	7/1 - 10/1	
79534		N	3/1 - 6/30	
79534		N	7/1 - 10/1	
79534		N	3/1 - 6/30	
74072		N	1/1 - 12/31	
9465		N	1/1 - 12/31	
		N	7/1 - 10/1	
		N	3/1 - 6/30	
		N	7/1 - 10/1	
		N	3/1 - 6/30	
1483		N	1/1 - 12/31	4.33 CFS 3/1 7/1; 2.16 CFS 7/1 10/1; 432.5 AF TOTAL
1484		N	1/1 - 12/31	2.5 CFS 3/1 7/1; 1.25 CFS 7/1 10/1; 250 AF TOTAL
1485		N	1/1 - 12/31	3.5 CFS 3/1 7/1; 1.75 CFS 7/1 10/1; 350 AF TOTAL
1485		N	1/1 - 12/31	5.86 CFS 3/1 7/1; 2.93 CFS 7/1 10/1; 586.25 AF TOTAL
1493		N	1/1 - 12/31	4.75 CFS 3/1 7/1; 2.38 CFS 7/1 10/1; 475 AF TOTAL
		N	1/1 - 12/31	JACOBSON
1483		N	1/1 - 12/31	2.16 CFS 3/1 7/1; 1.08 CFS 7/1 10/1; 216.25 AF TOTAL
1484		N	1/1 - 12/31	1.5 CFS 3/1 7/1; 0.75 CFS 7/1 10/1; 150 AF TOTAL
1493		N	1/1 - 12/31	4.75 CFS 3/1 7/1; 2.38 CFS 7/1 10/1; 475 AF TOTAL
52515		N	1/1 - 12/31	1.93C 7/1 TO 10/1
52515		N	1/1 - 12/31	1.93C 7/1 TO 10/1
		N	1/1 - 12/31	HARLAN SANDERS
		N	1/1 - 12/31	3/1 7/1; THEN 0.05 CFS TO 10/1
		N	1/1 - 12/31	3/1 7/1; THEN 0.05 CFS TO 10/1
64218		N	1/1 - 12/31	3/1-10/1
64218		N	1/1 - 12/31	7/1-10/1
64220		N	1/1 - 12/31	1.78 CFS 7/110/1
64220		N	1/1 - 12/31	1.78 CFS 7/110/1
1462		N	1/1 - 12/31	2.8 CFS 3/1 7/1; 1.4 CFS 7/1 10/1; 280 AF TOTAL
1463		N	1/1 - 12/31	3.13CFS 3/1 7/1; THEN 1.57CFS TO 10/1; 313AF TOTAL
1511		N	1/1 - 12/31	7.75 CFS 3/1 7/1; 3.88 CFS 7/1 10/1; 775 AF TOTAL
1525		N	1/1 - 12/31	5.0 CFS 3/1 7/1; 2.5 CFS THEREAFTER; 500 AF TOTAL
1525		N	1/1 - 12/31	1.28 CFS 3/1 7/1; 6.64 CFS THEREAFTER; 128 AF TOTAL
1525		N	1/1 - 12/31	3.55 CFS 3/1 7/1; 1.78 CFS THEREAFTER; 355 AF TOTAL
1982		N	1/1 - 12/31	
3857		N	1/1 - 12/31	
5053		N	1/1 - 12/31	1.0 CFS 3/1 7/1; 0.5 CFS 7/1 10/1; 76.25 AF
36834		N	1/1 - 12/31	
52745		N	1/1 - 12/31	
53300		N	1/1 - 12/31	

Certificate	Condition Code
14421	
14421	
79534	
79534	
79534	
79534	
79534	
79534	
74072	
9465	
1483	
1484	
1485	
1485	
1493	
1483	
1484	
1493	
52515	
52515	
64218	
64218	
64220	
64220	
1462	
1463	
1511	
1525	
1525	
1525	
1982	
3857	
5053	
36834	
52745	
53300	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
74000	S 3040				1916	1	Douglas R Standford	72188
74001			N Powder R		1899	1	Douglas R Standford	72188
74001			N Powder R		1899	1	Douglas R Standford	72188
74002			N Powder R		1888	1	Douglas R Stanford	72188
74002			N Powder R		1888	1	Douglas R Stanford	72188
74002			N Powder R		1890	1	Douglas R Stanford	72188
74002			N Powder R		1890	1	Douglas R Stanford	72188
	S 50717				1983	15	Powder River WCD	72188
	S 52948				1991	3	Wilson Family Ranches LLC, Northwest Farm Credit Serv	72188
74070	G 2662				1964	2	Douglas R Standford	72188
74070	G 2662				1964	2	Douglas R Standford	72191
	G 12975				1992	2	Doug Stanford	72188
	G 12975				1992	2	Doug Stanford	72191
74070	G 2662				1964	1	Douglas R Standford	72188
74070	G 2662				1964	1	Douglas R Standford	72191
	G 12975				1992	1	Doug Stanford	72188
	G 12975				1992	1	Doug Stanford	72191
1511			N Powder R		1890	2	P L Smith	72188
1516			N Powder R		1893	1	H C Travillion	72188
1982	S 3041				1916	1	George F Young	72188
74000	S 3040				1916	2	Douglas R Standford	72188
74001			N Powder R		1899	2	Douglas R Standford	72188
74001			N Powder R		1899	2	Douglas R Standford	72188
74002			N Powder R		1888	2	Douglas R Stanford	72188
74002			N Powder R		1888	2	Douglas R Stanford	72188
74002			N Powder R		1890	2	Douglas R Stanford	72188
74002			N Powder R		1890	2	Douglas R Stanford	72188
	S 50717				1983	16	Powder River WCD	72188
	S 52948				1991	4	Wilson Family Ranches LLC, Northwest Farm Credit Serv	72188
67103	S 50664				1987	2	Peter W Schoeningh Jr	72191
68070	S 51045				1989	2	Peter W Schoeningh Jr	72191
74000	S 3040				1916	3	Douglas R Standford	72191
64202	S 45052				1980	1	Arthur E Powell	72191
1470			N Powder R		1879	4	W R Hutchinson	72191
1475			Powder River		1879	1	Albert Hutchinson	72191
1475			Powder River		1896	1	Albert Hutchinson	72191
1453			Powder River		1886	1	Sam & W A Carnes	72191
5053			N Powder R		1902	2	Geo F Young	72191
3974			Powder River		1883	1	R P Anderson & N E Dodd	3.1E+07
3974			Powder River		1886	1	R P Anderson & N E Dodd	3.1E+07
3974			Powder River		1887	1	R P Anderson & N E Dodd	3.1E+07
73426					1993	1	Hart Estate Investment Co	3.1E+07
3974			Powder River		1883	2	R P Anderson & N E Dodd	72191
3974			Powder River		1886	2	R P Anderson & N E Dodd	72191
3974			Powder River		1887	2	R P Anderson & N E Dodd	72191
3974			Powder River		1883	2	R P Anderson & N E Dodd	3.1E+07
3974			Powder River		1886	2	R P Anderson & N E Dodd	3.1E+07
3974			Powder River		1887	2	R P Anderson & N E Dodd	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
74000	N POWDER R	06.00S39.00E-32-NWSW	IR	1.88	1.88	N	
74001	N POWDER R	06.00S39.00E-32-NWSW	IR	2.85	0.00	Y	
74001	N POWDER R	06.00S39.00E-32-NWSW	IR	2.85	2.85	N	
74002	N POWDER R	06.00S39.00E-32-NWSW	IL	5.08	0.00	Y	
74002	N POWDER R	06.00S39.00E-32-NWSW	IL	10.20	10.20	N	
74002	N POWDER R	06.00S39.00E-32-NWSW	IL	5.08	0.00	Y	
74002	N POWDER R	06.00S39.00E-32-NWSW	IL	5.08	5.08	N	
	N POWDER R	06.00S39.00E-32-NWSW	IC	25.60	0.00	Y	
	ANTHONY CR	06.00S39.00E-32-NWSW	IS	2.72	0.00	Y	
74070	WELL 2	06.00S39.00E-33-NENE	IS	5.30	0.00	Y	
74070	WELL 2	06.00S39.00E-33-NENE	IS	5.30	0.00	Y	
	WELL 2	06.00S39.00E-33-NENE	IS	2.98	0.00	Y	
	WELL 2	06.00S39.00E-33-NENE	IS	2.98	0.00	Y	
74070	WELL 1	06.00S39.00E-33-NWNE	IS	5.30	5.30	N	
74070	WELL 1	06.00S39.00E-33-NWNE	IS	5.30	5.30	N	
	WELL 1	06.00S39.00E-33-NWNE	IS	2.98	2.98	N	
	WELL 1	06.00S39.00E-33-NWNE	IS	2.98	2.98	N	
1511	N POWDER R	06.00S39.00E-33-NWNW	I*	3.95	3.95	N	
1516	N POWDER R	06.00S39.00E-33-NWNW	IR	1.00	1.00	N	
1982	N POWDER R	06.00S39.00E-33-NWNW	IR	1.56	1.56	N	
74000	N POWDER R	06.00S39.00E-33-NWNW	IR	1.88	0.00	Y	
74001	N POWDER R	06.00S39.00E-33-NWNW	IR	2.85	0.00	Y	
74001	N POWDER R	06.00S39.00E-33-NWNW	IR	2.85	0.00	Y	
74002	N POWDER R	06.00S39.00E-33-NWNW	IL	5.08	0.00	Y	
74002	N POWDER R	06.00S39.00E-33-NWNW	IL	5.08	0.00	Y	
74002	N POWDER R	06.00S39.00E-33-NWNW	IL	5.08	0.00	Y	
74002	N POWDER R	06.00S39.00E-33-NWNW	IL	5.08	0.00	Y	
	N POWDER R	06.00S39.00E-33-NWNW	IC	25.60	0.00	Y	
	N POWDER R	06.00S39.00E-33-NWNW	IR	3.82	3.82	N	
67103	WARM SPRS CR	06.00S39.00E-33-SWSW	IS	5.55	0.00	Y	
68070	WARM SPRS CR	06.00S39.00E-33-SWSW	IC	2.06	0.00	Y	
74000	WASTEWATER	06.00S39.00E-34-SWSW	IR	1.88	0.00	Y	
64202	UNN STR	06.00S39.00E-35-NENE	IR	0.57	0.57	N	
1470	N POWDER R	06.00S39.00E-36-NWSW	IR	2.64	2.64	N	
1475	N POWDER R	06.00S39.00E-36-NWSW	IR	3.50	3.50	N	
1475	N POWDER R	06.00S39.00E-36-NWSW	IR	1.04	1.04	N	
1453	N POWDER R	06.00S39.00E-36-SESW	IR	2.97	2.97	N	
5053	N POWDER R	06.00S39.00E-36-SESW	IR	1.00	1.00	N	
3974	LITTLE ANTELOPE CR	06.00S40.00E-2-NWNW	IR	6.00	6.00	N	
3974	LITTLE ANTELOPE CR	06.00S40.00E-2-NWNW	IR	6.00	0.00	Y	
3974	LITTLE ANTELOPE CR	06.00S40.00E-2-NWNW	IR	6.00	0.00	Y	
73426	RUNOFF/RES 11	06.00S40.00E-4-SESW	LV	0.00	0.00	N	1.43
3974	SPRS	06.00S40.00E-9-NWNW	IR	6.00	0.00	Y	
3974	SPRS	06.00S40.00E-9-NWNW	IR	6.00	0.00	Y	
3974	SPRS	06.00S40.00E-9-NWNW	IR	6.00	0.00	Y	
3974	SPRS	06.00S40.00E-9-NWNW	IR	6.00	0.00	Y	
3974	SPRS	06.00S40.00E-9-NWNW	IR	6.00	0.00	Y	
3974	SPRS	06.00S40.00E-9-NWNW	IR	6.00	0.00	Y	

Certificate	ACF	ACF Estimated	Season	Remarks
74000		N	1/1 - 12/31	
74001		N	1/1 - 12/31	7/1-10/1; 285.0 AF
74001		N	1/1 - 12/31	3/1-7/1; 285.0 AF
74002		N	1/1 - 12/31	7/1 10/1; NOT TO EXCEED 1016.2 AF;150.0 ACRES
74002		N	1/1 - 12/31	3/1 7/1; NOT TO EXCEED 1016.2 AF; 150.0 ACRES
74002		N	1/1 - 12/31	3/1 7/1; NOT TO EXCEED 1016.2 AF;256.5 ACRES
74002		N	1/1 - 12/31	7/1 10/1; NOT TO EXCEED 1016.2 AF;256.5 ACRES
		N	1/1 - 12/31	SMITH, MCPHEE & TANNER
		N	1/1 - 12/31	3/1 6/30
74070		N	1/1 - 12/31	
74070		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 9/30
		N	1/1 - 12/31	3/1 9/30
74070		N	1/1 - 12/31	
74070		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 9/30
		N	1/1 - 12/31	3/1 9/30
1511		N	1/1 - 12/31	3.95 CFS 3/1 7/1; 1.98 CFS THEREAFTER; 395 AF TOTAL
1516		N	1/1 - 12/31	0.85 CFS 3/1 7/1; 0.43 CFS 7/1 10/1; 85 AF TOTAL
1982		N	1/1 - 12/31	
74000		N	1/1 - 12/31	
74001		N	1/1 - 12/31	3/1-7/1; 285.0 AF
74001		N	1/1 - 12/31	7/1-10/1; 285.0 AF
74002		N	1/1 - 12/31	3/1 7/1; NOT TO EXCEED 1016.2 AF; 150.0 ACRS
74002		N	1/1 - 12/31	7/1 10/1; NOT TO EXCEED 1016.2 AF;150.0 ACRES
74002		N	1/1 - 12/31	3/1 7/1; NOT TO EXCEED 1016.2 AF; 256.6 ACRES
74002		N	1/1 - 12/31	7/1 10/1; NOT TO EXCEED 1016.2 AF; 256.5 ACRES
		N	1/1 - 12/31	MCPHEE
		N	1/1 - 12/31	3/1 6/30
67103		N	1/1 - 12/31	
68070		N	1/1 - 12/31	
74000		N	1/1 - 12/31	
64202		N	1/1 - 12/31	
1470		N	1/1 - 12/31	20.15CFS 3/1 7/1; THEN 12.24CFS TO 10/1; 2449AF TOTAL
1475		N	1/1 - 12/31	3.5 CFS FM 3/1 7/1; 1.75 CFS 7/1 10/1; 350 AF TOTAL
1475		N	1/1 - 12/31	1.01 CFS 3/1 7/1; 0.506 CFS 7/1 10/1; 101.25 AF TOTAL
1453		N	1/1 - 12/31	2.97C FM 3/1 7/1; THEN 1.49C; 297 AF TOTAL
5053		N	1/1 - 12/31	1.0 CFS 3/1 7/1; 0.5 CFS 7/1 10/1; NOT TO EXCEED 148.75 AF
3974		N	1/1 - 12/31	93.0 ACRES
3974		N	1/1 - 12/31	75.0 ACRES
3974		N	1/1 - 12/31	72.0 ACRES
73426	1.43	N	1/1 - 12/31	
3974		N	1/1 - 12/31	93.0 ACRES
3974		N	1/1 - 12/31	75.0 ACRES
3974		N	1/1 - 12/31	72.0 ACRES
3974		N	1/1 - 12/31	93.0 ACRES
3974		N	1/1 - 12/31	75.0 ACRES
3974		N	1/1 - 12/31	72.0 ACRES

Certificate	Condition Code
74000	
74001	
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74002	
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74070	
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1511	
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1982	
74000	
74001	
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74002	
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74002	
67103	
68070	
74000	
64202	
1470	
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73426	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
73426					1993	2	Hart Estate Investment Co	72192
73426					1993	3	Hart Estate Investment Co	72192
73426					1993	4	Hart Estate Investment Co	72192
73426					1993	5	Hart Estate Investment Co	72192
	R 11868				1992	1	R P & Marylou McClammy	72192
	R 11868				1992	1	R P & Marylou McClammy	3.1E+07
9731	S 9647				1930	1	B F Hill	3.1E+07
9731	S 9647				1930	2	B F Hill	3.1E+07
	R 11868				1992	2	R P & Marylou McClammy	72192
	R 11868				1992	2	R P & Marylou McClammy	3.1E+07
	R 11868				1992	3	R P & Marylou McClammy	3.1E+07
	R 11868				1992	4	R P & Marylou McClammy	72192
	R 11868				1992	4	R P & Marylou McClammy	3.1E+07
	R 11868				1992	5	R P & Marylou McClammy	72192
	R 11868				1992	5	R P & Marylou McClammy	3.1E+07
	R 11868				1992	6	R P & Marylou McClammy	72192
	R 11868				1992	6	R P & Marylou McClammy	3.1E+07
	R 11868				1992	7	R P & Marylou McClammy	72192
	R 11868				1992	7	R P & Marylou McClammy	3.1E+07
72663					1992	1		72192
72663					1992	1		72192
72663					1992	1		72192
72663					1992	1		72192
72663					1992	1		72192
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72663					1992	1		72192
72663					1992	1		72192
72663					1992	1		72192
74050	S 11092			T 7287	1933	9	US Bureau of Reclamation	72192
74050	S 11092			T 7287	1933	9	US Bureau of Reclamation	72192
	S 51031				1990	1	Lower Powder Valley Irr Dist	72192
	R 11802				1992	1	The Hart Investment Co	72191
	R 11802				1992	2	The Hart Investment Co	72191
	R 11802				1992	3	The Hart Investment Co	72191

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
73426	UNN STR/RES 14	06.00S40.00E-15-NENW	LV	0.00	0.00	N	0.11
73426	UNN STR/RES 23	06.00S40.00E-15-SWNE	LV	0.00	0.00	N	0.26
73426	UNN STR/RES 24	06.00S40.00E-15-SWNW	LV	0.00	0.00	N	0.06
73426	UNN STR/RES 17	06.00S40.00E-16-SWNE	LV	0.00	0.00	N	0.07
	RESERVOIR 5	06.00S40.00E-23-NWSE	LV	0.00	0.00	N	0.234
	RESERVOIR 5	06.00S40.00E-23-NWSE	LV	0.00	0.00	N	0.234
9731	CUSICK CR	06.00S40.00E-23-SENE	IR	0.37	0.37	N	
9731	CUSICK CR	06.00S40.00E-24-NWNW	IR	0.37	0.00	Y	
	RESERVOIR 7	06.00S40.00E-24-NWSW	LV	0.00	0.00	N	0.234
	RESERVOIR 7	06.00S40.00E-24-NWSW	LV	0.00	0.00	N	0.234
	RESERVOIR 9	06.00S40.00E-24-SESE	LV	0.00	0.00	N	0.234
	RESERVOIR 10	06.00S40.00E-25-SWNE	LV	0.00	0.00	N	0.234
	RESERVOIR 10	06.00S40.00E-25-SWNE	LV	0.00	0.00	N	0.234
	RESERVOIR 11	06.00S40.00E-25-SWNE	LV	0.00	0.00	N	0.234
	RESERVOIR 11	06.00S40.00E-25-SWNE	LV	0.00	0.00	N	0.234
	RESERVOIR 12	06.00S40.00E-25-SWNE	LV	0.00	0.00	N	0.234
	RESERVOIR 12	06.00S40.00E-25-SWNE	LV	0.00	0.00	N	0.234
	RESERVOIR 13	06.00S40.00E-25-SWNE	LV	0.00	0.00	N	0.234
	RESERVOIR 13	06.00S40.00E-25-SWNE	LV	0.00	0.00	N	0.234
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	50.00	50.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	60.00	60.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	60.00	60.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	70.00	70.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	70.00	70.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	70.00	70.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	70.00	70.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	70.00	70.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	70.00	70.00	N	
72663	POWDER R	06.00S40.00E-26-NESW	F8	70.00	70.00	N	
74050	POWDER R	06.00S40.00E-26-NESW	IC	4.24	0.00	Y	
74050	POWDER R	06.00S40.00E-26-NESW	WI	4.24	0.00	Y	
	THIEF VALLEY RES	06.00S40.00E-26-NESW	IS	3.90	3.90	N	
	GENTRY CR/RES 2 4	06.00S40.00E-29-NESW	LV	0.00	0.00	N	0.06
	GENTRY CR/RES 2 5	06.00S40.00E-29-SENW	LV	0.00	0.00	N	0.35
	UNN STR/RES 2 6	06.00S40.00E-30-NESE	LV	0.00	0.00	N	0.35

Certificate	ACF	ACF Estimated	Season	Remarks
73426	0.11	N	1/1 - 12/31	
73426	0.26	N	1/1 - 12/31	
73426	0.06	N	1/1 - 12/31	
73426	0.07	N	1/1 - 12/31	
	0.234	N	1/1 - 12/31	
	0.234	N	1/1 - 12/31	
9731		N	1/1 - 12/31	
9731		N	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
72663		N	1/1 - 1/15	
72663		N	1/15 - 1/31	
72663		N	10/1 - 10/15	
72663		N	10/16 - 10/31	
72663		N	11/1 - 11/15	
72663		N	11/16 - 11/30	
72663		N	12/1 - 12/15	
72663		N	12/16 - 12/31	
72663		N	2/1 - 2/15	
72663		N	7/1 - 7/15	
72663		N	7/16 - 7/31	
72663		N	8/1 - 8/15	
72663		N	8/16 - 8/30	
72663		N	9/1 - 9/15	
72663		N	9/16 - 9/30	
72663		N	2/16 - 2/29	
72663		N	6/16 - 6/30	
72663		N	3/1 - 3/15	
72663		N	3/16 - 3/31	
72663		N	4/1 - 4/15	
72663		N	4/16 - 4/30	
72663		N	5/1 - 5/15	
72663		N	5/16 - 5/31	
72663		N	6/1 - 6/15	
74050		N	1/1 - 12/31	4/1 10/1; 7113.9 ACRES
74050		N	1/1 - 12/31	
		N	1/1 - 12/31	
	0.06	N	1/1 - 12/31	APPROPRIATED FOR STORAGE 10/1 5/31
	0.35	N	1/1 - 12/31	APPROPRIATED FOR STORAGE 10/1 5/31
	0.35	N	1/1 - 12/31	APPROPRIATED FOR STORAGE 10/1 5/31

Certificate	Condition Code
73426	
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72663	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
68874					1993	1	Clark & Betty D Gray	3.1E+07
	R 11868				1992	10	R P & Marylou McClammy	3.1E+07
73727					1993	1	Ron Thomas	3.1E+07
73727					1993	2	Ron Thomas	3.1E+07
	S 44222				1977	4	Elmer & Peggy Satterberg	72191
68805					1993	1	The Hart Estate Invest Co	72191
	S 44222				1977	3	Elmer & Peggy Satterberg	72191
	S 44222				1977	3	Elmer & Peggy Satterberg	72191
	S 44222				1977	2	Elmer & Peggy Satterberg	72191
	S 44222				1977	2	Elmer & Peggy Satterberg	72191
72619			N Powder R		1899	1	Kerns Bros Inc	72191
1544			N Powder R		1905	1	Alvin O Smith	71685
1544			N Powder R		1905	1	Alvin O Smith	72166
1470			N Powder R		1871	1	W R Hutchinson	72187
1470			N Powder R		1883	1	W R Hutchinson	72187
1470			N Powder R		1899	1	W R Hutchinson	72187
1470			N Powder R		1873	2	W R Hutchinson	72187
1470			N Powder R		1888	2	W R Hutchinson	72187
1470			N Powder R		1903	2	W R Hutchinson	72187
1471			N Powder R		1902	1	Chas E Hutchinson	72187
1473			N Powder R		1871	1	Mary F Hutchinson	72187
1496			N Powder R,1916		1871	1	W L Miller	72187
1496			N Powder R,1916		1875	1	W L Miller	72187
1496			N Powder R,1916		1865	2	W L Miller	72187
38006	S 30328				1965	1	Alvia H Peters	72187
38406	S 30499				1965	1	Merton A/Ehrman Davis	72187
54067	S 44570				1979	2	Florence L Peters	72187
66060	S 49340				1984	1	Peter W Schoeningh Jr	72187
67104	S 50371				1987	1	Peter W Schoeningh Jr	72187
72203			N Powder R		1862	1	Gerals Loennig	72187
72203			N Powder R		1870	1	Gerals Loennig	72187
72203			N Powder R		1884	1	Gerals Loennig	72187
72286			N Powder R	T 3889	1871	1	Richard Stevens	72187
72286			N Powder R	T 3889	1882	1	Richard Stevens	72187
73626			N Powder R		1871	1	Jim C & Rhea M Patton	72187
73626			N Powder R		1871	2	Jim C & Rhea M Patton	72187
76952			N Powder R	T 8346	1874	1	Peter W Schoeningh Jr	72187
76952			N Powder R	T 8346	1881	1	Peter W Schoeningh Jr	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	2	Daniel Thee	72187

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
68874	UNN STR	06.00S41.00E-19-NWNE	LV	0.00	0.00	N	0.5
	RESERVOIR 18	06.00S41.00E-19-SWNW	LV	0.00	0.00	N	0.234
73727	UNN STR/RES 1	06.00S41.00E-20-NENE	LV	0.00	0.00	N	5
73727	UNN STR/RES 2	06.00S41.00E-21-NWSW	LV	0.00	0.00	N	5
	STREAM 4	07.00S38.00E-1-SWNW	IS	2.84	2.84	N	
68805	UNN STR	07.00S38.00E-1-SWSE	LV	0.00	0.00	N	6.53
	STREAM 3	07.00S38.00E-2-SENE	IR	2.00	0.00	Y	
	STREAM 3	07.00S38.00E-2-SENE	IS	2.00	2.00	N	
	STREAM 2	07.00S38.00E-3-NENE	IR	0.71	0.00	Y	
	STREAM 2	07.00S38.00E-3-NENE	IS	0.71	0.71	N	
72619	WILLOW CR	07.00S38.00E-3-SENW	IR	0.62	0.62	N	
1544	ANTONE CR	07.00S38.00E-5-NESW	I*	0.60	0.60	N	
1544	ANTONE CR	07.00S38.00E-5-NESW	I*	0.60	0.60	N	
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	4.00	4.00	N	
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	1.24	1.24	N	
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	1.00	1.00	N	
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	2.18	2.18	N	
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	3.99	3.99	N	
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	3.42	3.42	N	
1471	N POWDER R	07.00S38.00E-5-NWNE	IR	2.26	2.26	N	
1473	N POWDER R	07.00S38.00E-5-NWNE	IL	2.00	2.00	N	
1496	N POWDER R	07.00S38.00E-5-NWNE	I*	0.63	0.63	N	
1496	N POWDER R	07.00S38.00E-5-NWNE	I*	0.90	0.90	N	
1496	N POWDER R	07.00S38.00E-5-NWNE	I*	1.25	1.25	N	
38006	N POWDER R	07.00S38.00E-5-NWNE	IR	4.69	4.69	N	
38406	N POWDER R	07.00S38.00E-5-NWNE	IR	4.97	4.97	N	
54067	VAN PATTEN L RES	07.00S38.00E-5-NWNE	IR	0.00	0.00	N	41.75
66060	N POWDER R	07.00S38.00E-5-NWNE	IR	1.28	1.28	N	
67104	N POWDER R	07.00S38.00E-5-NWNE	IS	1.62	1.62	N	
72203	N POWDER R	07.00S38.00E-5-NWNE	DS	3.02	3.02	N	
72203	N POWDER R	07.00S38.00E-5-NWNE	IR	3.02	0.00	Y	
72203	N POWDER R	07.00S38.00E-5-NWNE	IL	3.02	0.00	Y	
72286	N POWDER R	07.00S38.00E-5-NWNE	IL	2.10	2.10	N	
72286	N POWDER R	07.00S38.00E-5-NWNE	IL	0.58	0.58	N	
73626	N POWDER R	07.00S38.00E-5-NWNE	I*	0.22	0.22	N	
73626	N POWDER R	07.00S38.00E-5-NWNE	I*	0.22	0.00	Y	
76952	N POWDER R	07.00S38.00E-5-NWNE	I*	4.73	0.00	Y	
76952	N POWDER R	07.00S38.00E-5-NWNE	I*	4.73	4.73	N	
79576	N POWDER R	07.00S38.00E-5-NWNE	DO	0.48	0.08	Y	
79576	N POWDER R	07.00S38.00E-5-NWNE	DO	0.95	0.16	Y	
79576	N POWDER R	07.00S38.00E-5-NWNE	IR	0.48	0.08	Y	
79576	N POWDER R	07.00S38.00E-5-NWNE	IR	0.95	0.16	Y	
79576	N POWDER R	07.00S38.00E-5-NWNE	LV	0.48	0.08	Y	
79576	N POWDER R	07.00S38.00E-5-NWNE	LV	0.95	0.16	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	DO	0.17	0.03	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	DO	0.35	0.06	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	IR	0.17	0.03	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	IR	0.35	0.06	Y	

Certificate	ACF	ACF Estimated	Season	Remarks
68874	0.5	N	1/1 - 12/31	
	0	Y	1/1 - 12/31	
73727	5	N	1/1 - 12/31	
73727	0	Y	1/1 - 12/31	
		N	1/1 - 12/31	SENE,S2
68805	6.53	N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	NENE,S2
		N	1/1 - 12/31	NENE,S2
72619		N	1/1 - 12/31	
1544		N	1/1 - 12/31	0.3 CFS 3/1 7/1; 0.15 CFS 7/1 10/1; 30 AF
1544		N	1/1 - 12/31	0.3 CFS 3/1 7/1; 0.15 CFS 7/1 10/1; 30 AF
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1471		N	1/1 - 12/31	2.26 CFS 31/ 7/1; 1.13 CFS 7/1 10/1; 226.25 AF TOTAL
1473		N	1/1 - 12/31	2 CFS 3/1 7/1; 1 CFS 7/1 10/1; 200 AF TOTAL
1496		N	1/1 - 12/31	0.625 CFS 3/1 7/1; 0.31 CFS 7/1 10/1; 62.5 AF TOTAL
1496		N	1/1 - 12/31	0.88 CFS 3/1 7/1; 0.44 CFS 7/1 10/1; 87.5 AF TOTAL
1496		N	1/1 - 12/31	1.25 CFS 3/1 7/1; 0.625 CFS 7/1 10/1; 125 AF TOTAL
38006		N	1/1 - 12/31	
38406		N	1/1 - 12/31	
54067	0	Y	1/1 - 12/31	
66060		N	1/1 - 12/31	
67104		N	1/1 - 12/31	
72203		N	1/1 - 12/31	3/1 7/1;1.51 CFS 7/1 10/1
72203		N	1/1 - 12/31	3/1 7/1;1.51 CFS 7/1 10/1
72203		N	1/1 - 12/31	3/1 7/1;1.51 CFS 7/1 10/1
72286		N	1/1 - 12/31	3/1 7/1; 1.34 CFS 7/1 10/1
72286		N	1/1 - 12/31	3/1 7/1; 1.34 CFS 7/1 10/1
73626		N	1/1 - 12/31	3/1 7/1; GARDNER MILL RACE AND HILLSIDE LATERALS
73626		N	1/1 - 12/31	7/1 10/1; GARDNER MILL RACE AND HILLSIDE LATERALS
76952		N	1/1 - 12/31	3/1-7/1; 2.37 CFS 7/1-10/1; NOT TO EXCEED 470.0 AF
76952		N	1/1 - 12/31	3/1-7/1; 2.37 CFS 7/1-10/1; NOT TO EXCEED 470.0 AF
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	

Certificate	Condition Code
68874	
73727	
73727	
68805	
72619	
1544	
1544	
1470	
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1471	
1473	
1496	
1496	
1496	
38006	
38406	
54067	
66060	
67104	
72203	
72203	
72203	
72286	
72286	
73626	
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76952	
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79576	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
79577			N Powder R,1916	T 7289	1865	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
	S 50717				1983	7	Powder River WCD	72187
	S 52094				1991	1	Richard D Stephens	72187
	S 52094				1991	2	Richard D Stephens	72187
				T 3889	1873	1	J H Hutchinson, Ernest Kirkland, Francis Dobbin	72187
				T 3889	1895	1	J H Hutchinson, Ernest Kirkland, Francis Dobbin	72187
				T 3889	1903	1	J H Hutchinson, Ernest Kirkland, Francis Dobbin	72187
	R 8551				1983	1	Roger W Smith	71685
	R 8551				1983	1	Roger W Smith	72166
	S 47279				1983	1	Roger W Smith	71685
	S 47279				1983	1	Roger W Smith	72166
4149			N Powder R		1869	1	Ben Fisher	72191
4149			N Powder R		1869	1	Ben Fisher	72191
65007	S 43101				1976	1	Billy R & Doris M Leggett	72191
74460	S 19907				1950	3	Baker Ranches	72191
7673	S 6498				1924	3	W J Welch	72191
74460	S 19907				1950	1	Baker Ranches	72191
12040	S 12429				1936	1	Mary F Hutchinson, Margaret Loughlin, Adelaide Hunter	72191
12446	S 13066				1938	1	Mable E Withycombe	72191
12040	S 12429				1936	2	Mary F Hutchinson, Margaret Loughlin, Adelaide Hunter	72191
34641	S 28276				1962	1	William O Christensen	72191
	G 15208				2001	1	William Jerry Welch	72191
31545	S 28314				1962	2	Estate of W Perkins	72191
31545	S 28314				1962	1	Estate of W Perkins	72191
28040	S 24360				1939	1	Ralph McCullough	72191
11396	S 11547				1934	1	L W Perkins	72191
11396	S 11547				1934	2	L W Perkins	72191
31545	S 28314				1962	3	Estate of W Perkins	72191
7673	S 6498				1924	1	W J Welch	72191
74460	S 19907				1950	2	Baker Ranches	72191
67094	S 47874				1983	2	Roger W Smith	72191
67094	S 47874				1983	3	Roger W Smith	72191
67094	S 47874				1983	4	Roger W Smith	72191
70020					1993	1	Robert L Taylor	72191
7673	S 6498				1924	2	W J Welch	72191
67094	S 47874				1983	1	Roger W Smith	72191
58698	S 42340				1977	2	Adele B Chandler	72191
28635	S 10351				1931	1	Lowell Chandler	72191
58698	S 42340				1977	1	Adele B Chandler	72191
37783	S 30146				1964	1	Kenneth Boyer	72191
49228	S 28494				1962	1	Leslie J/Marie Robbs	71685
49228	S 28494				1962	1	Leslie J/Marie Robbs	71685

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
79577	N POWDER R	07.00S38.00E-5-NWNE	LV	0.17	0.03	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	LV	0.35	0.06	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	DO	0.39	0.07	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	DO	0.79	0.13	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	IR	0.39	0.07	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	IR	0.79	0.13	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	LV	0.39	0.07	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	LV	0.79	0.13	Y	
	N POWDER R	07.00S38.00E-5-NWNE	IC	25.60	25.60	N	
	N POWDER R	07.00S38.00E-5-NWNE	IR	0.88	0.88	N	
	UNN STR	07.00S38.00E-5-NWNE	IS	0.88	0.00	Y	
	N POWDER R	07.00S38.00E-5-NWNE	I*	3.45	3.45	N	
	N POWDER R	07.00S38.00E-5-NWNE	I*	5.68	5.68	N	
	N POWDER R	07.00S38.00E-5-NWNE	I*	2.94	2.94	N	
	UNN STR	07.00S38.00E-8-NWNW	RC	0.00	0.00	N	1.5
	UNN STR	07.00S38.00E-8-NWNW	RC	0.00	0.00	N	1.5
	UNN STR	07.00S38.00E-8-NWNW	IR	0.25	0.25	N	
	UNN STR	07.00S38.00E-8-NWNW	IR	0.25	0.25	N	
4149	WARM SPRS CR	07.00S38.00E-10-NWNE	IR	0.86	0.86	N	
4149	WARM SPRS CR	07.00S38.00E-10-NWNE	PW	0.54	0.54	N	
65007	WARM SPRS CR	07.00S38.00E-10-NWNE	IS	0.40	0.40	N	
74460	UNN STR	07.00S38.00E-11-SENW	IC	2.50	0.00	Y	
7673	SEEPAGE/WASTE W/SPR	07.00S38.00E-11-SESE	IL	2.50	0.00	Y	
74460	UNN STR	07.00S38.00E-11-SESE	IC	2.50	2.50	N	
12040	WARM SPRS CR	07.00S38.00E-12-NESW	IS	4.00	4.00	N	
12446	WASTE WATER	07.00S38.00E-12-NWNE	IS	1.25	1.25	N	
12040	SLOUGH/WASTE WATER	07.00S38.00E-12-NWSW	IR	4.00	0.00	Y	
34641	UNN DRAINAGE	07.00S38.00E-12-SWSE	IS	0.99	0.99	N	
	A WELL	07.00S38.00E-13-NENW	IS	1.78	1.78	N	
31545	M UNN SWALE	07.00S38.00E-13-NWNE	IS	0.55	0.55	N	
31545	N UNN SWALE	07.00S38.00E-13-NWNE	IS	1.00	1.00	N	
28040	UNN STR	07.00S38.00E-13-NWSE	IR	9.00	9.00	N	
11396	UNN SL	07.00S38.00E-13-NWSW	IS	1.62	1.62	N	
11396	WASTE WATER	07.00S38.00E-13-NWSW	IR	1.62	0.00	Y	
31545	S UNN SWALE	07.00S38.00E-13-SWNE	IS	0.95	0.95	N	
7673	SEEPAGE/WASTE W/SPR	07.00S38.00E-14-NWNE	IL	2.50	2.50	N	
74460	UNN STR	07.00S38.00E-14-NWNE	IC	2.50	0.00	Y	
67094	UNN STR	07.00S38.00E-14-NWSW	IS	4.81	0.00	Y	
67094	UNN STR	07.00S38.00E-14-NWSW	IS	4.81	0.00	Y	
67094	UNN STR	07.00S38.00E-14-NWSW	IS	4.81	0.00	Y	
70020	RUNOFF/RES	07.00S38.00E-14-SESE	LV	0.00	0.00	N	3.5
7673	SEEPAGE/WASTE W/SPR	07.00S38.00E-14-SWNW	IL	2.50	0.00	Y	
67094	UNN STR	07.00S38.00E-15-NESE	IS	4.81	4.81	N	
58698	UNN G	07.00S38.00E-15-SESW	IC	0.63	0.00	Y	
28635	UNN G	07.00S38.00E-15-SWSE	IS	0.37	0.37	N	
58698	UNN G	07.00S38.00E-15-SWSW	IC	0.63	0.63	N	
37783	UNN STR	07.00S38.00E-16-NESE	IR	0.31	0.31	N	
49228	UNN STR	07.00S38.00E-16-SWSW	IR	0.43	0.43	N	
49228	UNN STR	07.00S38.00E-16-SWSW	IS	0.17	0.17	N	

Certificate	ACF	ACF Estimated	Season	Remarks
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
		N	1/1 - 12/31	HUTCHINSON HILLSIDE GARDNER MILLRACE
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	3.45 CFS FM 3/1 7/1; 2.375 CFS TIL 10/1; 190 ACRES
		N	1/1 - 12/31	5.68 CFS FM 3/1 7/1; 3.91 TIL 10/1; 313 ACRES
		N	1/1 - 12/31	2.94CFS FM 3/1 7/1; 2.02 TIL 10/1; 162 ACRES
	1.5	N	1/1 - 12/31	
	1.5	N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
4149		N	1/1 - 12/31	
4149		N	1/1 - 12/31	
65007		N	1/1 - 12/31	
74460		N	1/1 - 12/31	NOT TO EXCEED 2.5
7673		N	1/1 - 12/31	
74460		N	1/1 - 12/31	NOT TO EXCEED 2.5 CFS
12040		N	1/1 - 12/31	
12446		N	1/1 - 12/31	3/1 7/1; THEN 1/80
12040		N	1/1 - 12/31	
34641		N	1/1 - 12/31	
		N	1/1 - 12/31	5/1-9/30
31545		N	1/1 - 12/31	
31545		N	1/1 - 12/31	
28040		N	1/1 - 12/31	
11396		N	1/1 - 12/31	4/1 10/1
11396		N	1/1 - 12/31	4/1 10/1
31545		N	1/1 - 12/31	
7673		N	1/1 - 12/31	
74460		N	1/1 - 12/31	NOT TO EXCEED 2.5 CFS
67094		N	1/1 - 12/31	
67094		N	1/1 - 12/31	
67094		N	1/1 - 12/31	
70020	3.5	N	1/1 - 12/31	
7673		N	1/1 - 12/31	
67094		N	1/1 - 12/31	
58698		N	1/1 - 12/31	
28635		N	1/1 - 12/31	
58698		N	1/1 - 12/31	
37783		N	1/1 - 12/31	
49228		N	1/1 - 12/31	
49228		N	1/1 - 12/31	

Certificate	Condition Code
79577	
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4149	
4149	
65007	
74460	
7673	
74460	
12040	
12446	
12040	
34641	
31545	
31545	
28040	
11396	
11396	
31545	
7673	
74460	
67094	
67094	
67094	
70020	
7673	
67094	
58698	
28635	
58698	
37783	
49228	
49228	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
49228	S 28494				1962	1	Leslie J/Marie Robbs	72191
49228	S 28494				1962	1	Leslie J/Marie Robbs	72191
73735					1993	1	Richard L Lien & John B Clark	71685
73735					1993	1	Richard L Lien & John B Clark	71685
73735					1993	1	Richard L Lien & John B Clark	72191
73735					1993	1	Richard L Lien & John B Clark	72191
38011	S 31975				1966	1	Dwight Perkins	71685
49148	S 31924				1966	1	Dorik V Mechau	71685
49148	S 31924				1966	1	Dorik V Mechau	72191
38010	S 31143				1965	1	Dwight Perkins	71685
38010	S 31143				1965	1	Dwight Perkins	72176
8654	S 8522				1928	1	Seth Hart	71685
49088	S 31882				1966	1	Dorik V Mechau	71685
67151	S 50413				1988	1	Richard L Lien	71685
1450			N Powder R		1880	1	John Ashworth	71685
1450			N Powder R		1898	1	John Ashworth	71685
1466			N Powder R		1880	1	Ben Fisher	71685
1470			N Powder R		1879	3	W R Hutchinson	71685
1477			N Powder R		1875	1	M Ella Haskin	71685
1477			N Powder R		1889	1	M Ella Haskin	71685
1481			N Powder R		1895	1	W M Hearing	71685
1481			N Powder R		1897	1	W M Hearing	71685
1482			N Powder R		1898	1	James Hearing	71685
1488			N Powder R		1885	1	J R Long	71685
1502			N Powder R		1877	1	L W Perkins	71685
1502			N Powder R		1895	1	L W Perkins	71685
1510			N Powder R		1881	1	Estate of Michael J Relling	71685
1510			N Powder R		1893	2	Estate of Michael J Relling	71685
1513			N Powder R		1893	1	G J Savage	71685
13548	S 4356			W 15	1919	1	Mabel E Withycombe	71685
38007	S 30770				1965	1	Lester Bond	71685
38010	S 31143				1965	2	Dwight Perkins	71685
48923			N Powder R	T 3853	1886	1	Kenneth Boyer	71685
48929	S 42939				1978	1	Kenneth Boyer	71685
54981	S 45921				1981	1	Isabel W Boyd	71685
60482	S 43049				1978	1	Bill Loennig	71685
62314			N Powder R		1874	1	D Joan Fowler	71685
62314			N Powder R		1874	1	D Joan Fowler	71685
62315			N Powder R		1876	1	Diane Getchell	71685
62316			N Powder R	T 6003	1876	1	James F & Mary P Shasky	71685
67251			N Powder R	T 6635	1887	2	E H Pratt	71685
67251			N Powder R	T 6635	1887	2	E H Pratt	71685
67251			N Powder R	T 6635	1904	2	E H Pratt	71685
67251			N Powder R	T 6635	1904	2	E H Pratt	71685
72285			N Powder R		1877	1	Billy R & Doris M Leggett	71685
72287	S 43102				1978	1	Billy R & Doris M Leggett	71685
72289			N Powder R		1877	1	Billy R & Doris M Leggett	71685
72289			N Powder R		1892	1	Billy R & Doris M Leggett	71685
72290			N Powder R		1877	1	Robert & Caron Stephens	71685

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
49228	UNN STR	07.00S38.00E-16-SWSW	IR	0.43	0.43	N	
49228	UNN STR	07.00S38.00E-16-SWSW	IS	0.17	0.17	N	
73735	A SPR/RES	07.00S38.00E-16-SWSW	IL	0.00	0.00	N	8.4
73735	A SPR/RES	07.00S38.00E-16-SWSW	RC	0.00	0.00	N	8.4
73735	A SPR/RES	07.00S38.00E-16-SWSW	IL	0.00	0.00	N	8.4
73735	A SPR/RES	07.00S38.00E-16-SWSW	RC	0.00	0.00	N	8.4
38011	UNN STR	07.00S38.00E-17-NWSW	IS	3.89	3.89	N	
49148	UNN STR	07.00S38.00E-17-SESE	IS	0.24	0.24	N	
49148	UNN STR	07.00S38.00E-17-SESE	IS	0.24	0.24	N	
38010	N POWDER R	07.00S38.00E-18-NESE	IR	3.93	3.93	N	
38010	N POWDER R	07.00S38.00E-18-NESE	IR	3.93	3.93	N	
8654	N POWDER R	07.00S38.00E-18-SESE	IR	0.13	0.13	N	
49088	UNN STR	07.00S38.00E-18-SESE	IS	0.69	0.69	N	
67151	UNN STR	07.00S38.00E-18-SESE	IS	0.14	0.14	N	
1450	N POWDER R	07.00S38.00E-18-SWSE	IR	0.45	0.45	N	
1450	N POWDER R	07.00S38.00E-18-SWSE	IR	2.55	2.55	N	
1466	N POWDER R	07.00S38.00E-18-SWSE	IS	0.50	0.50	N	
1470	N POWDER R	07.00S38.00E-18-SWSE	IR	1.68	1.68	N	
1477	N POWDER R	07.00S38.00E-18-SWSE	IR	1.88	1.88	N	
1477	N POWDER R	07.00S38.00E-18-SWSE	IR	0.55	0.55	N	
1481	N POWDER R	07.00S38.00E-18-SWSE	IR	0.50	0.50	N	
1481	N POWDER R	07.00S38.00E-18-SWSE	IR	1.80	1.80	N	
1482	N POWDER R	07.00S38.00E-18-SWSE	IR	0.90	0.90	N	
1488	N POWDER R	07.00S38.00E-18-SWSE	IR	0.55	0.55	N	
1502	N POWDER R	07.00S38.00E-18-SWSE	ID	0.21	0.21	N	
1502	N POWDER R	07.00S38.00E-18-SWSE	ID	0.82	0.82	N	
1510	N POWDER R	07.00S38.00E-18-SWSE	I*	2.50	2.50	N	
1510	N POWDER R	07.00S38.00E-18-SWSE	I*	2.50	2.50	N	
1513	N POWDER R	07.00S38.00E-18-SWSE	IR	0.35	0.35	N	
13548	N POWDER R	07.00S38.00E-18-SWSE	IR	0.75	0.75	N	
38007	N POWDER R	07.00S38.00E-18-SWSE	IR	0.88	0.88	N	
38010	N POWDER R	07.00S38.00E-18-SWSE	IR	3.93	0.00	Y	
48923	N POWDER R	07.00S38.00E-18-SWSE	IR	0.00	0.00	N	25
48929	N POWDER R	07.00S38.00E-18-SWSE	IR	0.44	0.44	N	
54981	N POWDER R	07.00S38.00E-18-SWSE	IR	1.30	1.30	N	
60482	N POWDER R	07.00S38.00E-18-SWSE	IR	0.10	0.10	N	
62314	N POWDER R	07.00S38.00E-18-SWSE	IL	1.50	1.50	N	
62314	N POWDER R	07.00S38.00E-18-SWSE	IL	2.25	2.25	N	
62315	N POWDER R	07.00S38.00E-18-SWSE	IL	3.43	3.43	N	
62316	N POWDER R	07.00S38.00E-18-SWSE	IL	2.49	2.49	N	
67251	N POWDER R	07.00S38.00E-18-SWSE	I*	0.54	0.00	Y	
67251	N POWDER R	07.00S38.00E-18-SWSE	I*	0.54	0.00	Y	
67251	N POWDER R	07.00S38.00E-18-SWSE	I*	0.54	0.00	Y	
67251	N POWDER R	07.00S38.00E-18-SWSE	I*	0.54	0.00	Y	
72285	N POWDER R	07.00S38.00E-18-SWSE	IL	2.44	2.44	N	
72287	N POWDER R	07.00S38.00E-18-SWSE	IS	0.18	0.18	N	
72289	N POWDER R	07.00S38.00E-18-SWSE	IL	2.74	1.37	Y	
72289	N POWDER R	07.00S38.00E-18-SWSE	IL	2.74	1.37	Y	
72290	N POWDER R	07.00S38.00E-18-SWSE	IL	2.22	1.11	Y	

Certificate	ACF	ACF Estimated	Season	Remarks
49228		N	1/1 - 12/31	
49228		N	1/1 - 12/31	
73735	4.2	Y	1/1 - 12/31	
73735	4.2	Y	1/1 - 12/31	
73735	4.2	Y	1/1 - 12/31	
73735	4.2	Y	1/1 - 12/31	
38011		N	1/1 - 12/31	
49148		N	1/1 - 12/31	
49148		N	1/1 - 12/31	
38010		N	1/1 - 12/31	
38010		N	1/1 - 12/31	
8654		N	1/1 - 12/31	
49088		N	1/1 - 12/31	
67151		N	1/1 - 12/31	
1450		N	1/1 - 12/31	0.45 CFS 3/1 7/1; 0.225 CFS THEREAFTER; 45 AF TOTAL
1450		N	1/1 - 12/31	2.55 CFS 3/1 7/1; 1.275 CFS THEREAFTER; 255 AF TOTAL
1466		N	1/1 - 12/31	A RIGHT TO SUPP THE FLOW OF CERTAIN SPRINGS FOR THE IRRIGATION OF
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1477		N	1/1 - 12/31	1.88 CFS 3/1 7/1; 0.94 CFS 7/1 10/1; 187.5 AF TOTAL
1477		N	1/1 - 12/31	0.55 CFS 3/1 7/1; 0.28 CFS 7/1 10/1; 55 AF TOTAL
1481		N	1/1 - 12/31	0.5 CFS 3/1 7/1; 0.25 CFS 7/1 10/1; 50 AF TOTAL
1481		N	1/1 - 12/31	1.8 CFS 3/1 7/1 ; 0.9 CFS 7/1 10/1; 180 AF TOTAL
1482		N	1/1 - 12/31	0.88 CFS 3/1 7/1; 0.44 CFS 7/1 10/1; 87.5 AF TOTAL
1488		N	1/1 - 12/31	0.55 CFS 3/1 7/1; 0.28 CFS 7/1 10/1; 55 AF TOTAL
1502		N	1/1 - 12/31	1.03C FM3/1 7/1; 0.63 C FM 7/1 10/1; 25 AF TOTAL
1502		N	1/1 - 12/31	1.03C FM3/1 7/1; 0.63 C FM 7/1 10/1; 100 AF TOTAL
1510		N	1/1 - 12/31	2.5 CFS 3/1 7/1; 1.25 CFS THEREAFTER; 250 AF TOTAL
1510		N	1/1 - 12/31	2.5 CFS 3/1 7/1; 1.25 CFS THEREAFTER; 250 AF TOTAL
1513		N	1/1 - 12/31	0.35 CFS 3/1 10/1; 0.18 CFS THEREAFTER; 35 AF TOTAL
13548		N	1/1 - 12/31	
38007		N	1/1 - 12/31	
38010		N	1/1 - 12/31	
48923	25	N	1/1 - 12/31	.25 CFS 3/1 TO 7/1; .13 CFS 7/1 TO 10/1; 25 AF
48929		N	1/1 - 12/31	
54981		N	1/1 - 12/31	
60482		N	1/1 - 12/31	
62314		N	1/1 - 12/31	7/1-10/1
62314		N	1/1 - 12/31	7/1-10/1
62315		N	1/1 - 12/31	3/1 TO 7/1
62316		N	1/1 - 12/31	3/1 TO 7/1
67251		N	1/1 - 12/31	3/1-7/1; NOT TO EXCEED 108.0 AF
67251		N	1/1 - 12/31	7/1-10/1; NOT TO EXCEED 108.0 AF
67251		N	1/1 - 12/31	3/1-7/1; NOT TO EXCEED 108.0 AF
67251		N	1/1 - 12/31	7/1-10/1; NOT TO EXCEED 108.0 AF
72285		N	1/1 - 12/31	3/1 7/1; 1.06 CFS 7/1 10/31; 211.0 AF
72287		N	1/1 - 12/31	
72289		N	1/1 - 12/31	3/1 7/1; 1.9 CFS 7/1 10.1; 380 AF
72289		N	1/1 - 12/31	3/1 7/1; 1.9 CFS 7/1 10.1; 380 AF
72290		N	1/1 - 12/31	3/1 7/1; 1.11 CFS 7/1 10/1; 221.5 AF

Certificate	Condition Code
49228	
49228	
73735	
73735	
73735	
73735	
38011	
49148	
49148	
38010	
38010	
8654	
49088	
67151	
1450	
1450	
1466	
1470	
1477	
1477	
1481	
1481	
1482	
1488	
1502	
1502	
1510	
1510	
1513	
13548	
38007	
38010	
48923	
48929	
54981	
60482	
62314	
62314	
62315	
62316	
67251	
67251	
67251	
67251	
72285	
72287	
72289	
72289	
72290	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
72290			N Powder R		1884	1	Robert & Caron Stephens	71685
72291			N Powder R		1877	1	Robert & Caron Stephens	71685
72292			N Powder R		1898	1	Bill & Beverly Loennig	71685
73997			N Powder R		1879	1	William & Lorene Dyke	71685
73998			N Powder R		1877	1	William & Lorene Dyke	71685
73998			N Powder R		1877	1	William & Lorene Dyke	71685
73998			N Powder R		1879	1	William & Lorene Dyke	71685
73998			N Powder R		1879	1	William & Lorene Dyke	71685
73998			N Powder R		1880	1	William & Lorene Dyke	71685
73998			N Powder R		1880	1	William & Lorene Dyke	71685
73998			N Powder R		1896	1	William & Lorene Dyke	71685
73998			N Powder R		1896	1	William & Lorene Dyke	71685
73998			N Powder R		1905	1	William & Lorene Dyke	71685
73998			N Powder R		1905	1	William & Lorene Dyke	71685
				T 3889	1879	3	J H Hutchinson, Ernest Kirkland, Francis Dobbin	71685
				T 5937	1878	2	Kenneth B & Joann Boyer	71685
62314			N Powder R		1874	3	D Joan Fowler	71685
62315			N Powder R		1876	2	Diane Getchell	71685
62316			N Powder R	T 6003	1876	2	James F & Mary P Shasky	71685
66001	S 48282				1983	1	Alan Maxwell	71685
67251			N Powder R	T 6635	1887	1	E H Pratt	71685
67251			N Powder R	T 6635	1887	1	E H Pratt	71685
67251			N Powder R	T 6635	1904	1	E H Pratt	71685
67251			N Powder R	T 6635	1904	1	E H Pratt	71685
1452			N Powder R		1900	1	J E Burnside	71685
1487			N Powder R		1897	1	C L Kent	71685
1489			N Powder R		1897	1	A Long	71685
1519			N Powder R		1900	1	James R Warfield	71685
1520			N Powder R		1900	1	Elmer Warfield	71685
1522			N Powder R		1894	1	Edward W Warfield	71685
1522			N Powder R		1906	1	Edward W Warfield	71685
2215	S 2889				1916	1	George W Pratt	71685
2390	S 3142				1916	1	Clayton Coleman	71685
13545			N Powder R	W 15	1893	1	Clayton Coleman	71685
45456			N Powder R	T 3853	1886	1	Lucinda Hartung	71685
45456			N Powder R	T 3853	1898	1	Lucinda Hartung	71685
55558			N Powder R	T 5102	1889	1	Bill Loenning	71685
55558			N Powder R	T 5102	1889	1	Bill Loenning	71685
55559			N Powder R	T 5130	1893	1	Peter W Schoeningh Jr & William B Schoeningh	71685
55559			N Powder R	T 5130	1904	1	Peter W Schoeningh Jr & William B Schoeningh	71685
55560			N Powder R	T 5223	1893	1	Jack A McGoldrick	71685
55560			N Powder R	T 5223	1904	1	Jack A McGoldrick	71685
55562			N Powder R	T 5224	1904	1	Carl/Barbara J Wendt	71685
56479			N Powder R	T 5281	1907	1	Ferdinand Boesch	71685
58943			N Powder R	T 5169	1889	1	James F & Mary Shasky	71685
58943			N Powder R	T 5169	1889	1	James F & Mary Shasky	71685
60619	S 43215				1978	1	Ronald D Perkins	71685
64971			N Powder R		1905	6	Charles E Hutchinson, Estate of L S Kelsey	71685
68613	S 45216				1979	1	Gerald O Maxwell, Maxwell Ranch	71685

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
72290	N POWDER R	07.00S38.00E-18-SWSE	IL	2.22	1.11	Y	
72291	N POWDER R	07.00S38.00E-18-SWSE	IL	0.14	0.14	N	
72292	N POWDER R	07.00S38.00E-18-SWSE	IL	1.18	1.18	N	
73997	N POWDER R	07.00S38.00E-18-SWSE	IR	0.45	0.45	N	
73998	N POWDER R	07.00S38.00E-18-SWSE	ID	1.00	1.00	N	
73998	N POWDER R	07.00S38.00E-18-SWSE	ID	1.37	1.37	N	
73998	N POWDER R	07.00S38.00E-18-SWSE	IR	3.90	3.90	N	
73998	N POWDER R	07.00S38.00E-18-SWSE	IR	3.90	3.90	N	
73998	N POWDER R	07.00S38.00E-18-SWSE	IL	0.88	0.88	N	
73998	N POWDER R	07.00S38.00E-18-SWSE	IL	0.97	0.97	N	
73998	N POWDER R	07.00S38.00E-18-SWSE	AG	0.29	0.29	N	
73998	N POWDER R	07.00S38.00E-18-SWSE	IL	0.34	0.34	N	
73998	N POWDER R	07.00S38.00E-18-SWSE	IR	0.12	0.12	N	
73998	N POWDER R	07.00S38.00E-18-SWSE	IR	0.13	0.13	N	
	N POWDER R	07.00S38.00E-18-SWSE	I*	4.18	4.18	N	
	N POWDER R	07.00S38.00E-18-SWSE	IR	1.66	0.00	Y	
62314	N POWDER R	07.00S38.00E-19-NESW	IL	1.50	0.00	Y	
62315	N POWDER R	07.00S38.00E-19-NESW	IL	3.43	0.00	Y	
62316	N POWDER R	07.00S38.00E-19-NESW	IL	2.49	0.00	Y	
66001	N POWDER R	07.00S38.00E-19-NESW	IS	2.00	2.00	N	
67251	N POWDER R	07.00S38.00E-19-NESW	I*	0.54	0.00	Y	
67251	N POWDER R	07.00S38.00E-19-NESW	I*	1.08	1.08	N	
67251	N POWDER R	07.00S38.00E-19-NESW	I*	0.54	0.00	Y	
67251	N POWDER R	07.00S38.00E-19-NESW	I*	0.54	0.54	N	
1452	N POWDER R	07.00S38.00E-19-SESW	IR	1.00	1.00	N	
1487	N POWDER R	07.00S38.00E-19-SESW	IR	3.75	3.75	N	
1489	N POWDER R	07.00S38.00E-19-SESW	IR	0.75	0.75	N	
1519	N POWDER R	07.00S38.00E-19-SESW	IR	1.00	1.00	N	
1520	N POWDER R	07.00S38.00E-19-SESW	IR	1.00	1.00	N	
1522	N POWDER R	07.00S38.00E-19-SESW	IR	0.25	0.25	N	
1522	N POWDER R	07.00S38.00E-19-SESW	IR	0.40	0.40	N	
2215	N POWDER R	07.00S38.00E-19-SESW	IR	0.49	0.49	N	
2390	N POWDER R	07.00S38.00E-19-SESW	IR	1.13	1.13	N	
13545	N POWDER R	07.00S38.00E-19-SESW	IR	1.73	1.73	N	
45456	N POWDER R	07.00S38.00E-19-SESW	IR	0.50	0.50	N	
45456	N POWDER R	07.00S38.00E-19-SESW	IR	0.50	0.50	N	
55558	N POWDER R	07.00S38.00E-19-SESW	IL	0.70	0.70	N	
55558	N POWDER R	07.00S38.00E-19-SESW	IL	1.05	1.05	N	
55559	N POWDER R	07.00S38.00E-19-SESW	IL	5.89	5.89	N	
55559	N POWDER R	07.00S38.00E-19-SESW	IL	5.89	0.00	Y	
55560	N POWDER R	07.00S38.00E-19-SESW	IL	0.38	0.38	N	
55560	N POWDER R	07.00S38.00E-19-SESW	IL	0.38	0.00	Y	
55562	N POWDER R	07.00S38.00E-19-SESW	IR	10.95	10.95	N	
56479	N POWDER R	07.00S38.00E-19-SESW	IR	0.39	0.39	N	
58943	N POWDER R	07.00S38.00E-19-SESW	IL	1.64	1.64	N	
58943	N POWDER R	07.00S38.00E-19-SESW	IL	4.07	4.07	N	
60619	N POWDER R	07.00S38.00E-19-SESW	IR	0.80	0.80	N	
64971	N POWDER R	07.00S38.00E-19-SESW	IR	9.75	9.75	N	
68613	N POWDER R	07.00S38.00E-19-SESW	IS	4.00	4.00	N	

Certificate	ACF	ACF Estimated	Season	Remarks
72290		N	1/1 - 12/31	3/1 7/1; 1.11 CFS 7/1 10/1; 221.5 AF
72291		N	1/1 - 12/31	3/1 7/1; 0.1 CFS 7/1 10/1; 20.0 AF
72292		N	1/1 - 12/31	3/1 7/1; 0.59 CFS 7/1 10/31; 117.5 AF
73997		N	1/1 - 12/31	3/1 10/1
73998		N	7/1 - 10/1	
73998		N	3/1 - 7/1	
73998		N	3/1 - 7/1	
73998		N	7/1 - 10/1	
73998		N	7/1 - 10/1	
73998		N	3/1 - 7/1	
73998		N	7/1 - 10/1	
73998		N	3/1 - 7/1	
73998		N	7/1 - 10/1	
73998		N	3/1 - 7/1	
		N	1/1 - 12/31	4.18 CFS FM 3/1 7/1; 4.18 TIL 10/1; 367.5 ACRES
		N	1/1 - 12/31	1.66 CFS 3/1 7/1;0.83 CFS 7/1 10/1;166 AF TOTAL
62314		N	1/1 - 12/31	1.5 CFS 3/1-7/1; 1/80 2.5; 0.75 CFS 7/1-10/1
62315		N	1/1 - 12/31	3.43 CFS 3/1 TO 7/1;1/80 2.5 AF 1.72 CFS 7/1 TO 10/1
62316		N	1/1 - 12/31	2.488 CFS 3/1 TO 7/1;1/80 2.5 AF 1.244 CFS 7/1 TO 10/1
66001		N	1/1 - 12/31	
67251		N	1/1 - 12/31	3/1-7/1; NOT TO EXCEED 108.0 AF
67251		N	1/1 - 12/31	3/1-7/1; NOT TO EXCEED 108.0 AF
67251		N	1/1 - 12/31	7/1-10/1; NOT TO EXCEED 108.0 AF
67251		N	1/1 - 12/31	7/1-10/1; NOT TO EXCEED 108.0 AF
1452		N	1/1 - 12/31	0.14 CFS 3/1 7/1; 0.07 CFS 7/1 10/1; 35 AF TOTAL
1487		N	1/1 - 12/31	3.75 CFS 3/1 7/1; 1.88 CFS 7/1 10/1; 375 AF TOTAL
1489		N	1/1 - 12/31	0.75 CFS 3/1 7/1; 0.38 CFS 7/1 10/L; 75 AF TOTAL
1519		N	1/1 - 12/31	0.59 CFS 3/ 7/1; 0.3 CFS 7/1 10/1; 59 AF TOTAL
1520		N	1/1 - 12/31	0.04 CFS 3/1 7/1; 0.2 CFS 7/1 10/1; 40 AF TOTAL
1522		N	1/1 - 12/31	0.25 CFS 3/1 7/1; 0.13 CFS 7/1 10/1; 25 AF TOTAL
1522		N	1/1 - 12/31	0.4 CFS 31/ 7/1; 0.2 CFS 7/1 10/1; 40 AF TOTAL
2215		N	1/1 - 12/31	
2390		N	1/1 - 12/31	
13545		N	1/1 - 12/31	1.73 CFS 3/1 7/1; 0.86 CFS 7/1 10/1; NOT TO EXCEED 173 AF
45456		N	1/1 - 12/31	1 CFS 3/1 TO 7/1; .05 CFS 7/1 TO 10/1; TOTAL 100 AF
45456		N	1/1 - 12/31	1 CFS 3/1 TO 7/1; .05 CFS 7/1 TO 10/1; TOTAL 100 AF
55558		N	1/1 - 12/31	7/1 10/1
55558		N	1/1 - 12/31	3/1 7/1
55559		N	1/1 - 12/31	3.93CFS 3/1-7/1; 1.96CFS 7/1-10/1; NOT TO EXCEED 393AF
55559		N	1/1 - 12/31	3.93CFS 3/1-7/1; 1.96CFS 7/1-10/1; NOT TO EXCEED 393AF
55560		N	1/1 - 12/31	.25CFS 3/1-7/1; .13CFS 7/1-10/1; NOT TO EXCEED 25AF
55560		N	1/1 - 12/31	.25CFS 3/1-7/1; .13CFS 7/1-10/1; NOT TO EXCEED 25AF
55562		N	1/1 - 12/31	7.3 CFS 3/1-7/1; 3.65 CFS 7/1-10/1; NOT TO EXCEED 730AF
56479		N	1/1 - 12/31	1CFS 3/1-7/1; .39CFS 7/1-10/1; NOT TO EXCEED 78AF
58943		N	1/1 - 12/31	7/1 10/1
58943		N	1/1 - 12/31	3/1 7/1
60619		N	1/1 - 12/31	
64971		N	1/1 - 12/31	390.32.02 CFS 3/1 7/1;16.01 CFS 7/1 10/1;2538.5 AF TOTAL
68613		N	1/1 - 12/31	

Certificate	Condition Code
72290	
72291	
72292	
73997	
73998	
73998	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
72204			N Powder R		1894	1	Kenneth & Joann Boyer	71685
72204			N Powder R		1894	1	Kenneth & Joann Boyer	71685
75515	S 2890				1916	1	Tommy Duncan	71685
62314			N Powder R		1874	2	D Joan Fowler	71685
				T 5937	1878	1	Kenneth B & Joann Boyer	71685
10822	S 10989				1932	4	Charles A Spearman	71685
10822	S 10989				1932	4	Charles A Spearman	72191
10822	S 10989				1932	5	Charles A Spearman	71685
10822	S 10989				1932	2	Charles A Spearman	71685
10822	S 10989				1932	2	Charles A Spearman	72191
10822	S 10989				1932	3	Charles A Spearman	71685
10822	S 10989				1932	3	Charles A Spearman	72191
10822	S 10989				1932	1	Charles A Spearman	71685
10822	S 10989				1932	1	Charles A Spearman	72191
62270	S 42124				1977	2	James R & Kristina Edwards	72191
69256					1993	1	Diane R Getchell	72191
62270	S 42124				1977	1	James R & Kristina Edwards	72191
60517	S 46385				1982	1	Josephine J Jensen	72191
2390	S 3142				1916	2	Clayton Coleman	72191
54727	S 42037				1977	1	Josephine J Jensen	72191
7263	S 6226				1924	1	School District 17	72191
54727	S 42037				1977	2	Josephine J Jensen	72191
26541	S 9978				1930	1	Gerald Maxwell	72191
73611			Powder River	T 6074	1880	3	Powder Valley WCD	72191
73611			Powder River	T 6074	1891	3	Powder Valley WCD	72191
73611			Powder River	T 6074	1880	4	Powder Valley WCD	72191
73611			Powder River	T 6074	1891	4	Powder Valley WCD	72191
5167	S 6137				1923	1	Nancy A Maxwell	72191
28634	G 49				1955	1	Loring W Perkins	72191
	G 13738				1994	2	Douglas J & Elsie D Newman	72191
73826					1993	1	Edward W & Kathleen Warfield	72191
4198			Powder River		1887	2	A J Hartung	72191
	G 13738				1994	1	Douglas J & Elsie D Newman	72191
	S 48341				1983	1	Tommy L Duncan, Richard Camp	72191
	S 48341				1983	2	Tommy L Duncan, Richard Camp	72191
73622			Powder R, Consol		1874	2	Thomas Brock	71685
73622			Powder R, Consol		1874	2	Thomas Brock	72191
73622			Powder R, Consol		1865	1	Thomas Brock	72191
7775	S 5547				1922	1	J W Bush	72194
				T 3688	1868	1	Pearl L Steward	72194
				T 3688	1882	1	Pearl L Steward	72194
7795	S 6678				1924	1	W A Green	72194
72619			N Powder R		1899	4	Kerns Bros Inc	72194
72623			Powder River		1899	1	Wilson Ditch Co, Brad Allen	72194
74032			Powder River		1878	1	Douglas Newman	72194
74032			Powder River		1886	1	Douglas Newman	72194
74032			Powder River		1891	1	Douglas Newman	72194
				T 3688	1904	2	Pearl L Steward	72194
				T 7155	1868	2	James E Kerns	72194

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
72204	N POWDER R	07.00S38.00E-19-SESW	I*	0.50	0.50	N	
72204	N POWDER R	07.00S38.00E-19-SESW	I*	0.75	0.75	N	
75515	N POWDER R	07.00S38.00E-19-SESW	IR	0.43	0.43	N	
62314	N POWDER R	07.00S38.00E-19-SWNE	IL	1.50	0.00	Y	
	N POWDER R	07.00S38.00E-19-SWNE	IR	1.66	1.66	N	
10822	SPRS 6,7,8	07.00S38.00E-20-NENW	IR	0.75	0.00	Y	
10822	SPRS 6,7,8	07.00S38.00E-20-NENW	IR	0.75	0.00	Y	
10822	SPRS 6,7,8	07.00S38.00E-20-NWNW	IR	0.75	0.00	Y	
10822	SPR 7	07.00S38.00E-20-SENW	IR	0.75	0.00	Y	
10822	SPR 7	07.00S38.00E-20-SENW	IR	0.75	0.00	Y	
10822	SPR 8	07.00S38.00E-20-SENW	IR	0.75	0.00	Y	
10822	SPR 8	07.00S38.00E-20-SENW	IR	0.75	0.00	Y	
10822	SPR 6	07.00S38.00E-20-SWNW	IR	0.75	0.75	N	
10822	SPR 6	07.00S38.00E-20-SWNW	IR	0.75	0.75	N	
62270	UNN STR	07.00S38.00E-21-NENW	IR	0.18	0.18	N	
69256	LITTLE MUDDY CR	07.00S38.00E-21-NESW	LV	0.00	0.00	N	1
62270	A SPR	07.00S38.00E-21-NWNW	IR	0.20	0.20	N	
60517	WASTE WATER	07.00S38.00E-22-NWNE	IS	2.20	2.20	N	
2390	N POWDER R	07.00S38.00E-22-SENE	IR	1.13	0.00	Y	
54727	LITTLE MUDDY CR	07.00S38.00E-22-SWNE	IS	0.87	0.87	N	
7263	UNN SPR	07.00S38.00E-22-SWNW	ID	0.13	0.13	N	
54727	UNN SL	07.00S38.00E-23-NENW	IS	0.28	0.28	N	
26541	LITTLE MUDDY CR	07.00S38.00E-24-NENE	IS	0.11	0.11	N	
73611	BIG MUDDY CR	07.00S38.00E-24-NESW	IR	5.00	0.00	Y	
73611	BIG MUDDY CR	07.00S38.00E-24-NESW	IR	5.00	0.00	Y	
73611	LITTLE MUDDY CR	07.00S38.00E-24-SENW	IR	5.00	0.00	Y	
73611	LITTLE MUDDY CR	07.00S38.00E-24-SENW	IR	5.00	0.00	Y	
5167	SPRS	07.00S38.00E-24-SWSE	I*	0.50	0.50	N	
28634	PERKINS WELL	07.00S38.00E-25-NENE	IS	1.40	1.40	N	
	WELL 2	07.00S38.00E-26-NWNW	IS	2.25	2.25	N	
73826	ROCK CR/RES	07.00S38.00E-26-SWSE	IL	0.00	0.00	N	1.84
4198	KILLAMACUE RS	07.00S38.00E-26-SWSW	ST	4.00	0.00	Y	
	WELL 1	07.00S38.00E-27-NESE	IS	2.25	2.25	N	
	BIG MUDDY CR	07.00S38.00E-28-SWNW	IC	0.43	0.43	N	
	KILMERQUE CR	07.00S38.00E-28-SWNW	IC	0.43	0.00	Y	
73622	SAND CR	07.00S38.00E-31-NWNW	IR	11.30	1.00	N	
73622	SAND CR	07.00S38.00E-31-NWNW	IR	11.30	1.00	N	
73622	ROCK CR	07.00S38.00E-32-NWSW	IR	11.30	0.98	N	
7775	ROCK CR	07.00S38.00E-33-NESE	IR	1.25	1.25	N	
	ROCK CR	07.00S38.00E-33-NESE	IR	1.00	1.00	N	
	ROCK CR	07.00S38.00E-33-NESE	IR	0.58	0.58	N	
7795	ROCK CR	07.00S38.00E-33-NWSE	IR	0.75	0.75	N	
72619	ROCK CR	07.00S38.00E-33-NWSE	IR	0.62	0.00	Y	
72623	ROCK CR	07.00S38.00E-33-NWSE	IR	34.18	34.18	N	
74032	ROCK CR	07.00S38.00E-33-NWSE	IR	0.70	0.70	N	
74032	ROCK CR	07.00S38.00E-33-NWSE	IR	3.30	3.30	N	
74032	ROCK CR	07.00S38.00E-33-NWSE	IR	2.03	2.03	N	
	ROCK CR	07.00S38.00E-33-NWSE	IR	0.30	0.30	N	
	ROCK CR	07.00S38.00E-33-NWSE	IR	0.50	0.00	Y	

Certificate	ACF	ACF Estimated	Season	Remarks
72204		N	1/1 - 12/31	3/1 7/1
72204		N	1/1 - 12/31	7/1 10/1
75515		N	1/1 - 12/31	
62314		N	1/1 - 12/31	1.5 CFS 3/1-7/1; 1/80 2.5; 0.75 CFS 7/1-10/1
		N	1/1 - 12/31	1.66 CFS 3/1 7/1;0.83 CFS 7/1 10/1;DIV LMT QUAN AVAIL ORIG POD
10822		N	1/1 - 12/31	3/1-7/1; 1/80, 7/1-10/1
10822		N	1/1 - 12/31	3/1-7/1; 1/80, 7/1-10/1
10822		N	1/1 - 12/31	3/1-7/1; 1/80, 7/1-10/1
10822		N	1/1 - 12/31	3/17/1; 1/80, 7/1 10/1
10822		N	1/1 - 12/31	3/17/1; 1/80, 7/1 10/1
10822		N	1/1 - 12/31	3/17/1; 1/80, 7/1 10/1
10822		N	1/1 - 12/31	3/17/1; 1/80, 7/1 10/1
10822		N	1/1 - 12/31	3/17/1; 1/80, 7/1 10/1
10822		N	1/1 - 12/31	3/17/1; 1/80, 7/1 10/1
62270		N	1/1 - 12/31	
69256	1	N	1/1 - 12/31	
62270		N	1/1 - 12/31	
60517		N	1/1 - 12/31	
2390		N	1/1 - 12/31	
54727		N	1/1 - 12/31	
7263		N	1/1 - 12/31	
54727		N	1/1 - 12/31	
26541		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
5167		N	1/1 - 12/31	
28634		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
73826	1.84	N	1/1 - 12/31	
4198		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	
		N	1/1 - 12/31	
73622		N	1/1 - 12/31	40.0 ACRES
73622		N	1/1 - 12/31	40.0 ACRES
73622		N	1/1 - 12/31	39.1 ACRES
7775		N	1/1 - 12/31	
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
7795		N	1/1 - 12/31	
72619		N	1/1 - 12/31	
72623		N	1/1 - 12/31	
74032		N	1/1 - 12/31	28.0 ACRES
74032		N	1/1 - 12/31	132 ACRES
74032		N	1/1 - 12/31	81.33 ACRES
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD

Certificate	Condition Code
72204	
72204	
75515	
62314	
10822	
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62270	
69256	
62270	
60517	
2390	
54727	
7263	
54727	
26541	
73611	
73611	
73611	
73611	
5167	
28634	
73826	
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7795	
72619	
72623	
74032	
74032	
74032	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
				T 7155	1868	2	James E Kerns	72194
				T 7155	1882	1	James E Kerns	72194
46113	G 3662				1967	1	M Grant Lindsay	72191
46113	G 3662				1967	1	M Grant Lindsay	72194
72217			Powder River	T 6232	1868	1	Martha Jane Jacobs	72194
73401			Powder River	T 6285	1888	1	Powder Valley WCD	72194
73402			Powder River	T 6285	1889	1	Powder Valley WCD	72194
73404			Powder River	T 6074	1880	1	Powder Valley WCD	72194
73404			Powder River	T 6074	1886	1	Powder Valley WCD	72194
73404			Powder River	T 6074	1891	1	Powder Valley WCD	72194
73404			Powder River	T 6074	1892	1	Powder Valley WCD	72194
73411			Powder River	T 6074	1880	1	Powder Valley WCD	72194
73412			Powder River	T 6286	1872	1	Powder Valley WCD	72194
73412			Powder River	T 6286	1879	1	Powder Valley WCD	72194
73611			Powder River	T 6074	1880	1	Powder Valley WCD	72194
73611			Powder River	T 6074	1891	1	Powder Valley WCD	72194
74064			Powder River	T 8505	1868	2	Tim & Jan Kerns	72194
74064			Powder River	T 8505	1890	2	Tim & Jan Kerns	72194
76596			Powder River	T 6234	1883	1	Powder Valley WCD	72194
79012			Powder River	T 8755	1886	1	B R Angell	72194
				T 6285	1888	2	Powder Valley WCD	72194
				T 6186	1868	1	Tim L & Janice L Kerns	72194
51498			Powder River		1894	1	Francis B Zimmerman	72194
51498			Powder River		1894	1	Francis B Zimmerman	3.1E+07
57740			Powder River	T 5181	1894	1	Francis B Zimmerman	72194
57740			Powder River	T 5181	1894	1	Francis B Zimmerman	3.1E+07
3998			Powder River	T 8206	1868	1	Clark Benson	72194
3998			Powder River	T 8206	1898	1	Clark Benson	72194
57739			Powder River	T 5181	1879	1	Francis B Zimmerman	72194
74064			Powder River	T 8505	1868	1	Tim & Jan Kerns	72194
74064			Powder River	T 8505	1890	1	Tim & Jan Kerns	72194
74069			Powder River	T 7916	1868	2	Tim & Jan Kerns	72194
74069			Powder River	T 7916	1868	2	Tim & Jan Kerns	72194
74069			Powder River	T 7916	1894	2	Tim & Jan Kerns	72194
				T 6186	1868	2	Tim L & Janice L Kerns	72194
3977			Powder River		1891	4	William J Ashwood	72194
3977			Powder River		1892	5	William J Ashwood	72194
4061			Powder River		1898	1	Wm N Chambers	72194
54107			Powder River	T 3925	1880	1	Donald Stephens	72194
54107			Powder River	T 3925	1880	2	Donald Stephens	72194
54108			Powder River	T 3924	1883	1	Donald Stephens	72194
54108			Powder River	T 3924	1894	1	Donald Stephens	72194
54108			Powder River	T 3924	1897	1	Donald Stephens	72194
72350			Powder River		1879	1	Dennis Spence	72194
73412			Powder River	T 6286	1872	3	Powder Valley WCD	72194
73412			Powder River	T 6286	1879	3	Powder Valley WCD	72194
76253			Powder River		1880	2	Hellen G Fisher, c/o Richard D Stephens	72194
				T 7155	1882	2	James E Kerns	72194
51174	S 40029				1975	1	William W Derrick	72194

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
	ROCK CR	07.00S38.00E-33-NWSE	IR	0.25	0.00	Y	
	ROCK CR	07.00S38.00E-33-NWSE	IR	0.75	0.75	N	
46113	A SUMP	07.00S38.00E-34-NENE	IS	0.75	0.75	N	
46113	A SUMP	07.00S38.00E-34-NENE	IS	0.75	0.75	N	
72217	ROCK CR	07.00S38.00E-34-NESW	IR	0.40	0.40	N	
73401	ROCK CR	07.00S38.00E-34-NESW	IR	9.80	9.80	N	
73402	ROCK CR	07.00S38.00E-34-NESW	IR	3.00	3.00	N	
73404	ROCK CR	07.00S38.00E-34-NESW	IR	18.00	18.00	N	
73404	ROCK CR	07.00S38.00E-34-NESW	IR	18.00	0.00	Y	
73404	ROCK CR	07.00S38.00E-34-NESW	IR	18.00	0.00	Y	
73404	ROCK CR	07.00S38.00E-34-NESW	IR	18.00	0.00	Y	
73411	ROCK CR	07.00S38.00E-34-NESW	IR	6.00	6.00	N	
73412	ROCK CR	07.00S38.00E-34-NESW	IR	7.00	7.00	N	
73412	ROCK CR	07.00S38.00E-34-NESW	IR	7.00	0.00	Y	
73611	ROCK CR	07.00S38.00E-34-NESW	IR	5.00	5.00	N	
73611	ROCK CR	07.00S38.00E-34-NESW	IR	5.00	0.00	Y	
74064	ROCK CR	07.00S38.00E-34-NESW	IR	0.40	0.00	Y	
74064	ROCK CR	07.00S38.00E-34-NESW	IR	0.40	0.00	Y	
76596	ROCK CR	07.00S38.00E-34-NESW	IR	7.00	7.00	N	
79012	ROCK CR	07.00S38.00E-34-NESW	IR	2.96	2.96	N	
	ROCK CR	07.00S38.00E-34-NESW	IR	9.80	0.00	Y	
	ROCK CR	07.00S38.00E-34-NESW	IR	0.48	0.48	N	
51498	ROCK CR	07.00S38.00E-34-NWSE	IR	0.50	0.50	N	
51498	ROCK CR	07.00S38.00E-34-NWSE	IR	0.50	0.50	N	
57740	ROCK CR	07.00S38.00E-34-NWSE	IR	0.50	0.50	N	
57740	ROCK CR	07.00S38.00E-34-NWSE	IR	0.50	0.50	N	
3998	ROCK CR	07.00S38.00E-34-NWSW	IR	0.75	0.75	N	
3998	ROCK CR	07.00S38.00E-34-NWSW	IR	1.25	1.25	N	
57739	ROCK CR	07.00S38.00E-34-NWSW	IR	0.50	0.50	N	
74064	ROCK CR	07.00S38.00E-34-NWSW	IR	1.00	1.00	N	
74064	ROCK CR	07.00S38.00E-34-NWSW	IR	0.40	0.40	N	
74069	ROCK CR	07.00S38.00E-34-NWSW	IR	2.00	2.00	N	
74069	ROCK CR	07.00S38.00E-34-NWSW	IS	2.00	0.00	Y	
74069	ROCK CR	07.00S38.00E-34-NWSW	IR	2.00	2.00	N	
	ROCK CR	07.00S38.00E-34-NWSW	IR	0.48	0.00	Y	
3977	ROCK CR	07.00S38.00E-34-SENE	IR	2.85	2.85	N	
3977	ROCK CR	07.00S38.00E-34-SENE	IR	0.85	0.85	N	
4061	ROCK CR	07.00S38.00E-34-SENE	IR	1.00	1.00	N	
54107	ROCK CR	07.00S38.00E-34-SENE	IR	3.28	3.28	N	
54107	ROCK CR	07.00S38.00E-34-SENE	IR	3.28	0.00	Y	
54108	ROCK CR	07.00S38.00E-34-SENE	IR	1.97	1.97	N	
54108	ROCK CR	07.00S38.00E-34-SENE	IR	1.97	1.97	N	
54108	ROCK CR	07.00S38.00E-34-SENE	IR	1.97	1.97	N	
72350	ROCK CR	07.00S38.00E-34-SENE	IR	0.95	0.95	N	
73412	ROCK CR	07.00S38.00E-34-SENE	IR	7.00	0.00	Y	
73412	ROCK CR	07.00S38.00E-34-SENE	IR	7.00	0.00	Y	
76253	ROCK CR	07.00S38.00E-34-SENE	IR	2.00	0.00	Y	
	ROCK CR	07.00S38.00E-34-SENW	IR	0.75	0.75	N	
51174	UNN STR	07.00S38.00E-34-SWNE	IS	0.27	0.27	N	

Certificate	ACF	ACF Estimated	Season	Remarks
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
46113		N	1/1 - 12/31	
46113		N	1/1 - 12/31	
72217		N	1/1 - 12/31	HUNSTOCK AND MEYERS DITCH
73401		N	1/1 - 12/31	
73402		N	1/1 - 12/31	
73404		N	1/1 - 12/31	
73404		N	1/1 - 12/31	
73404		N	1/1 - 12/31	
73404		N	1/1 - 12/31	
73411		N	1/1 - 12/31	
73412		N	1/1 - 12/31	
73412		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
74064		N	1/1 - 12/31	40.0 ACRES; TRACT 1
74064		N	1/1 - 12/31	16.0 ACRES; TRACT 2
76596		N	1/1 - 12/31	
79012		N	1/1 - 12/31	
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
51498		N	1/1 - 12/31	
51498		N	1/1 - 12/31	
57740		N	1/1 - 12/31	
57740		N	1/1 - 12/31	
3998		N	1/1 - 12/31	
3998		N	1/1 - 12/31	
57739		N	1/1 - 12/31	
74064		N	1/1 - 12/31	40.0 ACRES; TRACT 1
74064		N	1/1 - 12/31	16.0 ACRES; TRACT 2
74069		N	1/1 - 12/31	TRACT 2; 80.0 ACRES
74069		N	1/1 - 12/31	TRACT 4; 100.0 ACRES
74069		N	1/1 - 12/31	TRACT 2; 80.0 ACRES
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
3977		N	1/1 - 12/31	
3977		N	1/1 - 12/31	
4061		N	1/1 - 12/31	
54107		N	1/1 - 12/31	
54107		N	1/1 - 12/31	
54108		N	1/1 - 12/31	23AC
54108		N	1/1 - 12/31	18AC
54108		N	1/1 - 12/31	9.4AC
72350		N	1/1 - 12/31	
73412		N	1/1 - 12/31	
73412		N	1/1 - 12/31	
76253		N	1/1 - 12/31	IF AVAILABLE AT AUTHORIZED POD
		N	1/1 - 12/31	
51174		N	1/1 - 12/31	

Certificate	Condition Code
46113	
46113	
72217	
73401	
73402	
73404	
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74064	
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76596	
79012	
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57740	
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54107	
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72350	
73412	
73412	
76253	
51174	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
72229			Powder River		1906	1	Rock Creek Milling Co	72194
73412			Powder River	T 6286	1872	2	Powder Valley WCD	72194
73412			Powder River	T 6286	1879	2	Powder Valley WCD	72194
74033			Powder River	T 7155	1882	1	Fred Screeck	72194
				T 7155	1868	1	James E Kerns	72194
				T 7155	1868	1	James E Kerns	72194
54107			Powder River	T 3925	1880	3	Donald Stephens	72194
4053			Powder River		1884	1	D M Cartmill	3.1E+07
4053			Powder River		1893	1	D M Cartmill	3.1E+07
4053			Powder River		1901	1	D M Cartmill	3.1E+07
54068	G 6408				1975	1	Robert D Stephens	72191
54068	G 6408				1975	1	Robert D Stephens	72194
3977			Powder River		1895	3	William J Ashwood	72194
3977			Powder River		1895	3	William J Ashwood	3.1E+07
3978			Powder River		1892	1	Johnnie Ashworth	72194
3978			Powder River		1892	1	Johnnie Ashworth	3.1E+07
4077			Powder River		1891	1	Clara Collins	72194
4077			Powder River		1891	1	Clara Collins	3.1E+07
48424			Powder River	C 174	1891	1	Donald William Christy	72194
48424			Powder River	C 174	1891	1	Donald William Christy	3.1E+07
4076			Powder River		1908	2	W M Coles	72191
4076			Powder River		1908	2	W M Coles	72194
4076			Powder River		1908	2	W M Coles	3.1E+07
73404			Powder River	T 6074	1886	2	Powder Valley WCD	72191
73404			Powder River	T 6074	1891	2	Powder Valley WCD	72191
73404			Powder River	T 6074	1892	2	Powder Valley WCD	72191
73404			Powder River	T 6074	1886	2	Powder Valley WCD	72194
73404			Powder River	T 6074	1891	2	Powder Valley WCD	72194
73404			Powder River	T 6074	1892	2	Powder Valley WCD	72194
73404			Powder River	T 6074	1886	2	Powder Valley WCD	3.1E+07
73404			Powder River	T 6074	1891	2	Powder Valley WCD	3.1E+07
73404			Powder River	T 6074	1892	2	Powder Valley WCD	3.1E+07
73404			Powder River	T 6074	1880	3	Powder Valley WCD	72191
73404			Powder River	T 6074	1886	3	Powder Valley WCD	72191
73404			Powder River	T 6074	1891	3	Powder Valley WCD	72191
73404			Powder River	T 6074	1892	3	Powder Valley WCD	72191
73404			Powder River	T 6074	1880	3	Powder Valley WCD	72194
73404			Powder River	T 6074	1886	3	Powder Valley WCD	72194
73404			Powder River	T 6074	1891	3	Powder Valley WCD	72194
73404			Powder River	T 6074	1892	3	Powder Valley WCD	72194
73404			Powder River	T 6074	1880	3	Powder Valley WCD	3.1E+07
73404			Powder River	T 6074	1886	3	Powder Valley WCD	3.1E+07
73404			Powder River	T 6074	1891	3	Powder Valley WCD	3.1E+07
73404			Powder River	T 6074	1892	3	Powder Valley WCD	3.1E+07
73411			Powder River	T 6074	1880	3	Powder Valley WCD	72191
73411			Powder River	T 6074	1880	3	Powder Valley WCD	72194
73411			Powder River	T 6074	1880	3	Powder Valley WCD	3.1E+07
73411			Powder River	T 6074	1880	2	Powder Valley WCD	72191
73411			Powder River	T 6074	1880	2	Powder Valley WCD	72194

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
72229	ROCK CR	07.00S38.00E-34-SWNE	IR	0.18	0.18	N	
73412	ROCK CR	07.00S38.00E-34-SWNE	IR	7.00	0.00	Y	
73412	ROCK CR	07.00S38.00E-34-SWNE	IR	7.00	0.00	Y	
74033	ROCK CR	07.00S38.00E-34-SWNE	IR	1.03	1.03	N	
	ROCK CR	07.00S38.00E-34-SWNE	IR	0.50	0.50	N	
	ROCK CR	07.00S38.00E-34-SWNE	IR	0.25	0.25	N	
54107	ROCK CR	07.00S38.00E-34-SWNW	IR	3.28	0.00	Y	
4053	ROCK CR	07.00S38.00E-35-NESW	IR	20.00	20.00	N	
4053	ROCK CR	07.00S38.00E-35-NESW	IR	20.00	20.00	N	
4053	ROCK CR	07.00S38.00E-35-NESW	IR	20.00	20.00	N	
54068	STEPHENS WELL	07.00S38.00E-35-NWNE	IS	1.23	1.23	N	
54068	STEPHENS WELL	07.00S38.00E-35-NWNE	IS	1.23	1.23	N	
3977	ROCK CR	07.00S38.00E-35-SENE	IR	0.75	0.75	N	
3977	ROCK CR	07.00S38.00E-35-SENE	IR	0.75	0.75	N	
3978	ROCK CR	07.00S38.00E-35-SENE	IR	4.00	4.00	N	
3978	ROCK CR	07.00S38.00E-35-SENE	IR	4.00	4.00	N	
4077	S FK ROCK CR	07.00S38.00E-35-SENE	IR	2.00	2.00	N	
4077	S FK ROCK CR	07.00S38.00E-35-SENE	IR	2.00	2.00	N	
48424	ROCK CR	07.00S38.00E-35-SENE	IR	0.13	0.13	N	
48424	ROCK CR	07.00S38.00E-35-SENE	IR	0.13	0.13	N	
4076	ROCK CR	07.00S38.00E-35-SENW	IR	0.80	0.80	N	
4076	ROCK CR	07.00S38.00E-35-SENW	IR	0.80	0.80	N	
4076	ROCK CR	07.00S38.00E-35-SENW	IR	0.80	0.80	N	
73404	BIG MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	BIG MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	BIG MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	BIG MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	BIG MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	BIG MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	BIG MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	BIG MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	BIG MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73404	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	18.00	0.00	Y	
73411	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	6.00	0.00	Y	
73411	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	6.00	0.00	Y	
73411	LITTLE MUDDY CR	07.00S38.00E-35-SENW	IR	6.00	0.00	Y	
73411	MUDDY CR	07.00S38.00E-35-SENW	IR	6.00	0.00	Y	
73411	MUDDY CR	07.00S38.00E-35-SENW	IR	6.00	0.00	Y	

Certificate	ACF	ACF Estimated	Season	Remarks
72229		N	1/1 - 12/31	
73412		N	1/1 - 12/31	
73412		N	1/1 - 12/31	
74033		N	1/1 - 12/31	
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
54107		N	1/1 - 12/31	
4053		N	1/1 - 12/31	
4053		N	1/1 - 12/31	
4053		N	1/1 - 12/31	
54068		N	1/1 - 12/31	
54068		N	1/1 - 12/31	
3977		N	1/1 - 12/31	
3977		N	1/1 - 12/31	
3978		N	1/1 - 12/31	
3978		N	1/1 - 12/31	
4077		N	1/1 - 12/31	
4077		N	1/1 - 12/31	
48424		N	1/1 - 12/31	
48424		N	1/1 - 12/31	
4076		N	1/1 - 12/31	
4076		N	1/1 - 12/31	
4076		N	1/1 - 12/31	
73404		N	1/1 - 12/31	
73404		N	1/1 - 12/31	
73404		N	1/1 - 12/31	
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73404		N	1/1 - 12/31	
73404		N	1/1 - 12/31	
73404		N	1/1 - 12/31	
73411		N	1/1 - 12/31	
73411		N	1/1 - 12/31	
73411		N	1/1 - 12/31	
73411		N	1/1 - 12/31	
73411		N	1/1 - 12/31	

Certificate	Condition Code
72229	
73412	
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74033	
54107	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
73411			Powder River	T 6074	1880	2	Powder Valley WCD	3.1E+07
73611			Powder River	T 6074	1880	2	Powder Valley WCD	72191
73611			Powder River	T 6074	1891	2	Powder Valley WCD	72191
73611			Powder River	T 6074	1880	2	Powder Valley WCD	72194
73611			Powder River	T 6074	1891	2	Powder Valley WCD	72194
73611			Powder River	T 6074	1880	2	Powder Valley WCD	3.1E+07
73611			Powder River	T 6074	1891	2	Powder Valley WCD	3.1E+07
37774	G 2453				1963	1	Lionel Shurtleff	3.1E+07
4044			Powder River		1889	1	John M Burnside	72194
4044			Powder River		1889	1	John M Burnside	3.1E+07
73402			Powder River	T 6285	1889	2	Powder Valley WCD	72194
73402			Powder River	T 6285	1889	2	Powder Valley WCD	3.1E+07
				T 6285	1888	1	Powder Valley WCD	72194
				T 6285	1888	1	Powder Valley WCD	3.1E+07
54106			Powder River	T 3923	1883	1	Robert D Stephens	72191
54106			Powder River	T 3923	1883	1	Robert D Stephens	72194
54106			Powder River	T 3923	1883	1	Robert D Stephens	3.1E+07
54108			Powder River	T 3924	1883	2	Donald Stephens	72191
54108			Powder River	T 3924	1883	2	Donald Stephens	72194
54108			Powder River	T 3924	1883	2	Donald Stephens	3.1E+07
58970	G 7629				1977	1	James E Kerns	3.1E+07
57773	S 41759				1977	1	Ronald E Frost	72191
34409	S 28526				1962	1	Donald William Christy	3.1E+07
42687	G 3835				1967	1	Donald William Christy	3.1E+07
	G 12668				1994	1	James G Aldrich	72191
	G 12668				1994	1	James G Aldrich	72194
3977			Powder River		1887	1	William J Ashwood	72194
3977			Powder River		1887	1	William J Ashwood	3.1E+07
4072			Powder River		1880	1	Cleveland Coles	72194
4072			Powder River		1880	1	Cleveland Coles	3.1E+07
4075			Powder River		1880	1	Walter Coles	72194
4075			Powder River		1880	1	Walter Coles	3.1E+07
72174			Powder River		1881	2	James P Ingram	72194
72174			Powder River		1890	2	James P Ingram	72194
72174			Powder River		1881	2	James P Ingram	3.1E+07
72174			Powder River		1890	2	James P Ingram	3.1E+07
3977			Powder River		1884	2	William J Ashwood	72194
3977			Powder River		1884	2	William J Ashwood	3.1E+07
				T 6995	1891	1	Don R Stephens	72194
				T 6995	1882	1	Don R Stephens	72194
				T 6995	1891	1	Don R Stephens	3.1E+07
				T 6995	1882	1	Don R Stephens	3.1E+07
42687	G 3835				1967	2	Donald William Christy	3.1E+07
53723	G 5251				1973	1	Donald W Christy	3.1E+07
	S 44222				1977	2	Elmer & Peggy Satterberg	72191
	S 44222				1977	2	Elmer & Peggy Satterberg	72191
72619			N Powder R		1899	1	Kerns Bros Inc	72191
1544			N Powder R		1905	1	Alvin O Smith	71685
1544			N Powder R		1905	1	Alvin O Smith	72166

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
73411	MUDDY CR	07.00S38.00E-35-SENW	IR	6.00	0.00	Y	
73611	ROCK CR	07.00S38.00E-35-SENW	IR	5.00	0.00	Y	
73611	ROCK CR	07.00S38.00E-35-SENW	IR	5.00	0.00	Y	
73611	ROCK CR	07.00S38.00E-35-SENW	IR	5.00	0.00	Y	
73611	ROCK CR	07.00S38.00E-35-SENW	IR	5.00	0.00	Y	
73611	ROCK CR	07.00S38.00E-35-SENW	IR	5.00	0.00	Y	
73611	ROCK CR	07.00S38.00E-35-SENW	IR	5.00	0.00	Y	
37774	GRAVEL PIT	07.00S38.00E-35-SESE	IS	0.33	0.33	N	
4044	ROCK CR/KILLAMACUE R	07.00S38.00E-35-SWNE	IR	2.00	2.00	N	
4044	ROCK CR/KILLAMACUE R	07.00S38.00E-35-SWNE	IR	2.00	2.00	N	
73402	ROCK CR	07.00S38.00E-35-SWNE	IR	3.00	0.00	Y	
73402	ROCK CR	07.00S38.00E-35-SWNE	IR	3.00	0.00	Y	
	ROCK CR	07.00S38.00E-35-SWNE	IR	9.80	9.80	N	
	ROCK CR	07.00S38.00E-35-SWNE	IR	9.80	9.80	N	
54106	ROCK CR	07.00S38.00E-35-SWNW	IR	0.23	0.23	N	
54106	ROCK CR	07.00S38.00E-35-SWNW	IR	0.23	0.23	N	
54106	ROCK CR	07.00S38.00E-35-SWNW	IR	0.23	0.23	N	
54108	TONEY DITCH	07.00S38.00E-35-SWNW	IR	1.97	0.00	Y	
54108	TONEY DITCH	07.00S38.00E-35-SWNW	IR	1.97	0.00	Y	
54108	TONEY DITCH	07.00S38.00E-35-SWNW	IR	1.97	0.00	Y	
58970	JAMES KERNS WELL	07.00S38.00E-35-SWSW	IS	0.36	0.36	N	
57773	A SPR	07.00S38.00E-36-NENE	IS	0.89	0.89	N	
34409	UNN DRAINAGEWAY	07.00S38.00E-36-NESW	IS	0.63	0.63	N	
42687	A SUMP	07.00S38.00E-36-NESW	IS	1.07	1.07	N	
	A WELL	07.00S38.00E-36-NWNE	IS	1.50	1.50	N	
	A WELL	07.00S38.00E-36-NWNE	IS	1.50	1.50	N	
3977	ROCK CR	07.00S38.00E-36-SENW	IR	0.98	0.98	N	
3977	ROCK CR	07.00S38.00E-36-SENW	IR	0.98	0.98	N	
4072	ROCK CR	07.00S38.00E-36-SENW	IR	5.00	5.00	N	
4072	ROCK CR	07.00S38.00E-36-SENW	IR	5.00	5.00	N	
4075	ROCK CR	07.00S38.00E-36-SENW	IR	2.13	2.13	N	
4075	ROCK CR	07.00S38.00E-36-SENW	IR	2.13	2.13	N	
72174	ROCK CR	07.00S38.00E-36-SENW	IR	6.42	0.00	Y	
72174	ROCK CR	07.00S38.00E-36-SENW	IR	6.42	0.00	Y	
72174	ROCK CR	07.00S38.00E-36-SENW	IR	6.42	0.00	Y	
72174	ROCK CR	07.00S38.00E-36-SENW	IR	6.42	0.00	Y	
3977	ROCK CR	07.00S38.00E-36-SWNW	IR	4.40	4.40	N	
3977	ROCK CR	07.00S38.00E-36-SWNW	IR	4.40	4.40	N	
	ROCK CR	07.00S38.00E-36-SWNW	IR	0.63	0.63	N	
	ROCK CR	07.00S38.00E-36-SWNW	IR	2.00	2.00	N	
	ROCK CR	07.00S38.00E-36-SWNW	IR	0.63	0.63	N	
	ROCK CR	07.00S38.00E-36-SWNW	IR	2.00	2.00	N	
42687	A WELL	07.00S38.00E-36-SWSE	IR	1.07	0.00	Y	
53723	A WELL	07.00S38.00E-36-SWSE	IS	0.60	0.60	N	
	STREAM 2	07.00S38.00E-3-NENE	IR	0.71	0.00	Y	
	STREAM 2	07.00S38.00E-3-NENE	IS	0.71	0.71	N	
72619	WILLOW CR	07.00S38.00E-3-SENW	IR	0.62	0.62	N	
1544	ANTONE CR	07.00S38.00E-5-NESW	I*	0.60	0.60	N	
1544	ANTONE CR	07.00S38.00E-5-NESW	I*	0.60	0.60	N	

Certificate	ACF	ACF Estimated	Season	Remarks
73411		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
73611		N	1/1 - 12/31	
37774		N	1/1 - 12/31	
4044		N	1/1 - 12/31	
4044		N	1/1 - 12/31	
73402		N	1/1 - 12/31	
73402		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
54106		N	1/1 - 12/31	
54106		N	1/1 - 12/31	
54106		N	1/1 - 12/31	
54108		N	1/1 - 12/31	23AC; 1894 18AC; 1897 9.4AC
54108		N	1/1 - 12/31	23AC; 1894 18AC; 1897 9.4AC
54108		N	1/1 - 12/31	23AC; 1894 18AC; 1897 9.4AC
58970		N	1/1 - 12/31	
57773		N	1/1 - 12/31	
34409		N	1/1 - 12/31	
42687		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	3/1 10/31
3977		N	1/1 - 12/31	
3977		N	1/1 - 12/31	
4072		N	1/1 - 12/31	
4072		N	1/1 - 12/31	
4075		N	1/1 - 12/31	
4075		N	1/1 - 12/31	
72174		N	1/1 - 12/31	
72174		N	1/1 - 12/31	
72174		N	1/1 - 12/31	
72174		N	1/1 - 12/31	
3977		N	1/1 - 12/31	
3977		N	1/1 - 12/31	
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
42687		N	1/1 - 12/31	
53723		N	1/1 - 12/31	
		N	1/1 - 12/31	NENE,S2
		N	1/1 - 12/31	NENE,S2
72619		N	1/1 - 12/31	
1544		N	1/1 - 12/31	0.3 CFS 3/1 7/1; 0.15 CFS 7/1 10/1; 30 AF
1544		N	1/1 - 12/31	0.3 CFS 3/1 7/1; 0.15 CFS 7/1 10/1; 30 AF

Certificate	Condition Code
73411	
73611	
73611	
73611	
73611	
73611	
73611	
37774	
4044	
4044	
73402	
73402	
54106	
54106	
54106	
54108	
54108	
54108	
58970	
57773	
34409	
42687	
3977	
3977	
4072	
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72174	
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72174	
72174	
3977	
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42687	
53723	
72619	
1544	
1544	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
1470			N Powder R		1871	1	W R Hutchinson	72187
1470			N Powder R		1883	1	W R Hutchinson	72187
1470			N Powder R		1899	1	W R Hutchinson	72187
1470			N Powder R		1873	2	W R Hutchinson	72187
1470			N Powder R		1888	2	W R Hutchinson	72187
1470			N Powder R		1903	2	W R Hutchinson	72187
1471			N Powder R		1902	1	Chas E Hutchinson	72187
1473			N Powder R		1871	1	Mary F Hutchinson	72187
1496			N Powder R,1916		1871	1	W L Miller	72187
1496			N Powder R,1916		1875	1	W L Miller	72187
1496			N Powder R,1916		1865	2	W L Miller	72187
38006	S 30328				1965	1	Alviah Peters	72187
38406	S 30499				1965	1	Merton A/Ehrman Davis	72187
54067	S 44570				1979	2	Florence L Peters	72187
66060	S 49340				1984	1	Peter W Schoeningh Jr	72187
67104	S 50371				1987	1	Peter W Schoeningh Jr	72187
72203			N Powder R		1862	1	Gerals Loennig	72187
72203			N Powder R		1870	1	Gerals Loennig	72187
72203			N Powder R		1884	1	Gerals Loennig	72187
72286			N Powder R	T 3889	1871	1	Richard Stevens	72187
72286			N Powder R	T 3889	1882	1	Richard Stevens	72187
73626			N Powder R		1871	1	Jim C & Rhea M Patton	72187
73626			N Powder R		1871	2	Jim C & Rhea M Patton	72187
76952			N Powder R	T 8346	1874	1	Peter W Schoeningh Jr	72187
76952			N Powder R	T 8346	1881	1	Peter W Schoeningh Jr	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79576			N Powder R,1916	T 7288	1869	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1865	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
79577			N Powder R,1916	T 7289	1890	2	Daniel Thee	72187
	S 50717				1983	7	Powder Valley WCD	72187
	S 52094				1991	1	Richard D Stephens	72187
	S 52094				1991	2	Richard D Stephens	72187
				T 3889	1873	1	J H Hutchinson, Ernest Kirkland, Francis Dobbin	72187
				T 3889	1895	1	J H Hutchinson, Ernest Kirkland, Francis Dobbin	72187
				T 3889	1903	1	J H Hutchinson, Ernest Kirkland, Francis Dobbin	72187

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	4.00	4.00	N	
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	1.24	1.24	N	
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	1.00	1.00	N	
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	2.18	2.18	N	
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	3.99	3.99	N	
1470	N POWDER R	07.00S38.00E-5-NWNE	I*	3.42	3.42	N	
1471	N POWDER R	07.00S38.00E-5-NWNE	IR	2.26	2.26	N	
1473	N POWDER R	07.00S38.00E-5-NWNE	IL	2.00	2.00	N	
1496	N POWDER R	07.00S38.00E-5-NWNE	I*	0.63	0.63	N	
1496	N POWDER R	07.00S38.00E-5-NWNE	I*	0.90	0.90	N	
1496	N POWDER R	07.00S38.00E-5-NWNE	I*	1.25	1.25	N	
38006	N POWDER R	07.00S38.00E-5-NWNE	IR	4.69	4.69	N	
38406	N POWDER R	07.00S38.00E-5-NWNE	IR	4.97	4.97	N	
54067	VAN PATTEN L RES	07.00S38.00E-5-NWNE	IR	0.00	0.00	N	41.75
66060	N POWDER R	07.00S38.00E-5-NWNE	IR	1.28	1.28	N	
67104	N POWDER R	07.00S38.00E-5-NWNE	IS	1.62	1.62	N	
72203	N POWDER R	07.00S38.00E-5-NWNE	DS	3.02	3.02	N	
72203	N POWDER R	07.00S38.00E-5-NWNE	IR	3.02	0.00	Y	
72203	N POWDER R	07.00S38.00E-5-NWNE	IL	3.02	0.00	Y	
72286	N POWDER R	07.00S38.00E-5-NWNE	IL	2.10	2.10	N	
72286	N POWDER R	07.00S38.00E-5-NWNE	IL	0.58	0.58	N	
73626	N POWDER R	07.00S38.00E-5-NWNE	I*	0.22	0.22	N	
73626	N POWDER R	07.00S38.00E-5-NWNE	I*	0.22	0.00	Y	
76952	N POWDER R	07.00S38.00E-5-NWNE	I*	4.73	0.00	Y	
76952	N POWDER R	07.00S38.00E-5-NWNE	I*	4.73	4.73	N	
79576	N POWDER R	07.00S38.00E-5-NWNE	DO	0.48	0.08	Y	
79576	N POWDER R	07.00S38.00E-5-NWNE	DO	0.95	0.16	Y	
79576	N POWDER R	07.00S38.00E-5-NWNE	IR	0.48	0.08	Y	
79576	N POWDER R	07.00S38.00E-5-NWNE	IR	0.95	0.16	Y	
79576	N POWDER R	07.00S38.00E-5-NWNE	LV	0.48	0.08	Y	
79576	N POWDER R	07.00S38.00E-5-NWNE	LV	0.95	0.16	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	DO	0.17	0.03	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	DO	0.35	0.06	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	IR	0.17	0.03	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	IR	0.35	0.06	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	LV	0.17	0.03	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	LV	0.35	0.06	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	DO	0.39	0.07	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	DO	0.79	0.13	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	IR	0.39	0.07	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	IR	0.79	0.13	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	LV	0.39	0.07	Y	
79577	N POWDER R	07.00S38.00E-5-NWNE	LV	0.79	0.13	Y	
	N POWDER R	07.00S38.00E-5-NWNE	IC	25.60	25.60	N	
	N POWDER R	07.00S38.00E-5-NWNE	IR	0.88	0.88	N	
	UNN STR	07.00S38.00E-5-NWNE	IS	0.88	0.00	Y	
	N POWDER R	07.00S38.00E-5-NWNE	I*	3.45	3.45	N	
	N POWDER R	07.00S38.00E-5-NWNE	I*	5.68	5.68	N	
	N POWDER R	07.00S38.00E-5-NWNE	I*	2.94	2.94	N	

Certificate	ACF	ACF Estimated	Season	Remarks
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1470		N	1/1 - 12/31	20.15 CFS FM 3/1 7/1;12.24 CFS FM 7/1 10/1;2449 AF TOTAL
1471		N	1/1 - 12/31	2.26 CFS 31/ 7/1; 1.13 CFS 7/1 10/1; 226.25 AF TOTAL
1473		N	1/1 - 12/31	2 CFS 3/1 7/1; 1 CFS 7/1 10/1; 200 AF TOTAL
1496		N	1/1 - 12/31	0.625 CFS 3/1 7/1; 0.31 CFS 7/1 10/1; 62.5 AF TOTAL
1496		N	1/1 - 12/31	0.88 CFS 3/1 7/1; 0.44 CFS 7/1 10/1; 87.5 AF TOTAL
1496		N	1/1 - 12/31	1.25 CFS 3/1 7/1; 0.625 CFS 7/1 10/1; 125 AF TOTAL
38006		N	1/1 - 12/31	
38406		N	1/1 - 12/31	
54067	0	Y	1/1 - 12/31	
66060		N	1/1 - 12/31	
67104		N	1/1 - 12/31	
72203		N	1/1 - 12/31	3/1 7/1;1.51 CFS 7/1 10/1
72203		N	1/1 - 12/31	3/1 7/1;1.51 CFS 7/1 10/1
72203		N	1/1 - 12/31	3/1 7/1;1.51 CFS 7/1 10/1
72286		N	1/1 - 12/31	3/1 7/1; 1.34 CFS 7/1 10/1
72286		N	1/1 - 12/31	3/1 7/1; 1.34 CFS 7/1 10/1
73626		N	1/1 - 12/31	3/1 7/1; GARDNER MILL RACE AND HILLSIDE LATERALS
73626		N	1/1 - 12/31	7/1 10/1; GARDNER MILL RACE AND HILLSIDE LATERALS
76952		N	1/1 - 12/31	3/1-7/1; 2.37 CFS 7/1-10/1; NOT TO EXCEED 470.0 AF
76952		N	1/1 - 12/31	3/1-7/1; 2.37 CFS 7/1-10/1; NOT TO EXCEED 470.0 AF
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79576		N	7/2 - 10/1	
79576		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
79577		N	7/2 - 10/1	
79577		N	3/1 - 7/1	
		N	1/1 - 12/31	HUTCHINSON HILLSIDE GARDNER MILLRACE
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	3.45 CFS FM 3/1 7/1; 2.375 CFS TIL 10/1; 190 ACRES
		N	1/1 - 12/31	5.68 CFS FM 3/1 7/1; 3.91 TIL 10/1; 313 ACRES
		N	1/1 - 12/31	2.94CFS FM 3/1 7/1; 2.02 TIL 10/1; 162 ACRES

Certificate	Condition Code
1470	
1470	
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1471	
1473	
1496	
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38006	
38406	
54067	
66060	
67104	
72203	
72203	
72203	
72286	
72286	
73626	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
	R 8551				1983	1	Roger W Smith	71685
	R 8551				1983	1	Roger W Smith	72166
	S 47279				1983	1	Roger W Smith	71685
	S 47279				1983	1	Roger W Smith	72166
53722	S 42792				1977	1	Marvin D/Mary L Cropp	72191
54110			Powder River	T 3680	1886	1	Marvin D/Mary L Cropp	72191
75718			Powder River	T 7095	1883	1	The Hart Investment Co	72191
				T 7095	1883	1	The Hart Investment Co	72191
69178					1993	1	Phyllis E Hodgson	72191
53299	G 5385				1971	1	Gary L Kramer	72191
52744	G 6081				1974	1	Gary L Kramer	72191
52746	S 39004				1974	1	Gary L Kramer	72191
67103	S 50664				1987	1	Peter W Schoeningh Jr	72191
68070	S 51045				1989	1	Peter W Schoeningh Jr	72191
7281	S 7365				1926	1	Wm J F Ashwood, O L Favorite, & John B Christensen	72191
66286	S 49893				1986	1	John Inman	72191
66061	S 50160				1987	1	Peter W Schoeningh Jr	72191
57205	G 5932				1973	2	Pete Schoeningh	72191
64973	S 47872				1983	2	Peter W Schoeningh Jr	72191
34419	G 2329				1962	1	Otto Wendt	72191
57208	S 38977				1974	1	Pete Schoeningh	72191
64973	S 47872				1983	3	Peter W Schoeningh Jr	72191
64973	S 47872				1983	1	Peter W Schoeningh Jr	72191
8845	S 9632				1930	1	Amanda C Moore	72191
57207	S 36970				1972	1	Peter W Schoeningh Jr	72191
57208	S 38977				1974	2	Pete Schoeningh	72191
54069	G 6677				1975	1	LeLand Hellberg	72191
	R 7983				1978	1	Marion C Inman	72191
	R 7983				1978	1	Marion C Inman	72191
	S 33518				1968	1	Marion C Inman	72191
	S 44618				1979	2	Marion C Inman	72191
13542	S 14197				1940	1	Armand W Perkins	72191
13542	S 14197				1940	1	Armand W Perkins	72191
34741	S 30386				1965	1	Marion Inman	72191
	R 5295				1968	1	Marion C Inman	72191
28776	S 24712				1956	1	Walter Jacobson	72191
28776	S 24712				1956	1	Walter Jacobson	72191
50115	S 31337			T 4706	1966	1	Walter Jacobson	72191
64145	S 42470				1975	1	Farm Credit Bank of Spokane	72191
64146	S 42472				1976	1	Farm Credit Bank of Spokane	72191
64146	S 42472				1976	2	Farm Credit Bank of Spokane	72191
64147	S 46561				1981	3	Farm Credit Bank of Spokane	72191
64148			Powder River	T 4707	1885	1	Farm Credit Bank of Spokane	72191
64149	S 31337			T 4706	1966	1	Farm Credit Bank of Spokane	72191
28776	S 24712				1956	2	Walter Jacobson	72191
34741	S 30386				1965	2	Marion Inman	72191
48995			Powder River		1883	1	J C Travillion	72191
48995			Powder River		1886	1	J C Travillion	72191

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
	UNN STR	07.00S38.00E-8-NWNW	RC	0.00	0.00	N	1.5
	UNN STR	07.00S38.00E-8-NWNW	RC	0.00	0.00	N	1.5
	UNN STR	07.00S38.00E-8-NWNW	IR	0.25	0.25	N	
	UNN STR	07.00S38.00E-8-NWNW	IR	0.25	0.25	N	
53722	POWDER R	07.00S39.00E-1-SWNW	IR	0.85	0.85	N	
54110	POWDER R	07.00S39.00E-1-SWNW	IR	1.89	1.89	N	
75718	POWDER R	07.00S39.00E-1-SWNW	IR	4.30	4.30	N	
	POWDER R	07.00S39.00E-1-SWNW	IR	0.57	0.57	N	
69178	RUNOFF/RES 1	07.00S39.00E-2-NE	IL			N	5
53299	A WELL	07.00S39.00E-3-NWNE	IS	2.22	2.22	N	
52744	A SUMP	07.00S39.00E-3-SESE	IS	3.01	3.01	N	
52746	UNN DRAW	07.00S39.00E-3-SESE	IS	1.17	1.17	N	
67103	WARM SPRS CR	07.00S39.00E-4-NWNW	IS	5.55	5.55	N	
68070	WARM SPRS CR	07.00S39.00E-4-NWNW	IC	2.06	2.06	N	
7281	FAVORITE SL	07.00S39.00E-5-SENE	IR	2.00	2.00	N	
66286	WARM SPRS CR	07.00S39.00E-6-NESE	IC	5.59	5.59	N	
66061	WARM SPRS CR	07.00S39.00E-6-SWSW	IS	0.95	0.95	N	
57205	SUMP WELL #2	07.00S39.00E-7-NENE	IC	0.33	0.33	N	
64973	UNN STR	07.00S39.00E-7-NENW	IC	1.65	0.00	Y	
34419	MCCALL WE	07.00S39.00E-7-NESE	IR	2.68	2.68	N	
57208	UNN DRAINAGEWAY	07.00S39.00E-7-NWNE	IS	1.71	1.71	N	
64973	UNN STR	07.00S39.00E-7-NWNE	IC	1.65	0.00	Y	
64973	UNN STR	07.00S39.00E-7-NWNW	IC	1.65	1.65	N	
8845	A SLOUGH	07.00S39.00E-7-NWSE	IR	1.00	1.00	N	
57207	NATURAL DRAINAGEWAY	07.00S39.00E-7-NWSW	IS	4.40	4.40	N	
57208	UNN DRAINAGEWAY	07.00S39.00E-7-SENW	IR	1.71	0.00	Y	
54069	A WELL	07.00S39.00E-8-SWNW	IR	2.23	2.23	N	
	UNNAMED DRAW	07.00S39.00E-10-NWSE	IR	0.00	0.00	N	8
	UNNAMED DRAW	07.00S39.00E-10-NWSE	RC	0.00	0.00	N	1
	UNNAMED DRAW/RES	07.00S39.00E-10-NWSE	IC	0.50	0.50	N	
	INMAN RESERVOIR	07.00S39.00E-10-NWSE	IS	0.00	0.00	N	8
13542	POWDER R/RS	07.00S39.00E-10-SESE	IR	2.40	2.40	N	
13542	POWDER R/RS	07.00S39.00E-10-SESE	IS	0.60	0.60	N	
34741	POWDER R	07.00S39.00E-10-SESE	IR	2.17	2.17	N	
	UNNAMED DRAW	07.00S39.00E-10-SWNE	IR	0.00	0.00	N	9
28776	UNN SL	07.00S39.00E-11-NESW	IR	3.94	3.94	N	
28776	UNN SL	07.00S39.00E-11-NESW	IS	0.38	0.38	N	
50115	POWDER R	07.00S39.00E-11-NESW	IR	3.51	3.51	N	
64145	UNN SL	07.00S39.00E-11-NESW	IS	6.70	6.70	N	
64146	POWDER R	07.00S39.00E-11-NESW	IR	2.79	2.79	N	
64146	UNN SL	07.00S39.00E-11-NESW	IR	2.79	0.00	Y	
64147	UNN SL	07.00S39.00E-11-NESW	IR	10.34	0.00	Y	
64148	POWDER R	07.00S39.00E-11-NESW	IR	6.81	6.81	N	
64149	POWDER R	07.00S39.00E-11-NESW	IR	3.19	3.19	N	
28776	UNN SL	07.00S39.00E-11-NWNW	IR	3.94	0.00	Y	
34741	POWDER R	07.00S39.00E-11-NWSW	IR	2.17	0.00	Y	
48995	POWDER R	07.00S39.00E-12-NENW	IR	4.54	4.54	N	
48995	POWDER R	07.00S39.00E-12-NENW	IR	4.11	4.11	N	

Certificate	ACF	ACF Estimated	Season	Remarks
	1.5	N	1/1 - 12/31	
	1.5	N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
53722		N	1/1 - 12/31	
54110		N	1/1 - 12/31	
75718		N	1/1 - 12/31	
		N	1/1 - 12/31	
69178	5	N	1/1 - 12/31	
53299		N	1/1 - 12/31	
52744		N	1/1 - 12/31	
52746		N	1/1 - 12/31	
67103		N	1/1 - 12/31	
68070		N	1/1 - 12/31	
7281		N	1/1 - 12/31	
66286		N	1/1 - 12/31	
66061		N	1/1 - 12/31	
57205		N	1/1 - 12/31	0
64973		N	1/1 - 12/31	
34419		N	1/1 - 12/31	
57208		N	1/1 - 12/31	0
64973		N	1/1 - 12/31	
64973		N	1/1 - 12/31	
8845		N	1/1 - 12/31	
57207		N	1/1 - 12/31	
57208		N	1/1 - 12/31	0
54069		N	1/1 - 12/31	
	8	N	1/1 - 12/31	
	1	N	1/1 - 12/31	
		N	1/1 - 12/31	
	8	N	1/1 - 12/31	
13542		N	1/1 - 12/31	
13542		N	1/1 - 12/31	
34741		N	1/1 - 12/31	
	9	N	1/1 - 12/31	
28776		N	1/1 - 12/31	
28776		N	1/1 - 12/31	
50115		N	1/1 - 12/31	
64145		N	1/1 - 12/31	
64146		N	1/1 - 12/31	
64146		N	1/1 - 12/31	
64147		N	1/1 - 12/31	172.4 ACRES
64148		N	1/1 - 12/31	
64149		N	1/1 - 12/31	
28776		N	1/1 - 12/31	
34741		N	1/1 - 12/31	
48995		N	1/1 - 12/31	
48995		N	1/1 - 12/31	

Certificate	Condition Code
53722	
54110	
75718	
69178	
53299	
52744	
52746	
67103	
68070	
7281	
66286	
66061	
57205	
64973	
34419	
57208	
64973	
64973	
8845	
57207	
57208	
54069	
13542	
13542	
34741	
28776	
28776	
50115	
64145	
64146	
64146	
64147	
64148	
64149	
28776	
34741	
48995	
48995	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
64147	S 46561				1981	1	Farm Credit Bank of Spokane	72191
64147	S 46561				1981	2	Farm Credit Bank of Spokane	72191
74003			Powder River		1883	1	ODOT	72191
74003			Powder River		1883	1	ODOT	72191
75329			Powder River		1883	1	Hart Estate Investment Co	72191
64204	S 3989			T 4179	1918	1	Investco Financial Corp	72191
	S 31402			T 8430	1966	3	Cal Worthington	72191
	S 31402			T 8430	1966	3	Cal Worthington	72191
	S 38638			T 8430	1974	2	Cal Worthington	72191
	G 13616				1998	4	Cal Worthington, Brad Allen	72191
	S 31402			T 8430	1966	4	Cal Worthington	72191
	S 31402			T 8430	1966	4	Cal Worthington	72191
	S 38638			T 8430	1974	3	Cal Worthington	72191
39114	G 3162				1965	1	Richard/Carlyn Alexender	72191
49494	G 6011				1974	1	Burr Courtright	72191
	S 31402			T 8430	1966	1	Cal Worthington	72191
	S 31402			T 8430	1966	2	Cal Worthington	72191
	S 31402			T 8430	1966	1	Cal Worthington	72191
	S 31402			T 8430	1966	2	Cal Worthington	72191
	S 38638			T 8430	1974	1	Cal Worthington	72191
19473	S 18460				1948	2	G H Marshall, E O McGoldrick, & W A Daugherty	72191
28765	S 17526				1946	1	Orville Fisher	72191
29065	S 23978				1955	2	Al Thompson	72191
28765	S 17526				1946	2	Orville Fisher	72191
28771	S 23953				1955	1	Edna Stewart	72191
29065	S 23978				1955	3	Al Thompson	72191
28765	S 17526				1946	3	Orville Fisher	72191
29065	S 23978				1955	1	Al Thompson	72191
35103	S 28871				1962	1	Peter W Schoeningh, Jr	72191
35103	S 28871				1962	2	Peter W Schoeningh, Jr	72191
57206	G 6622				1975	1	Peter W Schoeningh	72191
19493	S 18316				1930	1	John K Proebstel	72191
19493	S 18316				1930	2	John K Proebstel	72191
	G 13134				1996	1	Gary L & Elizabeth Kramer	72191
28765	S 17526				1946	4	Orville Fisher	72191
	G 12771				1994	1	Tommy L Duncan	72191
	G 12771				1994	1	Tommy L Duncan	72191
28770	S 22147				1953	1	Edna M Stewart	72191
28770	S 22147				1953	1	Edna M Stewart	72191
29065	S 23978				1955	4	Al Thompson	72191
37406	S 31148				1965	1	Orville R Fisher	72191
37406	S 31148				1965	2	Orville R Fisher	72191
37784	S 32604				1967	4	L M/Marion Sue Ingram	72191
75516			Powder River	T 6286	1886	1	Tommy Duncan	72191
75516			Powder River	T 6286	1900	2	Tommy Duncan	72191
37784	S 32604				1967	3	L M/Marion Sue Ingram	72191
37784	S 32604				1967	2	L M/Marion Sue Ingram	72191
37784	S 32604				1967	1	L M/Marion Sue Ingram	72191
53123	G 8094				1978	1	Fraser Ranches	72191

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
64147	POWDER R	07.00S39.00E-12-NENW	IR	10.34	10.34	N	
64147	POWDER R	07.00S39.00E-12-NENW	IR	10.34	0.00	Y	
74003	POWDER R	07.00S39.00E-12-NENW	I*	0.10	0.10	N	
74003	POWDER R	07.00S39.00E-12-NENW	I*	0.30	0.30	N	
75329	POWDER R	07.00S39.00E-12-NENW	IR	2.67	2.67	N	
64204	POWDER R	07.00S39.00E-12-NWNW	IR	1.60	1.60	N	
	POWDER R	07.00S39.00E-13-NWNW	IR	7.42	1.86	Y	
	POWDER R	07.00S39.00E-13-NWNW	IR	2.51	0.63	Y	
	POWDER R	07.00S39.00E-13-NWNW	IR	6.80	2.27	Y	
	WELL 4	07.00S39.00E-13-SESE	IR	1.34	1.34	N	
	POWDER R	07.00S39.00E-14-NENE	IR	7.42	1.86	Y	
	POWDER R	07.00S39.00E-14-NENE	IR	2.51	0.63	Y	
	POWDER R	07.00S39.00E-14-NENE	IR	6.80	2.27	Y	
39114	A WELL	07.00S39.00E-14-SESW	IR	1.38	1.38	N	
49494	WELL 2	07.00S39.00E-14-SWNE	IS	2.70	2.70	N	
	POWDER R	07.00S39.00E-15-NWNE	IR	7.42	1.86	Y	
	POWDER R	07.00S39.00E-15-NWNE	IR	7.42	1.86	Y	
	POWDER R	07.00S39.00E-15-NWNE	IR	2.51	0.63	Y	
	POWDER R	07.00S39.00E-15-NWNE	IR	2.51	0.63	Y	
	POWDER R	07.00S39.00E-15-NWNE	IR	6.80	2.27	Y	
19473	N UNN STR	07.00S39.00E-17-NWNW	IS	0.92	0.92	N	
28765	UNN STR	07.00S39.00E-17-NWNW	IR	1.18	1.18	N	
29065	LITTLE MUDDY CR	07.00S39.00E-17-NWNW	IR	0.40	0.40	N	
28765	UNN STR	07.00S39.00E-17-SESW	IR	1.18	0.00	Y	
28771	LITTLE MUDDY CR	07.00S39.00E-17-SESW	IS	3.95	3.95	N	
29065	LITTLE MUDDY CR	07.00S39.00E-17-SESW	IR	0.90	0.90	N	
28765	UNN STR	07.00S39.00E-18-NENE	IR	0.42	0.42	N	
29065	LITTLE MUDDY CR	07.00S39.00E-18-NENE	IR	0.40	0.40	N	
35103	NORTH UNN STR	07.00S39.00E-18-NWNW	IL	1.06	1.06	N	
35103	S UNN STR	07.00S39.00E-18-SWNW	IL	0.79	0.79	N	
57206	SCHOENINGH SUMP WE	07.00S39.00E-18-SWNW	IS	0.63	0.63	N	
19493	LITTLE MUDDY CR	07.00S39.00E-19-NWNE	IS	1.75	1.75	N	
19493	BIG MUDDY CR	07.00S39.00E-19-SWNE	IS	1.75	1.75	N	
	A WELL	07.00S39.00E-19-SWNE	IS	2.23	2.23	N	
28765	UNN STR	07.00S39.00E-20-NENW	IR	0.42	0.42	N	
	A WELL	07.00S39.00E-20-NESE	IC	2.04	1.02	Y	
	A WELL	07.00S39.00E-20-NESE	QM	0.14	0.07	Y	
28770	BIG MUDDY CR	07.00S39.00E-20-SENE	IR	0.21	0.21	N	
28770	BIG MUDDY CR	07.00S39.00E-20-SENE	IS	3.74	3.74	N	
29065	BIG MUDDY CR	07.00S39.00E-20-SENE	IR	3.30	3.30	N	
37406	BIG MUDDY CR	07.00S39.00E-20-SENE	IR	0.54	0.54	N	
37406	BIG MUDDY CR	07.00S39.00E-20-SENE	IR	0.52	0.52	N	
37784	E WASTE WATER DRAIN	07.00S39.00E-20-SESE	IR	1.80	0.00	Y	
75516	BIG MUDDY CR	07.00S39.00E-20-SWNW	IR	1.35	1.35	N	
75516	BIG MUDDY CR	07.00S39.00E-20-SWNW	IR	1.35	0.00	Y	
37784	E WASTE WATER DRAIN	07.00S39.00E-20-SWSE	IS	1.80	1.80	N	
37784	W WASTE WATER DRAIN	07.00S39.00E-20-SWSE	IR	2.47	0.00	Y	
37784	W WASTE WATER DRAIN	07.00S39.00E-20-SWSW	IS	2.47	2.47	N	
53123	A WELL	07.00S39.00E-24-SESE	IR	2.50	2.50	N	

Certificate	ACF	ACF Estimated	Season	Remarks
64147		N	1/1 - 12/31	28 ACRES
64147		N	1/1 - 12/31	172.4 ACRES
74003		N	1/1 - 12/31	7/1-10/1; 19.8 AF
74003		N	1/1 - 12/31	3/1-77/10; 19.8 AF
75329		N	1/1 - 12/31	2.67 CFS 3/1 7/1; 1.33 CFS 7/1 10/1; 266.5 ACRE FEET
64204		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	4/1 10/31
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
39114		N	1/1 - 12/31	
49494		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
19473		N	1/1 - 12/31	
28765		N	1/1 - 12/31	
29065		N	1/1 - 12/31	
28765		N	1/1 - 12/31	
28771		N	1/1 - 12/31	
29065		N	1/1 - 12/31	
28765		N	1/1 - 12/31	
29065		N	1/1 - 12/31	
35103		N	1/1 - 12/31	
35103		N	1/1 - 12/31	
57206		N	1/1 - 12/31	0
19493		N	1/1 - 12/31	
19493		N	1/1 - 12/31	
.		N	1/1 - 12/31	
28765		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	
28770		N	1/1 - 12/31	
28770		N	1/1 - 12/31	
29065		N	1/1 - 12/31	
37406		N	1/1 - 12/31	
37406		N	1/1 - 12/31	
37784		N	1/1 - 12/31	
75516		N	1/1 - 12/31	40.0 ACRES
75516		N	1/1 - 12/31	14.0 ACRES
. 37784		N	1/1 - 12/31	
37784		N	1/1 - 12/31	
37784		N	1/1 - 12/31	
53123		N	1/1 - 12/31	

Certificate	Condition Code
64147	
64147	
74003	
74003	
75329	
64204	
39114	
49494	
19473	
28765	
29065	
28765	
28771	
29065	
28765	
29065	
35103	
35103	
57206	
19493	
19493	
28765	
28770	
28770	
29065	
37406	
37406	
37784	
75516	
75516	
37784	
37784	
37784	
53123	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
	G 13616				1998	2	Cal Worthington, Brad Allen	72191
	G 13616				1998	1	Cal Worthington, Brad Allen	72191
11935	S 12425				1936	1	Fred A Toney	72191
46116	U 636				1954	1	Till Traverso, Virgil & Martha Traverso, John & Letha Traverso	72191
24526	S 19559				1950	1	Till Traverso, Virgil & Martha Traverso, John & Letha Traverso	72191
60342	G 8449				1978	1	Henry Steele	72191
29066	G 605				1956	1	Raymond T O'Dell	72191
29067	S 24947				1956	1	Raymond T O'Dell	72191
	G 11219				1990	1	L M Ingram	72191
	G 11219				1990	1	L M Ingram	72191
	G 12780				1993	1	James P Ingram	72191
	G 12780				1995	1	James P Ingram	72191
72178			Powder River		1881	1	James P Ingram	72191
19434	S 14239				1940	1	Walter Coles	72191
19434	S 14239				1940	1	Walter Coles	72191
13793	S 13881				1939	1	Edward Coles	72191
79758			Powder R, Consol	T 9162	1874	1	W Toney	72191
79758			Powder R, Consol	T 9162	1883	1	W Toney	72191
79758			Powder R, Consol	T 9162	1874	1	W Toney	72194
79758			Powder R, Consol	T 9162	1883	1	W Toney	72194
4075			Powder River		1881	2	Walter Coles	72191
72174			Powder River		1881	1	James P Ingram	72191
72174			Powder River		1890	1	James P Ingram	72191
72177			Powder River		1880	3	Edward Coles	72191
72177			Powder River		1881	3	Edward Coles	72191
72177			Powder River		1906	3	Edward Coles	72191
72177			Powder River		1880	1	Edward Coles	72191
72177			Powder River		1900	1	Edward Coles	72191
72177			Powder River		1890	2	Edward Coles	72191
80068			Powder R, Consol		1880	3	Edward Coles	72191
80068			Powder R, Consol		1880	3	Edward Coles	72191
80068			Powder R, Consol		1881	3	Edward Coles	72191
80068			Powder R, Consol		1890	3	Edward Coles	72191
80068			Powder R, Consol		1900	3	Edward Coles	72191
80068			Powder R, Consol		1906	3	Edward Coles	72191
80068			Powder R, Consol		1880	1	Edward Coles	72191
80068			Powder R, Consol		1880	1	Edward Coles	72191
80068			Powder R, Consol		1881	1	Edward Coles	72191
80068			Powder R, Consol		1890	1	Edward Coles	72191
80068			Powder R, Consol		1900	1	Edward Coles	72191
80068			Powder R, Consol		1906	1	Edward Coles	72191
80068			Powder R, Consol		1880	2	Edward Coles	72191
80068			Powder R, Consol		1880	2	Edward Coles	72191
80068			Powder R, Consol		1881	2	Edward Coles	72191
80068			Powder R, Consol		1890	2	Edward Coles	72191
80068			Powder R, Consol		1900	2	Edward Coles	72191
80068			Powder R, Consol		1906	2	Edward Coles	72191
4074			Powder River		1874	2	Fred, Lillie & Joel Coles	72191
42360	G 4357				1968	1	Phillip D Stevenson	72194

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
	WELL 2	07.00S39.00E-24-SESE	IR	4.45	4.45	N	
	WELL 1	07.00S39.00E-25-NENE	IR	1.11	1.11	N	
11935	POWDER R/RS	07.00S39.00E-27-NWSW	IR	2.10	2.10	N	
46116	LEE WELL	07.00S39.00E-28-NESW	IS	2.20	2.20	N	
24526	DRAINAGE DITCH	07.00S39.00E-28-NWNW	IS	1.00	1.00	N	
60342	SUMP WELL 1	07.00S39.00E-28-SESW	IS	3.41	3.41	N	
29066	WELL 2	07.00S39.00E-28-SWNE	CM	0.13	0.13	N	
29067	HOT SPR	07.00S39.00E-28-SWNE	CM	0.26	0.26	N	
	A WELL	07.00S39.00E-28-SWNW	IS	0.67	0.67	N	
	A WELL	07.00S39.00E-28-SWNW	IS	1.45	1.45	N	
	A WELL	07.00S39.00E-28-SWNW	IS	0.76	0.76	N	
	A WELL	07.00S39.00E-28-SWNW	IS	0.50	0.50	N	
72178	SAND CR	07.00S39.00E-28-SWSW	IR	0.92	0.92	N	
19434	A SPR	07.00S39.00E-29-NESW	IR	0.38	0.38	N	
19434	A SPR	07.00S39.00E-29-NESW	LV	0.38	0.38	N	
13793	UNN SPRS	07.00S39.00E-29-NWSE	LV	0.27	0.27	N	
79758	ROCK CR	07.00S39.00E-31-NESE	IR	1.00	1.00	N	
79758	ROCK CR	07.00S39.00E-31-NESE	IR	0.17	0.17	N	
79758	ROCK CR	07.00S39.00E-31-NESE	IR	1.00	1.00	N	
79758	ROCK CR	07.00S39.00E-31-NESE	IR	0.17	0.17	N	
4075	SAND CR	07.00S39.00E-31-NWNE	IR	2.88	2.88	N	
72174	SAND CR	07.00S39.00E-31-NWNE	IR	6.42	6.42	N	
72174	SAND CR	07.00S39.00E-31-NWNE	IR	6.42	0.00	Y	
72177	POWDER R	07.00S39.00E-31-NWNE	IR	26.57	0.00	Y	
72177	POWDER R	07.00S39.00E-31-NWNE	IR	26.57	0.00	Y	
72177	POWDER R	07.00S39.00E-31-NWNE	IR	26.57	0.00	Y	
72177	ROCK CR	07.00S39.00E-31-NWNE	IR	26.57	26.57	N	
72177	ROCK CR	07.00S39.00E-31-NWNE	IR	26.57	26.57	N	
72177	SAND CR	07.00S39.00E-31-NWNE	IR	26.57	0.00	Y	
80068	POWDER R	07.00S39.00E-31-NWNE	IR	2.50	0.83	Y	
80068	POWDER R	07.00S39.00E-31-NWNE	IR	3.18	1.06	Y	
80068	POWDER R	07.00S39.00E-31-NWNE	IR	0.29	0.10	Y	
80068	POWDER R	07.00S39.00E-31-NWNE	IR	4.38	1.46	Y	
80068	POWDER R	07.00S39.00E-31-NWNE	IR	2.15	0.72	Y	
80068	POWDER R	07.00S39.00E-31-NWNE	IR	1.30	0.43	Y	
80068	ROCK CR	07.00S39.00E-31-NWNE	IR	2.50	0.83	N	
80068	ROCK CR	07.00S39.00E-31-NWNE	IR	3.18	1.06	Y	
80068	ROCK CR	07.00S39.00E-31-NWNE	IR	0.29	0.10	Y	
80068	ROCK CR	07.00S39.00E-31-NWNE	IR	4.38	1.46	Y	
80068	ROCK CR	07.00S39.00E-31-NWNE	IR	2.15	0.72	Y	
80068	ROCK CR	07.00S39.00E-31-NWNE	IR	1.30	0.43	Y	
80068	SAND CR	07.00S39.00E-31-NWNE	IR	2.50	0.83	Y	
80068	SAND CR	07.00S39.00E-31-NWNE	IR	3.18	1.06	Y	
80068	SAND CR	07.00S39.00E-31-NWNE	IR	0.29	0.10	Y	
80068	SAND CR	07.00S39.00E-31-NWNE	IR	4.38	1.46	Y	
80068	SAND CR	07.00S39.00E-31-NWNE	IR	2.15	0.72	Y	
80068	SAND CR	07.00S39.00E-31-NWNE	IR	1.30	0.43	Y	
4074	SAND CR	07.00S39.00E-31-NWNW	IR	1.00	1.00	N	
42360	SUMP WELL	07.00S39.00E-31-SESE	IS	0.48	0.48	N	

Certificate	ACF	ACF Estimated	Season	Remarks
		N	1/1 - 12/31	4/1 10/31
		N	1/1 - 12/31	4/1 10/31
11935		N	1/1 - 12/31	
46116		N	1/1 - 12/31	
24526		N	1/1 - 12/31	
60342		N	1/1 - 12/31	
29066		N	1/1 - 12/31	
29067		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
72178		N	1/1 - 12/31	1/40 CFS PER ACRE
19434		N	1/1 - 12/31	
19434		N	1/1 - 12/31	
13793		N	1/1 - 12/31	
79758		N	3/1 - 11/1	
79758		N	3/1 - 11/1	
79758		N	3/1 - 11/1	
79758		N	3/1 - 11/1	
4075		N	1/1 - 12/31	
72174		N	1/1 - 12/31	
72174		N	1/1 - 12/31	
72177		N	1/1 - 12/31	1/40 CFS PER ACRE
72177		N	1/1 - 12/31	1/40 CFS PER ACRE
72177		N	1/1 - 12/31	1/40 CFS PER ACRE
72177		N	1/1 - 12/31	1/40 CFS PER ACRE
72177		N	1/1 - 12/31	1/40 CFS PER ACRE
72177		N	1/1 - 12/31	1/40 CFS PER ACRE
80068		N	1/1 - 12/31	
80068		N	1/1 - 12/31	
80068		N	1/1 - 12/31	
80068		N	1/1 - 12/31	
80068		N	1/1 - 12/31	
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80068		N	1/1 - 12/31	
80068		N	1/1 - 12/31	
80068		N	1/1 - 12/31	
80068		N	1/1 - 12/31	
80068		N	1/1 - 12/31	
4074		N	1/1 - 12/31	
42360		N	1/1 - 12/31	

Certificate	Condition Code
11935	
46116	
24526	
60342	
29066	
29067	
72178	
19434	
19434	
13793	
79758	
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79758	
4075	
72174	
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80068	
4074	
42360	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
42360	G 4357				1968	1	Phillip D Stevenson	3.1E+07
57912			Powder River		1878	4	Peter Poulson	72194
57912			Powder River		1878	4	Peter Poulson	3.1E+07
57912			Powder River		1878	1	Peter Poulson	72194
57912			Powder River		1878	1	Peter Poulson	3.1E+07
57912			Powder River		1878	3	Peter Poulson	72194
57912			Powder River		1878	3	Peter Poulson	3.1E+07
57912			Powder River		1875	2	Peter Poulson	72194
57912			Powder River		1880	5	Peter Poulson	72194
57912			Powder River		1882	6	Peter Poulson	72194
57912			Powder River		1875	2	Peter Poulson	3.1E+07
57912			Powder River		1880	5	Peter Poulson	3.1E+07
57912			Powder River		1882	6	Peter Poulson	3.1E+07
				T 4315	1872	1	Vernon Hayhurst	72194
				T 4315	1874	1	Vernon Hayhurst	72194
				T 4315	1880	1	Vernon Hayhurst	72194
				T 4315	1872	1	Vernon Hayhurst	3.1E+07
				T 4315	1874	1	Vernon Hayhurst	3.1E+07
				T 4315	1880	1	Vernon Hayhurst	3.1E+07
4042			Powder River		1895	1	J A Burnside	72191
4042			Powder River		1895	1	J A Burnside	72194
79755			Powder R, Consol	T 9162	1883	1	Robert Seymour	72191
79755			Powder R, Consol	T 9162	1883	1	Robert Seymour	72194
79757			Powder R, Consol	T 9162	1883	1	Barbara Seymour	72191
79757			Powder R, Consol	T 9162	1883	1	Barbara Seymour	72194
				T 6995	1891	2	Don R Stephens	72191
				T 6995	1893	2	Don R Stephens	72191
				T 6995	1891	2	Don R Stephens	72194
				T 6995	1893	2	Don R Stephens	72194
79756			Powder R, Consol	T 9162	1883	1	Henry Locken	72194
79756			Powder R, Consol	T 9162	1883	1	Henry Locken	3.1E+07
	G 15265				2001	1	David Anderson	3.1E+07
	G 15265				2001	1	David Anderson	3.1E+07
50944	G 5403				1971	1	Doris M Preobstel	72191
54987			Powder River	T 3609	1906	1	Roy/Verna Francis	72191
54987			Powder River	T 3609	1882	2	Roy/Verna Francis	72191
54987			Powder River	T 3609	1906	1	Roy/Verna Francis	72194
54987			Powder River	T 3609	1882	2	Roy/Verna Francis	72194
54987			Powder River	T 3609	1906	1	Roy/Verna Francis	3.1E+07
54987			Powder River	T 3609	1882	2	Roy/Verna Francis	3.1E+07
4074			Powder River		1865	1	Fred, Lillie & Joel Coles	72191
4074			Powder River		1865	1	Fred, Lillie & Joel Coles	72194
4065			Powder River		1900	1	John C Christenson Estate	72194
4065			Powder River		1900	1	John C Christenson Estate	3.1E+07
65542	S 49385				1985	1	John C Mack	72194
65542	S 49385				1985	1	John C Mack	3.1E+07
	G 13987				1999	1	Edward Hayhurst Jr	72194
	G 13987				1999	1	Edward Hayhurst Jr	3.1E+07
	R 13005				1994	1	Edward V Hayhurst Jr & Janice M	72194

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
42360	SUMP WELL	07.00S39.00E-31-SESE	IS	0.48	0.48	N	
57912	BIG MUDDY CR	07.00S39.00E-31-SESE	IR	11.85	0.00	Y	
57912	BIG MUDDY CR	07.00S39.00E-31-SESE	IR	11.85	0.00	Y	
57912	KILLAMACUE CR	07.00S39.00E-31-SESE	IR	11.85	11.85	N	
57912	KILLAMACUE CR	07.00S39.00E-31-SESE	IR	11.85	11.85	N	
57912	LITTLE MUDDY CR	07.00S39.00E-31-SESE	IR	11.85	0.00	Y	
57912	LITTLE MUDDY CR	07.00S39.00E-31-SESE	IR	11.85	0.00	Y	
57912	ROCK CR	07.00S39.00E-31-SESE	IR	11.85	0.00	Y	
57912	ROCK CR	07.00S39.00E-31-SESE	IR	11.85	0.00	Y	
57912	ROCK CR	07.00S39.00E-31-SESE	IR	11.85	0.00	Y	
57912	ROCK CR	07.00S39.00E-31-SESE	IR	11.85	0.00	Y	
57912	ROCK CR	07.00S39.00E-31-SESE	IR	11.85	0.00	Y	
57912	ROCK CR	07.00S39.00E-31-SESE	IR	11.85	0.00	Y	
	ROCK CR	07.00S39.00E-31-SESE	IR	0.75	0.75	N	
	ROCK CR	07.00S39.00E-31-SESE	IR	0.38	0.38	N	
	ROCK CR	07.00S39.00E-31-SESE	IR	1.13	1.13	N	
	ROCK CR	07.00S39.00E-31-SESE	IR	0.75	0.75	N	
	ROCK CR	07.00S39.00E-31-SESE	IR	0.38	0.38	N	
	ROCK CR	07.00S39.00E-31-SESE	IR	1.13	1.13	N	
4042	ROCK CR	07.00S39.00E-31-SWNW	IR	0.25	0.25	N	
4042	ROCK CR	07.00S39.00E-31-SWNW	IR	0.25	0.25	N	
79755	ROCK CR	07.00S39.00E-31-SWNW	IR	1.00	1.00	N	
79755	ROCK CR	07.00S39.00E-31-SWNW	IR	1.00	1.00	N	
79757	ROCK CR	07.00S39.00E-31-SWNW	IR	0.83	0.83	N	
79757	ROCK CR	07.00S39.00E-31-SWNW	IR	0.83	0.83	N	
	ROCK CR	07.00S39.00E-31-SWNW	IR	0.38	0.38	N	
	ROCK CR	07.00S39.00E-31-SWNW	IR	1.63	1.63	N	
	ROCK CR	07.00S39.00E-31-SWNW	IR	0.38	0.38	N	
	ROCK CR	07.00S39.00E-31-SWNW	IR	1.63	1.63	N	
79756	ROCK CR	07.00S39.00E-31-SWSE	IR	1.00	1.00	N	
79756	ROCK CR	07.00S39.00E-31-SWSE	IR	1.00	1.00	N	
	A WELL	07.00S39.00E-31-SWSW	IS	1.50	1.50	N	
	A WELL	07.00S39.00E-31-SWSW	IS	1.50	1.50	N	
50944	A WELL	07.00S39.00E-32-NENE	IS	0.96	0.96	N	
54987	ROCK CR	07.00S39.00E-32-NESE	IR	1.98	1.98	N	
54987	ROCK CR	07.00S39.00E-32-NESE	IR	1.98	0.00	Y	
54987	ROCK CR	07.00S39.00E-32-NESE	IR	1.98	1.98	N	
54987	ROCK CR	07.00S39.00E-32-NESE	IR	1.98	0.00	Y	
54987	ROCK CR	07.00S39.00E-32-NESE	IR	1.98	1.98	N	
54987	ROCK CR	07.00S39.00E-32-NESE	IR	1.98	0.00	Y	
4074	ROCK CR	07.00S39.00E-32-NWSW	IR	1.00	1.00	N	
4074	ROCK CR	07.00S39.00E-32-NWSW	IR	1.00	1.00	N	
4065	ROCK CR	07.00S39.00E-32-SWSE	IR	4.33	4.33	N	
4065	ROCK CR	07.00S39.00E-32-SWSE	IR	4.33	4.33	N	
65542	ROCK CR	07.00S39.00E-32-SWSE	IR	1.57	1.57	N	
65542	ROCK CR	07.00S39.00E-32-SWSE	IR	1.57	1.57	N	
	A WELL	07.00S39.00E-32-SWSW	IR	2.50	2.50	N	
	A WELL	07.00S39.00E-32-SWSW	IR	2.50	2.50	N	
	A SPR/HAYHURST RES	07.00S39.00E-32-SWSW	LW	0.00	0.00	N	9

Certificate	ACF	ACF Estimated	Season	Remarks
42360		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
57912		N	1/1 - 12/31	
		N	1/1 - 12/31	
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		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
4042		N	1/1 - 12/31	
4042		N	1/1 - 12/31	
79755		N	3/1 - 11/1	
79755		N	3/1 - 11/1	
79757		N	3/1 - 11/1	
79757		N	3/1 - 11/1	
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
79756		N	3/1 - 11/1	
79756		N	3/1 - 11/1	
		N	3/1 - 10/31	
		N	3/1 - 10/31	
50944		N	1/1 - 12/31	
54987		N	1/1 - 12/31	
54987		N	1/1 - 12/31	
54987		N	1/1 - 12/31	
54987		N	1/1 - 12/31	
54987		N	1/1 - 12/31	
54987		N	1/1 - 12/31	
4074		N	1/1 - 12/31	
4074		N	1/1 - 12/31	
4065		N	1/1 - 12/31	
4065		N	1/1 - 12/31	
65542		N	1/1 - 12/31	
65542		N	1/1 - 12/31	
		N	1/1 - 12/31	6/1-9/30
		N	1/1 - 12/31	6/1-9/30
	9	N	1/1 - 12/31	APPRORIATED FOR STORAGE 10/1-4/14

Certificate	Condition Code
42360	
57912	
57912	
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50944	
54987	
54987	
54987	
54987	
54987	
54987	
4074	
4074	
4065	
4065	
65542	
65542	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
	R 13005				1994	1	Edward V Hayhurst Jr & Janice M	3.1E+07
4484			Powder River		1868	4	Roy Stewart	72191
4484			Powder River		1868	3	Roy Stewart	72191
60342	G 8449				1978	2	Henry Steele	72191
4147			Powder River		1865	2	A A Fidler	72191
4147			Powder River		1865	2	A A Fidler	72194
60343	G 8450				1978	1	Henry Steele	72191
60343	G 8450				1978	1	Henry Steele	72191
60343	G 8450				1978	1	Henry Steele	72194
60343	G 8450				1978	1	Henry Steele	72194
64036	G 10007				1982	1	City of Haines	72194
64036	G 10007				1982	1	City of Haines	3.1E+07
31544	G 2305				1962	1	City of Haines	72191
31544	G 2305				1962	1	City of Haines	72194
31544	G 2305				1962	1	City of Haines	3.1E+07
61717	R 7988				1978	1	City of Haines	3.1E+07
61717	R 7988				1978	2	City of Haines	3.1E+07
61717	R 7988				1978	3	City of Haines	3.1E+07
61717	R 7988				1978	4	City of Haines	3.1E+07
13957	S 12398				1936	1	W A Daugherty	72191
13957	S 12398				1936	1	W A Daugherty	72194
13957	S 12398				1936	1	W A Daugherty	3.1E+07
61718	S 44658				1978	1	City of Haines	3.1E+07
61718	S 44658				1978	2	City of Haines	3.1E+07
61718	S 44658				1978	3	City of Haines	3.1E+07
61718	S 44658				1978	4	City of Haines	3.1E+07
		GR3019			1923	1	Edith H Miller	72191
73652					1993	2	The Hart Estate Investmnt Co	72191
73652					1993	1	The Hart Estate Investmnt Co	72191
73652					1993	3	The Hart Estate Investmnt Co	72191
73652					1993	4	The Hart Estate Investmnt Co	72191
	G 13616				1998	3	Cal Worthington, Brad Allen	72191
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
	A SPR/HAYHURST RES	07.00S39.00E-32-SWSW	LW	0.00	0.00	N	9
4484	FISH CR	07.00S39.00E-33-NENW	IR	3.50	0.00	Y	
4484	SLOUGH	07.00S39.00E-33-NENW	IR	3.50	0.00	Y	
60342	SUMP WELL 2	07.00S39.00E-33-NENW	IS	3.41	0.00	Y	
4147	FISH CR	07.00S39.00E-33-NWNE	IR	1.80	0.00	Y	
4147	FISH CR	07.00S39.00E-33-NWNE	IR	1.80	0.00	Y	
60343	A WELL	07.00S39.00E-33-NWNE	IR	0.27	0.27	N	
60343	A WELL	07.00S39.00E-33-NWNE	IS	3.14	3.14	N	
60343	A WELL	07.00S39.00E-33-NWNE	IR	0.27	0.27	N	
60343	A WELL	07.00S39.00E-33-NWNE	IS	3.14	3.14	N	
64036	WELL 3	07.00S39.00E-33-SENE	MU	1.78	1.78	N	
64036	WELL 3	07.00S39.00E-33-SENE	MU	1.78	1.78	N	
31544	WELL 3	07.00S39.00E-33-SENW	MU	0.33	0.33	N	
31544	WELL 3	07.00S39.00E-33-SENW	MU	0.33	0.33	N	
31544	WELL 3	07.00S39.00E-33-SENW	MU	0.33	0.33	N	
61717	SEWAGE EFF/LAGOON 1	07.00S39.00E-34-NESE	IR	0.00	0.00	N	5
61717	SEWAGE EFF/LAGOON 2	07.00S39.00E-34-NESE	IR	0.00	0.00	N	21.8
61717	SEWAGE EFF/LAGOON 3	07.00S39.00E-34-NESE	IR	0.00	0.00	N	10.7
61717	SEWAGE EFF/LAGOON 4	07.00S39.00E-34-NESE	IR	0.00	0.00	N	5.5
13957	POWDER R/RES	07.00S39.00E-34-NWNW	IS	0.62	0.62	N	
13957	POWDER R/RES	07.00S39.00E-34-NWNW	IS	0.62	0.62	N	
13957	POWDER R/RES	07.00S39.00E-34-NWNW	IS	0.62	0.62	N	
61718	SEWAGE EFF/LAGOON 1	07.00S39.00E-34-SWNE	IR	0.45	0.45	N	
61718	SEWAGE EFF/LAGOON 2	07.00S39.00E-34-SWNE	IR	0.45	0.00	Y	
61718	SEWAGE EFF/LAGOON 3	07.00S39.00E-34-SWNE	IR	0.45	0.00	Y	
61718	SEWAGE EFF/LAGOON 4	07.00S39.00E-34-SWNE	IR	0.45	0.00	Y	
	A WELL	07.00S40.00E-3-SWSW	IR	1.56	1.56	N	
73652	GENTRY CR/RES 8	07.00S40.00E-4-SWSE	LV	0.00	0.00	N	1.365
73652	GENTRY CR/RES 7	07.00S40.00E-4-SWSW	LV	0.00	0.00	N	1.365
73652	GENTRY CR/RES 9	07.00S40.00E-5-NWNE	LV	0.00	0.00	N	1.365
73652	GENTRY CR/RES 10	07.00S40.00E-7-SWNE	LV	0.00	0.00	N	1.365
	WELL 3	07.00S40.00E-19-SWSE	IR	1.34	1.34	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	8.00	8.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	10.00	10.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	15.00	15.00	N	

Certificate	ACF	ACF Estimated	Season	Remarks
	9	N	1/1 - 12/31	APPRORIATED FOR STORAGE 10/1-4/14
4484		N	1/1 - 12/31	
4484		N	1/1 - 12/31	
60342		N	1/1 - 12/31	
4147		N	1/1 - 12/31	
4147		N	1/1 - 12/31	
60343		N	1/1 - 12/31	
60343		N	1/1 - 12/31	
60343		N	1/1 - 12/31	
60343		N	1/1 - 12/31	
64036		N	1/1 - 12/31	
64036		N	1/1 - 12/31	
31544		N	1/1 - 12/31	
31544		N	1/1 - 12/31	
31544		N	1/1 - 12/31	
61717	5	N	1/1 - 12/31	
61717	21.8	N	1/1 - 12/31	
61717	10.7	N	1/1 - 12/31	
61717	5.5	N	1/1 - 12/31	
13957		N	1/1 - 12/31	
13957		N	1/1 - 12/31	
13957		N	1/1 - 12/31	
61718		N	1/1 - 12/31	
61718		N	1/1 - 12/31	
61718		N	1/1 - 12/31	
61718		N	1/1 - 12/31	
		N	1/1 - 12/31	
73652	0	Y	1/1 - 12/31	
73652	1.365	N	1/1 - 12/31	
73652	0	Y	1/1 - 12/31	
73652	0	Y	1/1 - 12/31	
		N	1/1 - 12/31	4/1 10/31
73321		N	1/1 - 1/15	
73321		N	1/15 - 1/31	
73321		N	10/1 - 10/15	
73321		N	10/16 - 10/31	
73321		N	11/1 - 11/15	
73321		N	11/16 - 11/30	
73321		N	12/1 - 12/15	
73321		N	12/16 - 12/31	
73321		N	2/1 - 2/15	
73321		N	8/1 - 8/15	
73321		N	8/16 - 8/30	
73321		N	9/1 - 9/15	
73321		N	9/16 - 9/30	
73321		N	7/16 - 7/31	
73321		N	2/16 - 2/29	

Certificate	Condition Code
4484	
4484	
60342	
4147	
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60343	
60343	
60343	
60343	
64036	
64036	
31544	
31544	
31544	
61717	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
73321					1991	1		71685
19791	S 17891				1900	1	Edward W/Ollie Coles	72159
73856					1993	2	Tim L & Janice L Kerns	3.1E+07
73856					1993	2	Tim L & Janice L Kerns	3.1E+07
73856					1993	2	Tim L & Janice L Kerns	3.1E+07
74059	G 7981				1977	1	Tim & Janice Kerns	3.1E+07
74067	G 7981				1977	1	Tim & Jan Kerns	3.1E+07
46114	G 4759				1969	1	Fred V Spence Jr	3.1E+07
65290	S 42717				1977	1	ODFW	3.1E+07
66529	S 42339				1977	1	Fred B Schreeck	3.1E+07
65290	S 42717				1977	2	ODFW	3.1E+07
66529	S 42339				1977	2	Fred B Schreeck	3.1E+07
73856					1993	1	Tim L & Janice L Kerns	3.1E+07
73856					1993	1	Tim L & Janice L Kerns	3.1E+07
73856					1993	1	Tim L & Janice L Kerns	3.1E+07
74060	G 7980				1977	1	Tim & Janice Kerns	3.1E+07
74068	G 7980				1977	1	Tim & Jan Kerns	3.1E+07
74069			Powder River	T 7916	1864	1	Tim & Jan Kerns	3.1E+07
74069			Powder River	T 7916	1901	1	Tim & Jan Kerns	3.1E+07
74069			Powder River	T 7916	1864	3	Tim & Jan Kerns	3.1E+07
74069			Powder River	T 7916	1868	3	Tim & Jan Kerns	3.1E+07
74069			Powder River	T 7916	1883	3	Tim & Jan Kerns	3.1E+07
8494	S 6312				1924	2	C J Markle	3.1E+07
8494	S 6312				1924	1	C J Markle	3.1E+07
	S 52454				1992	2	Jane P Markle	3.1E+07
66529	S 42339				1977	3	Fred B Schreeck	3.1E+07
4131			Powder River		1904	1	J H Ensminger	3.1E+07
46852			Powder River	T 3000	1884	1	Blanche McCullough	3.1E+07
46852			Powder River	T 3000	1904	1	Blanche McCullough	3.1E+07
72623			Powder River		1899	2	Wilcox Ditch Co, Brad Allen	3.1E+07
74033			Powder River	T 7155	1882	2	Fred Screeck	3.1E+07
69306					1993	1	ODFW	3.1E+07
7562	S 7990				1927	2	John/Sarah Richmond	3.1E+07
74033			Powder River	T 7155	1882	3	Fred Screeck	3.1E+07
	S 44276				1978	1	James E Kerns	3.1E+07
	S 44276				1979	1	James E Kerns	3.1E+07
4304			Powder River		1906	1	Thomas Leffler	72194
5788	S 5174				1921	1	Guy Badsky, H S Moulton	72191
5788	S 5174				1921	1	Guy Badsky, H S Moulton	72194
5818	R 510				1921	1	Guy Badsky, H S Moulton	72191

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	15.00	15.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	20.00	20.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	20.00	20.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	25.00	25.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	25.00	25.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	25.00	25.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	25.00	25.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	25.00	25.00	N	
73321	N POWDER R	08.00S37.00E-4-NWSE	F8	25.00	25.00	N	
19791	KILLAMACUE LAKE RES	08.00S37.00E-14-NWNE	IL	0.00	0.00	N	199.5
73856	RUNOFF/RES 2	08.00S38.00E-1-SWSW	LW	0.00	0.00	N	0.2
73856	RUNOFF/RES 2	08.00S38.00E-1-SWSW	RC	0.00	0.00	N	0.2
73856	RUNOFF/RES 2	08.00S38.00E-1-SWSW	ST	0.00	0.00	N	0.2
74059	SUMP 2	08.00S38.00E-1-SWSW	IS	0.29	0.29	N	
74067	SUMP 2	08.00S38.00E-1-SWSW	IS	0.26	0.26	N	
46114	SUMP WELL	08.00S38.00E-2-NESW	IS	0.22	0.22	N	
65290	DRAINAGE TILE	08.00S38.00E-2-NESW	IC	0.46	0.46	N	
66529	SEEP AREA/POND 1	08.00S38.00E-2-NWNW	IS	0.44	0.44	N	
65290	SPR 3	08.00S38.00E-2-NWSW	IC	0.20	0.20	N	
66529	SEEP AREA/POND 2	08.00S38.00E-2-SENW	IS	0.14	0.14	N	
73856	ROCK CR/RES 1	08.00S38.00E-2-SENW	LW	0.00	0.00	N	0.25
73856	ROCK CR/RES 1	08.00S38.00E-2-SENW	RC	0.00	0.00	N	0.25
73856	ROCK CR/RES 1	08.00S38.00E-2-SENW	ST	0.00	0.00	N	0.25
74060	SUMP 1	08.00S38.00E-2-SWNE	IS	0.18	0.18	N	
74068	SUMP 1	08.00S38.00E-2-SWNE	IS	0.16	0.16	N	
74069	MARBLE CR	08.00S38.00E-2-SWNE	IR	0.63	0.63	N	
74069	MARBLE CR	08.00S38.00E-2-SWNE	IR	0.45	0.45	N	
74069	WILLOW CR	08.00S38.00E-2-SWNE	IR	1.50	1.50	N	
74069	WILLOW CR	08.00S38.00E-2-SWNE	IR	1.05	1.05	N	
74069	WILLOW CR	08.00S38.00E-2-SWNE	IR	0.58	0.58	N	
8494	CLEAR CR	08.00S38.00E-3-NESE	IR	0.25	0.00	Y	
8494	CLEAR CR	08.00S38.00E-3-NWSE	IR	0.25	0.25	N	
	A SPR	08.00S38.00E-3-NWSW	IC	0.50	0.50	N	
66529	SEEP AREA/POND 3	08.00S38.00E-3-SENE	IS	0.18	0.18	N	
4131	ROCK CR	08.00S38.00E-3-SENW	IR	0.60	0.60	N	
46852	WILLOW CR	08.00S38.00E-3-SENW	IS	2.45	2.45	N	
46852	WILLOW CR	08.00S38.00E-3-SENW	IR	0.50	0.50	N	
72623	WILLOW CR	08.00S38.00E-3-SENW	IR	34.18	0.00	Y	
74033	WILLOW CR	08.00S38.00E-3-SENW	IR	1.03	0.00	Y	
69306	UNN SPR/POND 10	08.00S38.00E-3-SESE	LW	0.00	0.00	N	0.3
7562	WASTE WATER	08.00S38.00E-3-SWNE	I*	0.80	0.00	Y	
74033	WILLOW CR	08.00S38.00E-3-SWNE	IR	1.03	0.00	Y	
	A STREAM	08.00S38.00E-3-SWNE	IS	0.67	0.67	N	
	A STREAM	08.00S38.00E-3-SWNE	IS	0.34	0.34	N	
4304	ROCK CR	08.00S38.00E-5-NENE	IR	0.65	0.65	N	
5788	MUDDY CR/CLEAR L RS	08.00S38.00E-5-NWNW	FI	0.00	0.00	N	30
5788	MUDDY CR/CLEAR L RS	08.00S38.00E-5-NWNW	FI	0.00	0.00	N	30
5818	BIG MUDDY CR	08.00S38.00E-5-NWNW	FI	0.00	0.00	N	30

Certificate	ACF	ACF Estimated	Season	Remarks
73321		N	7/1 - 7/15	
73321		N	3/1 - 3/15	
73321		N	3/16 - 3/31	
73321		N	4/1 - 4/15	
73321		N	4/16 - 4/30	
73321		N	5/1 - 5/15	
73321		N	5/16 - 5/31	
73321		N	6/1 - 6/15	
73321		N	6/16 - 6/30	
19791	199.5	N	1/1 - 12/31	IRR SUP'L ONLY
73856	0	Y	1/1 - 12/31	
73856	0	Y	1/1 - 12/31	
73856	0.2	N	1/1 - 12/31	
74059		N	1/1 - 12/31	
74067		N	1/1 - 12/31	
46114		N	1/1 - 12/31	
65290		N	1/1 - 12/31	
66529		N	1/1 - 12/31	
65290		N	1/1 - 12/31	
66529		N	1/1 - 12/31	
73856	0	Y	1/1 - 12/31	
73856	0	Y	1/1 - 12/31	
73856	0.25	N	1/1 - 12/31	
74060		N	1/1 - 12/31	
74068		N	1/1 - 12/31	
74069		N	1/1 - 12/31	TRACT 1; 25.0 ACRES
74069		N	1/1 - 12/31	TRACT 1; 18.0 ACRES
74069		N	1/1 - 12/31	TRACT 3; 60.0 ACRES
74069		N	1/1 - 12/31	TRACT 3; 41.81 ACRES
74069		N	1/1 - 12/31	TRACT 3; 23.0 ACRES
8494		N	1/1 - 12/31	
8494		N	1/1 - 12/31	
		N	1/1 - 12/31	
66529		N	1/1 - 12/31	
4131		N	1/1 - 12/31	
46852		N	1/1 - 12/31	
46852		N	1/1 - 12/31	
72623		N	1/1 - 12/31	
74033		N	1/1 - 12/31	
69306	0.3	N	1/1 - 12/31	
7562		N	1/1 - 12/31	
74033		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
4304		N	1/1 - 12/31	
5788	30	N	1/1 - 12/31	
5788	30	N	1/1 - 12/31	
5818	30	N	1/1 - 12/31	

Certificate	Condition Code
73321	
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19791	
73856	
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46114	
65290	
66529	
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8494	
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72623	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
5818	R 510				1921	1	Guy Badsky, H S Moulton	72194
76596			Powder River	T 6234	1883	2	Powder Valley WCD	72159
76596			Powder River	T 6234	1883	3	Powder Valley WCD	72159
38199	S 33077				1967	1	Olga Ward Estate	72159
951	S 1315				1912	1	H B Barker	3.1E+07
73856					1993	3	Tim L & Janice L Kerns	3.1E+07
73856					1993	3	Tim L & Janice L Kerns	3.1E+07
73856					1993	3	Tim L & Janice L Kerns	3.1E+07
	G 13157			T 7975	1994	1	Kerns Rainbow Ranch Inc	3.1E+07
	G 13855				1999	2	Janice Kerns, Kerns Rainbow Ranch Inc	3.1E+07
	G 13855				1999	2	Janice Kerns, Kerns Rainbow Ranch Inc	3.1E+07
35204	S 29252				1963	2	Beulah Sackos Estate	3.1E+07
35204	S 29252				1963	3	Beulah Sackos Estate	3.1E+07
	G 13158				1994	1	Kerns Rainbow Ranch Inc	3.1E+07
70890					1993	1	Tim A Kerns	3.1E+07
70890					1993	1	Tim A Kerns	3.1E+07
70890					1993	1	Tim A Kerns	3.1E+07
70890					1993	4	Tim A Kerns	3.1E+07
70890					1993	4	Tim A Kerns	3.1E+07
70890					1993	4	Tim A Kerns	3.1E+07
38014	R 5048				1967	1	Marcus Sackos	3.1E+07
38014	R 5048				1967	2	Marcus Sackos	3.1E+07
38015	S 32743				1966	1	Marcus Sackos	3.1E+07
38015	S 32743				1966	2	Marcus Sackos	3.1E+07
70890					1993	2	Tim A Kerns	3.1E+07
70890					1993	2	Tim A Kerns	3.1E+07
70890					1993	2	Tim A Kerns	3.1E+07
70890					1993	3	Tim A Kerns	3.1E+07
70890					1993	3	Tim A Kerns	3.1E+07
70890					1993	3	Tim A Kerns	3.1E+07
72614	S 8034				1927	3	Kerns Bros Inc	3.1E+07
9129	S 7769				1926	1	Nimma Masters	3.1E+07
7669	S 6065				1923	1	Huldah Masters, Nimma Masters, Samuel E Masters	3.1E+07
7718	S 6134				1923	1	J W Phillips	3.1E+07
66820	G 9888				1982	1	Phillip R Stevenson, Mickey & Linda Cowan	3.1E+07
7251	S 4175				1919	1	Charlie D Dunn	3.1E+07
4490			Powder River		1868	2	Adaline Sturgill	3.1E+07
4891	S 5520				1922	1	Mary W Ruth, Guardian for Robert Street	3.1E+07
55292	S 42943				1978	1	Harry A Phillips	3.1E+07
72614	S 8034				1927	1	Kerns Bros Inc	3.1E+07
72614	S 8034				1927	2	Kerns Bros Inc	3.1E+07
67075	S 41459				1977	1	Harry A Phillips	3.1E+07
67075	S 41459				1977	1	Harry A Phillips	3.1E+07
4055			Powder River		1902	1	W A Cartmill	3.1E+07
4584			Powder River		1901	2	Peter F Young	3.1E+07
4584			Powder River		1901	1	Peter F Young	3.1E+07
66608			Powder R, Consol		1880	1	Fred Lamprecht	3.1E+07
66608			Powder R, Consol		1888	1	Fred Lamprecht	3.1E+07
66608			Powder R, Consol		1902	1	Fred Lamprecht	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
5818	BIG MUDDY CR	08.00S38.00E-5-NWNW	FI	0.00	0.00	N	30
76596	KILLAMACUE CR	08.00S38.00E-7-NWNE	IR	7.00	0.00	Y	
76596	LITTLE MUDDY CR	08.00S38.00E-7-NWNE	IR	7.00	0.00	Y	
38199	WILLOW CR	08.00S38.00E-7-NWNW	IS	1.15	1.15	N	
951	MARBLE CR	08.00S38.00E-11-NENW	IL	0.15	0.15	N	
73856	RUNOFF/RES 3	08.00S38.00E-12-NENE	LW	0.00	0.00	N	0.33
73856	RUNOFF/RES 3	08.00S38.00E-12-NENE	RC	0.00	0.00	N	0.33
73856	RUNOFF/RES 3	08.00S38.00E-12-NENE	ST	0.00	0.00	N	0.33
	WELL 1	08.00S38.00E-12-NENE	IS	2.50	2.50	N	
	WELL 2	08.00S38.00E-12-NENE	IR	0.00	0.00	N	0.28
	WELL 2	08.00S38.00E-12-NENE	IS	0.28	0.00	Y	
35204	A SPR	08.00S38.00E-12-NWNW	IR	0.52	0.52	N	
35204	A SPR	08.00S38.00E-12-NWNW	IR	0.52	0.00	Y	
	WELL 2	08.00S38.00E-12-NWSE	IS	3.25	3.25	N	
70890	SPRS/RES 1	08.00S38.00E-12-NWSW	IR	0.00	0.00	N	0.25
70890	SPRS/RES 1	08.00S38.00E-12-NWSW	LW	0.00	0.00	N	0.25
70890	SPRS/RES 1	08.00S38.00E-12-NWSW	RC	0.00	0.00	N	0.25
70890	SPRS/RES 4	08.00S38.00E-12-SENE	IR	0.00	0.00	N	0.1
70890	SPRS/RES 4	08.00S38.00E-12-SENE	LW	0.00	0.00	N	0.1
70890	SPRS/RES 4	08.00S38.00E-12-SENE	RC	0.00	0.00	N	0.1
38014	UNN DRAIN 1	08.00S38.00E-12-SENW	IR	0.00	0.00	N	1.75
38014	UNN DRAIN 2	08.00S38.00E-12-SENW	IR	0.00	0.00	N	1.75
38015	UNN DRAIN 1/RES	08.00S38.00E-12-SENW	IR	0.68	0.68	N	
38015	UNN DRAIN 2/RES	08.00S38.00E-12-SENW	IR	0.68	0.68	N	
70890	SPRS/RES 2	08.00S38.00E-12-SENW	IR	0.00	0.00	N	0.4
70890	SPRS/RES 2	08.00S38.00E-12-SENW	LW	0.00	0.00	N	0.4
70890	SPRS/RES 2	08.00S38.00E-12-SENW	RC	0.00	0.00	N	0.4
70890	SPRS/RES 3	08.00S38.00E-12-SWNE	IR	0.00	0.00	N	0.2
70890	SPRS/RES 3	08.00S38.00E-12-SWNE	LW	0.00	0.00	N	0.2
70890	SPRS/RES 3	08.00S38.00E-12-SWNE	RC	0.00	0.00	N	0.2
72614	WASTE WATER	08.00S38.00E-13-NESE	IS	1.75	0.00	Y	
9129	FIVE SMALL SPRS	08.00S38.00E-13-NWSE	DS	0.10	0.10	N	
7669	HUNT CR	08.00S38.00E-13-SESW	IL	1.25	1.25	N	
7718	HUNT CR	08.00S38.00E-14-SESE	IR	0.28	0.28	N	
66820	POND 1	08.00S38.00E-1-SESE	IC	0.76	0.76	N	
7251	WILLIAMS CR	08.00S38.00E-23-NESW	IR	0.38	0.38	N	
4490	STURGILL SPRS	08.00S38.00E-23-SENE	IR	1.34	0.00	Y	
4891	PINE CR	08.00S38.00E-23-SWSE	ID	0.60	0.60	N	
55292	SPR 1	08.00S38.00E-23-SWSE	IS	0.35	0.35	N	
72614	WASTE WATER	08.00S38.00E-23-SWSE	IS	1.75	1.75	N	
72614	WASTE WATER	08.00S38.00E-24-NWSE	IS	1.75	0.00	Y	
67075	PHILLIPS SPR	08.00S38.00E-24-SESW	IC	0.50	0.50	N	
67075	PHILLIPS SPR	08.00S38.00E-24-SESW	IC	0.50	0.50	N	
4055	PINE CR	08.00S38.00E-25-NWSE	IR	4.00	4.00	N	
4584	A SPR	08.00S38.00E-25-NWSW	IR	0.30	0.00	Y	
4584	PINE CR	08.00S38.00E-25-NWSW	IR	0.30	0.30	N	
66608	PINE CR	08.00S38.00E-25-SENW	IR	1.05	1.05	N	
66608	PINE CR	08.00S38.00E-25-SENW	IR	1.05	0.00	Y	
66608	PINE CR	08.00S38.00E-25-SENW	IR	1.05	0.00	Y	

Certificate	ACF	ACF Estimated	Season	Remarks
5818	30	N	1/1 - 12/31	
76596		N	1/1 - 12/31	
76596		N	1/1 - 12/31	
38199		N	1/1 - 12/31	
951		N	1/1 - 12/31	
73856	0	Y	1/1 - 12/31	
73856	0	Y	1/1 - 12/31	
73856	0.33	N	1/1 - 12/31	
		N	1/1 - 12/31	
	0	Y	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	3/1 10/31
35204		N	1/1 - 12/31	
35204		N	1/1 - 12/31	
		N	1/1 - 12/31	
70890	0.25	N	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
70890	0.1	N	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
38014	1.75	N	1/1 - 12/31	
38014	1.75	N	1/1 - 12/31	
38015		N	1/1 - 12/31	
38015		N	1/1 - 12/31	
70890	0.4	N	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
70890	0.2	N	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
72614		N	1/1 - 12/31	
9129		N	1/1 - 12/31	
7669		N	1/1 - 12/31	
7718		N	1/1 - 12/31	
66820		N	1/1 - 12/31	
7251		N	1/1 - 12/31	
4490		N	1/1 - 12/31	
4891		N	1/1 - 12/31	
55292		N	1/1 - 12/31	
72614		N	1/1 - 12/31	
72614		N	1/1 - 12/31	
67075		N	1/1 - 12/31	
67075		N	1/1 - 12/31	
4055		N	1/1 - 12/31	
4584		N	1/1 - 12/31	
4584		N	1/1 - 12/31	
66608		N	1/1 - 12/31	
66608		N	1/1 - 12/31	
66608		N	1/1 - 12/31	

Certificate	Condition Code
5818	
76596	
76596	
38199	
951	
73856	
73856	
73856	
35204	
35204	
70890	
70890	
70890	
70890	
70890	
70890	
38014	
38014	
38015	
38015	
70890	
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70890	
70890	
72614	
9129	
7669	
7718	
66820	
7251	
4490	
4891	
55292	
72614	
72614	
67075	
67075	
4055	
4584	
4584	
66608	
66608	
66608	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
70253					1993	1	Margaret B Gates	3.1E+07
70253					1993	1	Margaret B Gates	3.1E+07
70253					1993	1	Margaret B Gates	3.1E+07
72621			Powder River		1904	1	David & Carol Phillips	3.1E+07
72621			Powder River		1909	1	David & Carol Phillips	3.1E+07
79688			Powder R, Consol		1890	1	L Ison	3.1E+07
72062					1993	1	Lynn E Carlson	3.1E+07
72062					1993	1	Lynn E Carlson	3.1E+07
72062					1993	1	Lynn E Carlson	3.1E+07
72062					1993	1	Lynn E Carlson	3.1E+07
72062					1993	2	Lynn E Carlson	3.1E+07
72062					1993	2	Lynn E Carlson	3.1E+07
72062					1993	2	Lynn E Carlson	3.1E+07
72062					1993	2	Lynn E Carlson	3.1E+07
72062					1993	3	Lynn E Carlson	3.1E+07
72062					1993	3	Lynn E Carlson	3.1E+07
72062					1993	3	Lynn E Carlson	3.1E+07
72062					1993	3	Lynn E Carlson	3.1E+07
4361			Powder River		1902	1	C D Moll	3.1E+07
4361			Powder River		1911	1	C D Moll	3.1E+07
39217			Powder River	P 78	1890	1	Calvin Ninas	3.1E+07
72619			N Powder R		1899	3	Kerns Bros Inc	3.1E+07
72619			N Powder R		1899	3	Kerns Bros Inc	3.1E+07
	S 53908				1997	2	Tom Mac Kerns	3.1E+07
	S 53908				1997	2	Tom Mac Kerns	3.1E+07
4331			Powder River		1904	1	Huldah Masters	3.1E+07
4333			Powder River		1872	1	S E, Nimma & Huldah Masters	3.1E+07
4333			Powder River		1885	1	S E, Nimma & Huldah Masters	3.1E+07
4333			Powder River		1893	1	S E, Nimma & Huldah Masters	3.1E+07
4333			Powder River		1905	1	S E, Nimma & Huldah Masters	3.1E+07
4383			Powder River		1868	1	C C Olson	3.1E+07
4383			Powder River		1872	1	C C Olson	3.1E+07
4383			Powder River		1885	1	C C Olson	3.1E+07
4383			Powder River		1894	1	C C Olson	3.1E+07
4383			Powder River		1899	1	C C Olson	3.1E+07
13430			Powder River		1900	1	Charlie Dunn	3.1E+07
54109			Powder River	T 5726	1868	1	James W & T B Phillips	3.1E+07
54109			Powder River	T 5726	1871	1	James W & T B Phillips	3.1E+07
54109			Powder River	T 5726	1907	1	James W & T B Phillips	3.1E+07
64988			Powder River	T 5726	1868	1	Betty E Green	3.1E+07
72618	S 10721				1931	1	Kerns Bros Inc	3.1E+07
72619			N Powder R		1899	2	Kerns Bros Inc	3.1E+07
4419			Powder River		1894	1	W J Polley	3.1E+07
4419			Powder River		1907	1	W J Polley	3.1E+07
4447			Powder River		1897	1	Lou M Seig	3.1E+07
4447			Powder River		1903	1	Lou M Seig	3.1E+07
34840	S 410				1910	1	Norman Butler	3.1E+07
58468	R 8649				1982	1	David L Phillips	3.1E+07
58505	R 8608				1982	1	David L Phillips	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
70253	RUNOFF/GATES RES	08.00S38.00E-25-SENW	FP	0.00	0.00	N	0.5
70253	RUNOFF/GATES RES	08.00S38.00E-25-SENW	IR	0.00	0.00	N	0.5
70253	RUNOFF/GATES RES	08.00S38.00E-25-SENW	WI	0.00	0.00	N	0.5
72621	PINE CR	08.00S38.00E-25-SENW	IR	7.86	7.86	N	
72621	PINE CR	08.00S38.00E-25-SENW	IR	7.86	0.00	Y	
79688	PINE CR	08.00S38.00E-25-SENW	IR	0.83	0.83	N	
72062	SPR 1/RES 1	08.00S38.00E-25-SESE	AS	0.00	0.00	N	0.12
72062	SPR 1/RES 1	08.00S38.00E-25-SESE	FW	0.00	0.00	N	0.12
72062	SPR 1/RES 1	08.00S38.00E-25-SESE	IL	0.00	0.00	N	0.12
72062	SPR 1/RES 1	08.00S38.00E-25-SESE	RC	0.00	0.00	N	0.12
72062	SPR 2/RES 2	08.00S38.00E-25-SESE	AS	0.00	0.00	N	0.06
72062	SPR 2/RES 2	08.00S38.00E-25-SESE	FW	0.00	0.00	N	0.06
72062	SPR 2/RES 2	08.00S38.00E-25-SESE	IL	0.00	0.00	N	0.06
72062	SPR 2/RES 2	08.00S38.00E-25-SESE	RC	0.00	0.00	N	0.06
72062	SPR 3/RES 3	08.00S38.00E-25-SESE	AS	0.00	0.00	N	0.01
72062	SPR 3/RES 3	08.00S38.00E-25-SESE	FW	0.00	0.00	N	0.01
72062	SPR 3/RES 3	08.00S38.00E-25-SESE	IL	0.00	0.00	N	0.01
72062	SPR 3/RES 3	08.00S38.00E-25-SESE	RC	0.00	0.00	N	0.01
4361	GEE CR	08.00S38.00E-25-SESW	IR	0.13	0.13	N	
4361	GEE CR	08.00S38.00E-25-SESW	IR	0.13	0.13	N	
39217	PINE CR	08.00S38.00E-25-SWNW	IR	0.74	0.74	N	
72619	PINE CR	08.00S38.00E-26-NENW	IR	0.62	0.00	Y	
72619	PINE CR	08.00S38.00E-26-NENW	IR	0.62	0.00	Y	
	PINE CR	08.00S38.00E-26-NENW	IS			N	30
	PINE CR	08.00S38.00E-26-NENW	IS			N	30
4331	PINE CR	08.00S38.00E-26-NWNW	IR	1.00	1.00	N	
4333	PINE CR	08.00S38.00E-26-NWNW	IR	0.90	0.90	N	
4333	PINE CR	08.00S38.00E-26-NWNW	IR	1.43	1.43	N	
4333	PINE CR	08.00S38.00E-26-NWNW	IR	2.30	2.30	N	
4333	PINE CR	08.00S38.00E-26-NWNW	IR	0.95	0.95	N	
4383	PINE CR	08.00S38.00E-26-NWNW	IR	0.83	0.83	N	
4383	PINE CR	08.00S38.00E-26-NWNW	IR	1.88	1.88	N	
4383	PINE CR	08.00S38.00E-26-NWNW	IR	5.00	5.00	N	
4383	PINE CR	08.00S38.00E-26-NWNW	IR	1.38	1.38	N	
4383	PINE CR	08.00S38.00E-26-NWNW	IR	1.94	1.94	N	
13430	PINE CR	08.00S38.00E-26-NWNW	IR	0.38	0.38	N	
54109	PINE CR	08.00S38.00E-26-NWNW	IR	1.50	1.50	N	
54109	PINE CR	08.00S38.00E-26-NWNW	IR	1.29	1.29	N	
54109	PINE CR	08.00S38.00E-26-NWNW	IR	1.06	1.06	N	
64988	PINE CR	08.00S38.00E-26-NWNW	IR	0.50	0.50	N	
72618	PINE CR/RES	08.00S38.00E-26-NWNW	IS	7.00	7.00	N	
72619	PINE CR	08.00S38.00E-26-NWNW	IR	0.62	0.00	Y	
4419	PINE CR	08.00S38.00E-26-SENE	IR	0.75	0.75	N	
4419	PINE CR	08.00S38.00E-26-SENE	IR	1.25	1.25	N	
4447	PINE CR	08.00S38.00E-26-SENE	IR	0.63	0.63	N	
4447	PINE CR	08.00S38.00E-26-SENE	IR	3.34	3.34	N	
34840	PINE CR	08.00S38.00E-26-SENE	IR	1.78	1.78	N	
58468	SPR 2	08.00S38.00E-26-SENE	LV	0.00	0.00	N	0.04
58505	PINE CR	08.00S38.00E-26-SENE	LV	0.00	0.00	N	0.2

Certificate	ACF	ACF Estimated	Season	Remarks
70253	0	Y	1/1 - 12/31	
70253	0.5	N	1/1 - 12/31	
70253	0	Y	1/1 - 12/31	
72621		N	1/1 - 12/31	
72621		N	1/1 - 12/31	
79688		N	4/1 - 10/1	
72062	0	Y	1/1 - 12/31	
72062	0	Y	1/1 - 12/31	
72062	0.12	N	1/1 - 12/31	
72062	0	Y	1/1 - 12/31	
72062	0	Y	1/1 - 12/31	
72062	0	Y	1/1 - 12/31	
72062	0.06	N	1/1 - 12/31	
72062	0	Y	1/1 - 12/31	
72062	0.01	N	1/1 - 12/31	
72062	0.01	N	1/1 - 12/31	
72062	0.01	N	1/1 - 12/31	
72062	0.01	N	1/1 - 12/31	
4361		N	1/1 - 12/31	
4361		N	1/1 - 12/31	
39217		N	1/1 - 12/31	
72619		N	1/1 - 12/31	
72619		N	1/1 - 12/31	
	10	Y	3/1 - 10/31	
	10	Y	3/1 - 10/31	
4331		N	1/1 - 12/31	
4333		N	1/1 - 12/31	
4333		N	1/1 - 12/31	
4333		N	1/1 - 12/31	
4333		N	1/1 - 12/31	
4383		N	1/1 - 12/31	
4383		N	1/1 - 12/31	
4383		N	1/1 - 12/31	
4383		N	1/1 - 12/31	
4383		N	1/1 - 12/31	
13430		N	1/1 - 12/31	
54109		N	1/1 - 12/31	
54109		N	1/1 - 12/31	
54109		N	1/1 - 12/31	
64988		N	1/1 - 12/31	
72618		N	1/1 - 12/31	
72619		N	1/1 - 12/31	
4419		N	1/1 - 12/31	
4419		N	1/1 - 12/31	
4447		N	1/1 - 12/31	
4447		N	1/1 - 12/31	
34840		N	1/1 - 12/31	
58468	0.04	N	1/1 - 12/31	
58505	0.2	N	1/1 - 12/31	

Certificate	Condition Code
70253	
70253	
70253	
72621	
72621	
79688	
72062	
72062	
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72062	
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72062	
72062	
72062	
4361	
4361	
39217	
72619	
72619	
4331	
4333	
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4383	
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4383	
4383	
4383	
13430	
54109	
54109	
54109	
64988	
72618	
72619	
4419	
4419	
4447	
4447	
34840	
58468	
58505	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
58505	R 8608				1982	2	David L Phillips	3.1E+07
72623			Powder River		1899	3	Wilcox Ditch Co, Brad Allen	3.1E+07
73622			Powder R, Consol		1897	4	Thomas Brock	3.1E+07
73622			Powder R, Consol		1903	4	Thomas Brock	3.1E+07
75492	S 410				1910	1	Miles Lee, E A Van Sicklin	3.1E+07
75492	S 410				1910	1	Miles Lee, E A Van Sicklin	3.1E+07
1860	S 39				1909	1	June B Reynolds	3.1E+07
4444			Powder River		1899	1	Samuel S Scofield	3.1E+07
4168			Powder River		1889	1	R T George	3.1E+07
4251			Powder River		1882	1	Adelia Irvin	3.1E+07
4251			Powder River		1899	1	Adelia Irvin	3.1E+07
57544			Powder River	T 4657	1897	1	Arron L Moxon, Donald R Merritt	3.1E+07
67217			Powder River	T 3940	1898	2	Glen Swilling	3.1E+07
	S 53908				1997	1	Tom Mac Kerns	3.1E+07
31421	S 4813			D 83	1918	1	John Boyer, C W Davison, Nancy A Maxwell	72159
8476	R 490				1918	1	C W Davidson, Nancy A Maxwell	72159
31421	S 4813			D 83	1918	2	John Boyer, C W Davison, Nancy A Maxwell	72159
31421	S 4813			D 83	1918	4	John Boyer, C W Davison, Nancy A Maxwell	72159
73322					1992	1		72159
73322					1992	1		72159
73322					1992	1		72159
73322					1992	1		72159
73322					1992	1		72159
73322					1992	1		72159
73322					1992	1		72159
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73322					1992	1		72159
73322					1992	1		72159
73322					1992	1		72159
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
58505	UNN STR	08.00S38.00E-26-SENE	LV	0.00	0.00	N	0.13
72623	PINE CR	08.00S38.00E-26-SENE	IR	34.18	0.00	Y	
73622	PINE CR	08.00S38.00E-26-SENE	IR	11.30	0.63	N	
73622	PINE CR	08.00S38.00E-26-SENE	IR	11.30	3.29	N	
75492	PINE CR	08.00S38.00E-26-SENE	DO	0.10	0.10	N	
75492	PINE CR	08.00S38.00E-26-SENE	IR	10.41	10.41	N	
1860	GEE CR	08.00S38.00E-26-SESE	IR	0.63	0.63	N	
4444	GEE CR	08.00S38.00E-26-SESE	IR	1.60	1.60	N	
4168	PINE CR	08.00S38.00E-26-SWNE	IR	0.68	0.68	N	
4251	SPRING/PINE CR	08.00S38.00E-26-SWNE	IR	0.15	0.15	N	
4251	SPRING/PINE CR	08.00S38.00E-26-SWNE	IR	1.23	1.23	N	
57544	PINE CR	08.00S38.00E-26-SWNE	IR	0.14	0.14	N	
67217	PINE CR	08.00S38.00E-26-SWNE	IR	1.13	0.00	Y	
	PINE CR	08.00S38.00E-27-NWNW	IS			N	30
31421	ROCK CR RS	08.00S38.00E-31-NESW	IS	2.80	2.80	N	
8476	MELTING SNOW/SPRS	08.00S38.00E-31-NWSW	IR	0.00	0.00	N	500
31421	ROCK CR RS	08.00S38.00E-31-NWSW	IR	2.80	0.00	Y	
31421	ROCK CR RS	08.00S38.00E-31-SESW	IR	2.80	0.00	Y	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	

Certificate	ACF	ACF Estimated	Season	Remarks
58505	0.13	N	1/1 - 12/31	
72623		N	1/1 - 12/31	
73622		N	1/1 - 12/31	25 ACRES
73622		N	1/1 - 12/31	131.4 ACRES
75492		N	1/1 - 12/31	
75492		N	1/1 - 12/31	
1860		N	1/1 - 12/31	
4444		N	1/1 - 12/31	
4168		N	1/1 - 12/31	
4251		N	1/1 - 12/31	
4251		N	1/1 - 12/31	
57544		N	1/1 - 12/31	
67217		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
	10	Y	3/1 - 10/31	
31421		N	1/1 - 12/31	
8476	500	N	1/1 - 12/31	
31421		N	1/1 - 12/31	
31421		N	1/1 - 12/31	
73322		N	1/1 - 1/15	
73322		N	1/15 - 1/31	
73322		N	10/1 - 10/15	
73322		N	10/16 - 10/31	
73322		N	11/1 - 11/15	
73322		N	11/16 - 11/30	
73322		N	12/1 - 12/15	
73322		N	12/16 - 12/31	
73322		N	2/1 - 2/15	
73322		N	2/16 - 2/29	
73322		N	3/1 - 3/15	
73322		N	3/16 - 3/31	
73322		N	4/1 - 4/15	
73322		N	4/16 - 4/30	
73322		N	5/1 - 5/15	
73322		N	5/16 - 5/31	
73322		N	6/1 - 6/15	
73322		N	6/16 - 6/30	
73322		N	7/1 - 7/15	
73322		N	7/16 - 7/31	
73322		N	8/1 - 8/15	
73322		N	8/16 - 8/30	
73322		N	9/1 - 9/15	
73322		N	9/16 - 9/30	
73322		N	1/1 - 1/15	
73322		N	1/15 - 1/31	
73322		N	10/1 - 10/15	
73322		N	10/16 - 10/31	
73322		N	11/1 - 11/15	
73322		N	11/16 - 11/30	
73322		N	12/1 - 12/15	

Certificate	Condition Code
58505	
72623	
73622	
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75492	
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1860	
4444	
4168	
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57544	
67217	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
73322					1992	1		3.1E+07
31421	S 4813			D 83	1918	3	John Boyer, C W Davison, Nancy A Maxwell	72159
10089	R 660				1931	1	Otha D Perkins	3.1E+07
	R 13566				1996	1	Tom Mac Kerns	3.1E+07
	R 13606				1996	1	Tom Mac Kerns	3.1E+07
	S 53908				1997	3	Tom Mac Kerns	3.1E+07
66549			Powder River	T 6232	1868	1	Mary Hunstock	3.1E+07
4469			Powder River		1905	1	Michael R Speelman	3.1E+07
9608			Powder River	T 5665	1962	1	City of Baker	3.1E+07
9608			Powder River	T 5665	1868	24	City of Baker	3.1E+07
38405	S 28839				1963	1	Oscar H Coen	3.1E+07
38405	S 28839				1963	1	Oscar H Coen	3.1E+07
51316	S 7439			T 5038	1926	1	Henri Wallaert	3.1E+07
56976	G 6130				1974	1	Wallace H & Carol V Buholts	3.1E+07
3745	S 4426				1920	1	Henri Wallaert	3.1E+07
26650	S 23235				1954	1	D R Whittemore	3.1E+07
	S 39167				1975	10	Floyd E Duncan	3.1E+07
	S 39167				1975	8	Floyd E Duncan	3.1E+07
	S 39167				1975	9	Floyd E Duncan	3.1E+07
34841	S 1713			B 120	1913	2	Norman Butler	3.1E+07
	G 15399				2002	1	Alex Sackos	3.1E+07
	G 15399				2002	1	Alex Sackos	3.1E+07
4541			Powder River		1899	1	Samuel Wart	3.1E+07
4155			Powder River		1901	1	J M Fosnot	3.1E+07
37675	S 33631				1968	1	Wallace Buholts	3.1E+07
	S 39167				1975	1	Floyd E Duncan	3.1E+07
4155			Powder River		1901	2	J M Fosnot	3.1E+07
63780	S 40			T 5072	1909	1	Deal & Arlene Spriet	3.1E+07
63781	S 40			T 5072	1909	1	Maurice & Mary DeRoest	3.1E+07
63782			Powder River	T 5081	1904	1	Deal & Arlene Spriet	3.1E+07
63782			Powder River	T 5081	1904	2	Deal & Arlene Spriet	3.1E+07
63783			Powder River	T 5081	1904	1	Frank B & Pearlie M Pallo	3.1E+07
63783			Powder River	T 5081	1904	2	Frank B & Pearlie M Pallo	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
73322	ROCK CR	08.00S38.00E-31-SW	F8	20.00	20.00	N	
31421	ROCK CR RS	08.00S38.00E-31-SWSW	IR	2.80	0.00	Y	
10089	PINE CR	08.00S38.00E-32-SWNE	IS	0.00	0.00	N	85
	PINE CR	08.00S38.00E-32-SWNE	ST			N	30
	PINE CR	08.00S38.00E-32-SWNE	ST			N	30
	A RES	08.00S38.00E-32-SWNE	IS			N	30
66549	ROCK CR	08.00S38.00E-34-NWSE	IR	0.72	0.72	N	
4469	GEE CR	08.00S38.00E-35-NENE	IR	1.25	1.25	N	
9608	GOODRICH CR	08.00S38.00E-35-SESE	MU	5.00	5.00	N	
9608	GOODRICH CR	08.00S38.00E-35-SESE	MU	6.25	6.25	N	
38405	BEAR CR	08.00S38.00E-35-SESE	IR	0.13	0.13	N	
38405	BEAR CR	08.00S38.00E-35-SESE	IS	0.46	0.46	N	
51316	GOODRICH CR	08.00S38.00E-35-SWSE	IR	0.50	0.50	N	
56976	BUHOLTS RES	08.00S38.00E-36-NENE	IS	0.15	0.15	N	
3745	MARSH LANDS	08.00S38.00E-36-NENW	IR	0.31	0.31	N	
26650	GEE CR	08.00S38.00E-36-NENW	IR	0.24	0.24	N	
	SPRING 10	08.00S38.00E-36-NESE	ID	8.00	0.00	Y	
	SPRING 8	08.00S38.00E-36-NESE	ID	8.00	0.00	Y	
	SPRING 9	08.00S38.00E-36-NESE	ID	8.00	0.00	Y	
34841	GOODRICH CR	08.00S38.00E-36-NESW	IR	1.78	0.00	Y	
	A WELL	08.00S38.00E-36-NWNE	IR	0.60	0.60	N	
	A WELL	08.00S38.00E-36-NWNE	IS	0.90	0.90	N	
4541	GEE CR	08.00S38.00E-36-NWNW	IR	1.50	1.50	N	
4155	GOODRICH CR	08.00S38.00E-36-NWSW	IR	0.55	0.55	N	
37675	A SPR	08.00S38.00E-36-SENE	IR	0.18	0.18	N	
	SPRING 1	08.00S38.00E-36-SESE	IC	8.00	8.00	N	
4155	BEAR CR	08.00S38.00E-36-SESW	IR	0.55	0.00	Y	
63780	GOODRICH CR	08.00S38.00E-36-SESW	IR	0.50	0.50	N	
63781	GOODRICH CR	08.00S38.00E-36-SESW	IR	0.25	0.25	N	
63782	GOODRICH CR	08.00S38.00E-36-SESW	IR	1.89	1.89	N	
63782	SHERRED SPR	08.00S38.00E-36-SESW	IR	1.89	0.00	Y	
63783	GOODRICH CR	08.00S38.00E-36-SESW	IR	1.72	1.72	N	
63783	SHERRED SPR	08.00S38.00E-36-SESW	IR	1.72	0.00	Y	

Certificate	ACF	ACF Estimated	Season	Remarks
73322		N	12/16 - 12/31	
73322		N	2/1 - 2/15	
73322		N	2/16 - 2/29	
73322		N	3/1 - 3/15	
73322		N	3/16 - 3/31	
73322		N	4/1 - 4/15	
73322		N	4/16 - 4/30	
73322		N	5/1 - 5/15	
73322		N	5/16 - 5/31	
73322		N	6/1 - 6/15	
73322		N	6/16 - 6/30	
73322		N	7/1 - 7/15	
73322		N	7/16 - 7/31	
73322		N	8/1 - 8/15	
73322		N	8/16 - 8/30	
73322		N	9/1 - 9/15	
73322		N	9/16 - 9/30	
31421		N	1/1 - 12/31	
10089	85	N	1/1 - 12/31	
	30	N	10/1 - 4/14	
	30	N	10/1 - 4/14	
	10	Y	3/1 - 10/31	
66549		N	1/1 - 12/31	
4469		N	1/1 - 12/31	
9608		N	1/1 - 12/31	DIV LTD TO QUAN AVAIL AT ORIG POD AUBURN D 8.00S 38.00E 34 SWSE
9608		N	1/1 - 12/31	DIV LTD TO QUAN AVAIL AT ORIG POD N OR N STURGILL D 8S38E36NWSW
38405		N	1/1 - 12/31	
38405		N	1/1 - 12/31	
51316		N	1/1 - 12/31	
56976		N	1/1 - 12/31	
3745		N	1/1 - 12/31	
26650		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
34841		N	1/1 - 12/31	
		N	3/1 - 10/31	
		N	3/1 - 10/31	
4541		N	1/1 - 12/31	
4155		N	1/1 - 12/31	
37675		N	1/1 - 12/31	
		N	1/1 - 12/31	
4155		N	1/1 - 12/31	
63780		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
63781		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
63782		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
63782		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
63783		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
63783		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION

Certificate	Condition Code
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38405	
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51316	
56976	
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4155	
37675	
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63780	
63781	
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Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
	S 7439			T 5038	1926	1	Alex F Sackos	3.1E+07
38405	S 28839				1963	2	Oscar H Coen	3.1E+07
38008	S 31015				1965	1	Emil L Kipling	3.1E+07
38008	S 31015				1965	1	Emil L Kipling	3.1E+07
38008	S 31015				1965	2	Emil L Kipling	3.1E+07
38008	S 31015				1965	2	Emil L Kipling	3.1E+07
4383			Powder River		1872	2	C C Olson	3.1E+07
44925			Powder River	T 3609	1882	1	Minnie Coyle	3.1E+07
44925			Powder River	T 3609	1906	1	Minnie Coyle	3.1E+07
2111	S 3721				1918	1	David Wilcox & S P Barker	3.1E+07
38008	S 31015				1965	3	Emil L Kipling	3.1E+07
65073	G 6713				1976	1	Marcus C Sackos	3.1E+07
65074	G 8238				1978	1	Marcus C Sackos	3.1E+07
4143			Powder River		1908	2	O L Favorite	3.1E+07
4143			Powder River		1908	1	O L Favorite	3.1E+07
	G 13011				1995	1	Joel A Bigelow	3.1E+07
	G 13855				1999	3	Janice Kerns, Kerns Rainbow Ranch Inc	3.1E+07
	G 13855				1999	3	Janice Kerns, Kerns Rainbow Ranch Inc	3.1E+07
	G 13855				1999	4	Janice Kerns, Kerns Rainbow Ranch Inc	3.1E+07
	G 13855				1999	4	Janice Kerns, Kerns Rainbow Ranch Inc	3.1E+07
37669	G 2929				1965	1	Faye P Lillard	3.1E+07
66820	G 9888				1982	2	Phillip R Stevenson, Mickey & Linda Cowan	3.1E+07
70890					1993	6	Tim A Kerns	3.1E+07
70890					1993	6	Tim A Kerns	3.1E+07
70890					1993	6	Tim A Kerns	3.1E+07
	G 11773				1992	1	Tim L & Janice L Kerns	3.1E+07
	G 13159				1995	1	Tim L & Janice L Kerns	3.1E+07
	G 13855				1999	1	Janice Kerns, Kerns Rainbow Ranch Inc	3.1E+07
	G 13855				1999	1	Janice Kerns, Kerns Rainbow Ranch Inc	3.1E+07
	G 12039				1992	2	Tom Mac & Joyce A Kerns	3.1E+07
38198	S 31967				1966	1	Olga Ward Estate	3.1E+07
73856					1993	4	Tim L & Janice L Kerns	3.1E+07
73856					1993	4	Tim L & Janice L Kerns	3.1E+07
73856					1993	4	Tim L & Janice L Kerns	3.1E+07
74061	S 31160				1965	1	Tim & Janice Kerns	3.1E+07
74063	S 31160				1965	1	Tim & Jan Kerns	3.1E+07
48780	R 6424				1975	1	Thomas & Jean Griffith	3.1E+07
48780	R 6424				1975	1	Thomas & Jean Griffith	3.1E+07
72218	S 22407			T 6573	1953	1	Martha Jane Jacobs	3.1E+07
72617	S 40307				1975	1	Kerns Bros Inc	3.1E+07
72617	S 40307				1977	1	Kerns Bros Inc	3.1E+07
	G 11300				1990	1	Tom Mac & Joyce Kerns	3.1E+07
35204	S 29252				1963	1	Beulah Sackos Estate	3.1E+07
16882	S 15572				1943	1	Fluvia H Nicol	3.1E+07
	G 12039				1992	3	Tom Mac & Joyce A Kerns	3.1E+07
66550	S 22407			T 6573	1953	2	Harold P Colvin	3.1E+07
66550	S 22407			T 6573	1953	2	Harold P Colvin	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
	GOODRICH CR	08.00S38.00E-36-SESW	IR	0.75	0.75	N	
38405	BEAR CR	08.00S38.00E-36-SWSW	IR	0.13	0.00	Y	
38008	UNN SWALE 1	08.00S39.00E-4-NESE	IR	2.00	2.00	N	
38008	UNN SWALE 1	08.00S39.00E-4-NESE	IR	2.00	2.00	N	
38008	UNN SWALE 2	08.00S39.00E-4-NESE	IR	2.00	0.00	Y	
38008	UNN SWALE 2	08.00S39.00E-4-NESE	IR	2.00	0.00	Y	
4383	WILLOW CR	08.00S39.00E-4-SENW	IR	1.94	0.00	Y	
44925	ROCK CR	08.00S39.00E-4-SENW	IR	0.50	0.50	N	
44925	ROCK CR	08.00S39.00E-4-SENW	IR	0.50	0.50	N	
2111	WILLOW CR	08.00S39.00E-4-SESE	LV	0.10	0.10	N	
38008	UNN SWALE 3	08.00S39.00E-4-SESE	IR	2.00	0.00	Y	
65073	SUBSURFACE DR/SUMP	08.00S39.00E-4-SWNW	IC	1.65	1.65	N	
65074	SUBSURFACE DR/SUMP	08.00S39.00E-4-SWNW	IR	0.15	0.15	N	
4143	A SPR	08.00S39.00E-5-SWNE	ST	0.00	0.00	N	1
4143	ROCK CR	08.00S39.00E-5-SWNE	ST	0.00	0.00	N	1
	A WELL	08.00S39.00E-5-SWNW	IC	2.45	2.45	N	
	WELL 3	08.00S39.00E-6-SWSW	IR	0.00	0.00	N	0.28
	WELL 3	08.00S39.00E-6-SWSW	IS	0.28	0.00	Y	
	WELL 4	08.00S39.00E-7-NENE	IR	0.00	0.00	N	0.28
	WELL 4	08.00S39.00E-7-NENE	IS	0.28	0.00	Y	
37669	A WELL	08.00S39.00E-7-NENW	IS	0.50	0.50	N	
66820	POND 2	08.00S39.00E-7-NENW	IC	0.76	0.00	Y	
70890	ROCK CR/RES 6	08.00S39.00E-7-NENW	IR	0.00	0.00	N	0.33
70890	ROCK CR/RES 6	08.00S39.00E-7-NENW	LW	0.00	0.00	N	0.33
70890	ROCK CR/RES 6	08.00S39.00E-7-NENW	RC	0.00	0.00	N	0.33
	WELL 1	08.00S39.00E-7-NENW	IS	2.25	2.25	N	
	WELL 1	08.00S39.00E-7-NENW	IS	2.25	2.25	N	
	WELL 1	08.00S39.00E-7-NENW	IR	0.28	0.28	N	
	WELL 1	08.00S39.00E-7-NENW	IS	7.18	7.18	N	
	WELL 2	08.00S39.00E-7-NESW	IS	4.44	0.00	Y	
38198	DRAIN	08.00S39.00E-7-NWNE	IR	1.15	1.15	N	
73856	ROCK CR/RES 4	08.00S39.00E-7-NWNE	LW	0.00	0.00	N	0.25
73856	ROCK CR/RES 4	08.00S39.00E-7-NWNE	RC	0.00	0.00	N	0.25
73856	ROCK CR/RES 4	08.00S39.00E-7-NWNE	ST	0.00	0.00	N	0.25
74061	WILLOW CR	08.00S39.00E-7-NWNW	IS	0.14	0.14	N	
74063	WILLOW CR	08.00S39.00E-7-NWNW	IS	1.00	1.00	N	
48780	NATURAL SEEPAGE	08.00S39.00E-7-NWSE	IS	0.00	0.00	N	2.5
48780	NATURAL SEEPAGE	08.00S39.00E-7-NWSE	LV	0.00	0.00	N	2.5
72218	RUNOFF	08.00S39.00E-7-NWSE	IR	0.40	0.40	N	
72617	RUNOFF/RES	08.00S39.00E-7-NWSE	IS	0.51	0.51	N	
72617	RUNOFF/RES	08.00S39.00E-7-NWSE	LV	0.51	0.00	Y	
	A WELL	08.00S39.00E-7-NWSE	IR	1.52	1.52	N	
35204	DRAIN DITCH	08.00S39.00E-7-SENE	IR	0.26	0.26	N	
16882	WASTE WATER	08.00S39.00E-7-SENW	IR	1.00	1.00	N	
	WELL 3	08.00S39.00E-7-SESE	IS	4.44	0.00	Y	
66550	RUNOFF	08.00S39.00E-7-SWNE	IR	0.50	0.00	Y	
66550	RUNOFF	08.00S39.00E-7-SWNE	IS	0.50	0.00	Y	

Certificate	ACF	ACF Estimated	Season	Remarks
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
38405		N	1/1 - 12/31	
38008		N	1/1 - 12/31	
38008		N	1/1 - 12/31	
38008		N	1/1 - 12/31	
38008		N	1/1 - 12/31	
4383		N	1/1 - 12/31	
44925		N	1/1 - 12/31	
44925		N	1/1 - 12/31	
2111		N	1/1 - 12/31	
38008		N	1/1 - 12/31	
65073		N	1/1 - 12/31	
65074		N	1/1 - 12/31	
4143	0	Y	1/1 - 12/31	TOTAL 1 ACRE FOOT STORED FROM SPRING
4143	1	N	1/1 - 12/31	TOTAL 1 ACRE FOOT STORED FROM ROCK CREEK
		N	1/1 - 12/31	3/1 10/31
	0	Y	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	3/1 10/31
	0	Y	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	3/1 10/31
37669		N	1/1 - 12/31	
66820		N	1/1 - 12/31	
70890	0.33	N	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	
38198		N	1/1 - 12/31	
73856	0	Y	1/1 - 12/31	
73856	0	Y	1/1 - 12/31	
73856	0.25	N	1/1 - 12/31	
74061		N	1/1 - 12/31	
74063		N	1/1 - 12/31	
48780	1.25	Y	1/1 - 12/31	
48780	1.25	Y	1/1 - 12/31	
72218		N	1/1 - 12/31	
72617		N	1/1 - 12/31	
72617		N	1/1 - 12/31	
		N	1/1 - 12/31	
35204		N	1/1 - 12/31	
16882		N	1/1 - 12/31	
		N	1/1 - 12/31	
66550		N	1/1 - 12/31	
66550		N	1/1 - 12/31	

Certificate	Condition Code
38405	
38008	
38008	
38008	
38008	
4383	
44925	
44925	
2111	
38008	
65073	
65074	
4143	
4143	
37669	
66820	
70890	
70890	
70890	
38198	
73856	
73856	
73856	
74061	
74063	
48780	
48780	
72218	
72617	
72617	
35204	
16882	
66550	
66550	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
66550	S 22407			T 6573	1953	1	Harold P Colvin	3.1E+07
66550	S 22407			T 6573	1953	1	Harold P Colvin	3.1E+07
70890					1993	5	Tim A Kerns	3.1E+07
70890					1993	5	Tim A Kerns	3.1E+07
70890					1993	5	Tim A Kerns	3.1E+07
72613	G 4970				1971	1	Kerns Bros Inc	3.1E+07
4402			Powder River		1866	1	Armand W Perkins	3.1E+07
	G 12023				1992	1	Brad E, Blane E, Jay & Ann Allen	3.1E+07
	G 12003				1991	1	Brad Allen, Northwest Farm Credit Services FLCA	3.1E+07
51116	G 6162				1974	1	Blaine Dee Allen	3.1E+07
	G 12937				1992	1	Blatchford Brothers	3.1E+07
	G 12887				1996	3	Brad, Blaine & Jay Allen	3.1E+07
38195	S 31099				1965	1	Robert Proebstel	3.1E+07
38195	S 31099				1965	1	Robert Proebstel	3.1E+07
	G 12023				1992	2	Brad E, Blane E, Jay & Ann Allen	3.1E+07
	G 12887				1996	1	Brad, Blaine & Jay Allen	3.1E+07
	G 12905				1996	1	Brad Allen	3.1E+07
38195	S 31099				1965	2	Robert Proebstel	3.1E+07
38195	S 31099				1965	2	Robert Proebstel	3.1E+07
	G 12887				1996	2	Brad, Blaine & Jay Allen	3.1E+07
	G 12887				1996	2	Brad, Blaine & Jay Allen	3.1E+07
	G 12905				1996	2	Brad Allen	3.1E+07
	G 12905				1996	2	Brad Allen	3.1E+07
3430	S 4248			C 83	1919	1	Oscar Nelson	3.1E+07
4519			Powder River		1879	1	S L Turley	3.1E+07
52323	R 8244				1979	1	Baker Valley Irrigation Dist	3.1E+07
73405			Powder R, Consol	T 8448	1865	56	Baker Valley Irrigation Dist	3.1E+07
73405			Powder R, Consol	T 8448	1905	56	Baker Valley Irrigation Dist	3.1E+07
73406	S 1260				1910	56	Baker Valley Irrigation Dist	3.1E+07
73406	S 1260				1918	56	Baker Valley Irrigation Dist	3.1E+07
73406	S 1260				1919	56	Baker Valley Irrigation Dist	3.1E+07
73408	S 30544				1979	9	Baker Valley Irrigation Dist	3.1E+07
73565			Powder River		1905	1	Donald & Dorothy Hubbard	3.1E+07
73581			Powder River		1902	1	Charles Colton, SSI Land & Cattle Co	3.1E+07
73599	S 32932				1958	56	Baker Valley Irrigation Dist	3.1E+07
73610	S 32932				1958	56	US Bureau of Reclamation	3.1E+07
73999	S 50696				1982	34	Baker Valley Irrigation Dist	3.1E+07
73605	S 45593				1979	1	Baker Valley Irrigation Dist	3.1E+07
73605	S 45593				1979	1	Baker Valley Irrigation Dist	3.1E+07
	G 12887				1996	4	Brad, Blaine & Jay Allen	3.1E+07
60815	S 47419				1982	1	Clifford W & Phyliss A Jones	3.1E+07
28778	S 25990				1958	1	J E Young	3.1E+07
.	G 12023				1992	3	Brad E, Blane E, Jay & Ann Allen	3.1E+07
60409	U 610				1954	1	James A & Bertha E Kelly	3.1E+07
67346	G 10857				1987	1	C W & Phyllis Jones	3.1E+07
	G 13497				1995	1	Lazy K Ranch, Stan Kitzman	3.1E+07
63574	G 8049				1978	1	LeRoy W Phillips	3.1E+07
52848	G 7881				1977	1	Jim/Dave Blatchford	3.1E+07
52849	G 10138				1983	2	Jim/Dave Blatchford	3.1E+07
52712	G 6512				1975	1	James Blatchford	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
66550	WASTE WATER/RUN OFF	08.00S39.00E-7-SWNE	IR	0.50	0.50	N	
66550	WASTE WATER/RUN OFF	08.00S39.00E-7-SWNE	IS	0.50	0.00	Y	
70890	ROCK CR/RES 5	08.00S39.00E-7-SWNW	IR	0.00	0.00	N	0.7
70890	ROCK CR/RES 5	08.00S39.00E-7-SWNW	LW	0.00	0.00	N	0.7
70890	ROCK CR/RES 5	08.00S39.00E-7-SWNW	RC	0.00	0.00	N	0.7
72613	A WELL	08.00S39.00E-7-SWSE	IS	0.69	0.69	N	
4402	POWDER R	08.00S39.00E-8-NENE	IR	3.00	3.00	N	
	WELL 1	08.00S39.00E-8-NESW	IR	1.34	1.34	N	
	A WELL	08.00S39.00E-8-NWNW	IS	1.78	1.78	N	
51116	A RES	08.00S39.00E-8-SENW	IS	1.28	1.28	N	
	WELL 4	08.00S39.00E-8-SESE	IS	1.70	1.70	N	
	WELL 3	08.00S39.00E-9-NESW	IC	1.16	1.16	N	
38195	WASTE WATER	08.00S39.00E-9-NWNW	IR	1.35	1.35	N	
38195	WASTE WATER	08.00S39.00E-9-NWNW	IR	1.35	1.35	N	
	WELL 2	08.00S39.00E-9-NWSW	IR	1.78	1.78	N	
	WELL 1	08.00S39.00E-9-NWSW	IC	1.16	1.16	N	
	WELL 1	08.00S39.00E-9-NWSW	IC	1.22	1.22	N	
38195	WASTE WATER	08.00S39.00E-9-SWNW	IR	1.35	0.00	Y	
38195	WASTE WATER	08.00S39.00E-9-SWNW	IR	1.35	0.00	Y	
	WELL 2	08.00S39.00E-9-SWNW	IC	1.16	1.16	N	
	WELL 2	08.00S39.00E-9-SWNW	IC	1.16	1.16	N	
	WELL 2	08.00S39.00E-9-SWNW	IC	1.22	1.22	N	
	WELL 2	08.00S39.00E-9-SWNW	IC	1.22	1.22	N	
3430	POWDER R	08.00S39.00E-11-NENE	IR	0.38	0.38	N	
4519	POWDER R	08.00S39.00E-11-NENE	IR	40.00	40.00	N	
52323	POWDER R	08.00S39.00E-11-NENE	IS	0.00	0.00	N	52
73405	POWDER R	08.00S39.00E-11-NENE	IR	1.66	1.66	N	
73405	POWDER R	08.00S39.00E-11-NENE	IR	7.51	7.51	N	
73406	POWDER R	08.00S39.00E-11-NENE	IR	2.14	2.14	N	
73406	POWDER R	08.00S39.00E-11-NENE	IR	0.60	0.60	N	
73406	POWDER R	08.00S39.00E-11-NENE	IR	0.34	0.34	N	
73408	SALMON CR	08.00S39.00E-11-NENE	IS	1.90	1.90	N	
73565	POWDER R	08.00S39.00E-11-NENE	IR	3.97	3.97	N	
73581	POWDER R	08.00S39.00E-11-NENE	IR	0.25	0.25	N	
73599	POWDER R	08.00S39.00E-11-NENE	IC	7.84	0.00	Y	
73610	POWDER R	08.00S39.00E-11-NENE	IC	74.35	0.00	Y	
73999	POWDER R	08.00S39.00E-11-NENE	IC	92.00	0.00	Y	
73605	SALMON CR	08.00S39.00E-11-NENW	IS	58.10	58.10	N	
73605	SALMON CR	08.00S39.00E-11-NENW	IS	58.10	58.10	N	
	WELL 4	08.00S39.00E-15-NENW	IC	1.16	1.16	N	
60815	WASTE WATER	08.00S39.00E-15-NESE	IS	1.40	1.40	N	
28778	UNN STR	08.00S39.00E-15-NESW	IR	1.85	1.85	N	
	WELL 3	08.00S39.00E-15-NWNW	IR	1.78	1.78	N	
60409	GRAVEL PIT	08.00S39.00E-15-SENE	IR	0.61	0.61	N	
67346	A WELL	08.00S39.00E-15-SWNE	IR	0.50	0.50	N	
	A WELL	08.00S39.00E-15-SWNE	IS	1.11	1.11	N	
63574	A WELL	08.00S39.00E-15-SWNW	IR	0.34	0.34	N	
52848	WELL 3	08.00S39.00E-16-NWSE	IS	2.64	2.64	N	
52849	WELL 3	08.00S39.00E-16-NWSE	IS	2.45	2.45	N	
52712	WELL 2	08.00S39.00E-16-NWSW	IS	2.23	2.23	N	

Certificate	ACF	ACF Estimated	Season	Remarks
66550		N	1/1 - 12/31	
66550		N	1/1 - 12/31	
70890	0.7	N	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
70890	0	Y	1/1 - 12/31	
72613		N	1/1 - 12/31	
4402		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
51116		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
38195		N	1/1 - 12/31	
38195		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	3/1 10/31 PRIMARY
38195		N	1/1 - 12/31	
38195		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	3/1 10/31
		N	1/1 - 12/31	3/1 10/31 PRIMARY
		N	1/1 - 12/31	3/1 10/31 PRIMARY
3430		N	1/1 - 12/31	DIV LTD TO QUAN AVAIL AT ORIG POD-8S 39E 11 NENE NEW HANEY DITCH
4519		N	1/1 - 12/31	
52323	52	N	1/1 - 12/31	
73405		N	1/1 - 12/31	
73405		N	1/1 - 12/31	
73406		N	1/1 - 12/31	TRACT 3; 170.9 ACRES
73406		N	1/1 - 12/31	TRACT 8; 47.9 ACRES
73406		N	1/1 - 12/31	TRACT 5; 26.8 ACRES
73408		N	1/1 - 12/31	113.6 ACRES; 397.6 AF/YEAR; TRACT 8
73565		N	1/1 - 12/31	
73581		N	1/1 - 12/31	TRACT 1; 10.0 ACRES
73599		N	1/1 - 12/31	
73610		N	1/1 - 12/31	
73999		N	1/1 - 12/31	3/1 7/30
73605		N	1/1 - 12/31	
73605		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
60815		N	1/1 - 12/31	ROADSIDE WASTE WATER
28778		N	1/1 - 12/31	
		N	1/1 - 12/31	
60409		N	1/1 - 12/31	
67346		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
63574		N	1/1 - 12/31	
52848		N	1/1 - 12/31	
52849		N	1/1 - 12/31	
52712		N	1/1 - 12/31	

Certificate	Condition Code
66550	
66550	
70890	
70890	
70890	
72613	
4402	
51116	
38195	
38195	
38195	
38195	
3430	
4519	
52323	
73405	
73405	
73406	
73406	
73406	
73408	
73565	
73581	
73599	
73610	
73999	
73605	
73605	
60815	
28778	
60409	
67346	
63574	
52848	
52849	
52712	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
52712	G 6512				1975	1	James Blatchford	3.1E+07
52849	G 10138				1983	1	Jim/Dave Blatchford	3.1E+07
52849	G 10138				1983	1	Jim/Dave Blatchford	3.1E+07
46115	G 5780				1973	1	Jim & Dave Blatchford	3.1E+07
4418			Powder River		1894	1	J I Polley	3.1E+07
4418			Powder River		1907	1	J I Polley	3.1E+07
42361	G 4961				1971	1	Jim & Dave Blatchford	3.1E+07
	G 12023				1992	4	Brad E, Blane E, Jay & Ann Allen	3.1E+07
	G 12023				1992	4	Brad E, Blane E, Jay & Ann Allen	3.1E+07
	G 13594				1998	1	Douglas A Parker	3.1E+07
	G 13594				1998	1	Douglas A Parker	3.1E+07
72614	S 8034				1927	5	Kerns Bros Inc	3.1E+07
	G 12039				1992	1	Tom Mac & Joyce A Kerns	3.1E+07
60027	G 7917				1977	1	Virgil W Borger	3.1E+07
	G 11773				1992	2	Tim L & Janice L Kerns	3.1E+07
73856					1993	6	Tim L & Janice L Kerns	3.1E+07
73856					1993	6	Tim L & Janice L Kerns	3.1E+07
73856					1993	6	Tim L & Janice L Kerns	3.1E+07
57147	G 7090				1976	1	Gordon B Paustian	3.1E+07
57147	G 7090				1976	1	Gordon B Paustian	3.1E+07
58983	G 8239				1978	1	Darald W Doud	3.1E+07
	G 13432				1995	1	Randy & Janet Alanko	3.1E+07
52844	G 7263				1977	1	First Interstate Bank of Oregon	3.1E+07
76433	S 51398				1987	1	Tim L Kerns	3.1E+07
39250	G 4650				1969	1	Norman Butler	3.1E+07
39250	G 4650				1969	1	Norman Butler	3.1E+07
75775	G 2877			T 7933	1965	1	Norman Butler	3.1E+07
75775	G 2877			T 7933	1965	1	Norman Butler	3.1E+07
75775	G 2877			T 7933	1965	1	Norman Butler	3.1E+07
75775	G 2877			T 7933	1965	1	Norman Butler	3.1E+07
72614	S 8034				1927	4	Kerns Bros Inc	3.1E+07
73856					1993	5	Tim L & Janice L Kerns	3.1E+07
73856					1993	5	Tim L & Janice L Kerns	3.1E+07
73856					1993	5	Tim L & Janice L Kerns	3.1E+07
	G 15277				2001	3	Wesley Kerns	3.1E+07
	G 15277				2001	3	Wesley Kerns	3.1E+07
	G 15277				2001	1	Wesley Kerns	3.1E+07
	G 15277				2001	1	Wesley Kerns	3.1E+07
	G 11267				1990	1	Frank L & Odetta F Miller	3.1E+07
	G 15277				2001	2	Wesley Kerns	3.1E+07
	G 15277				2001	2	Wesley Kerns	3.1E+07
64315	G 5085				1970	1	Walter W & Cathryn J Zimmerman, Wallace E & Betty M Hardman	3.1E+07
	G 11290				1990	1	Walter W & Cathryn J Zimmerman	3.1E+07
	R 8554				1982	1	Kerns Brothers Ranch	3.1E+07
	R 8554				1982	5	Kerns Brothers Ranch	3.1E+07
	R 8554				1982	6	Kerns Brothers Ranch	3.1E+07
	S 47283				1982	2	David L & Carol Phillips	3.1E+07
72615	G 7630				1977	1		3.1E+07
72620	G 7630				1977	1	David & James Blatchford	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
52712	WELL 2	08.00S39.00E-16-NWSW	IS	2.23	2.23	N	
52849	WELL 2	08.00S39.00E-16-NWSW	IS	1.61	1.61	N	
52849	WELL 2	08.00S39.00E-16-NWSW	IS	1.61	1.61	N	
46115	WELL #1	08.00S39.00E-16-SWNW	IS	2.40	2.40	N	
4418	PINE CR	08.00S39.00E-17-NESE	IR	4.00	4.00	N	
4418	PINE CR	08.00S39.00E-17-NESE	IR	4.00	4.00	N	
42361	GRAVEL PIT	08.00S39.00E-17-NWSE	IS	1.34	1.34	N	
	WELL 4	08.00S39.00E-17-SWNW	IR	1.78	1.78	N	
	WELL 4	08.00S39.00E-17-SWNW	IR	1.78	1.78	N	
	A WELL	08.00S39.00E-18-NESE	IS	0.13	0.13	N	
	A WELL	08.00S39.00E-18-NESE	IS	0.13	0.13	N	
72614	WASTE WATER	08.00S39.00E-18-NESW	IS	1.75	0.00	Y	
	WELL 1	08.00S39.00E-18-NWNW	IS	4.44	4.44	N	
60027	A WELL	08.00S39.00E-18-SENE	IS	1.95	1.95	N	
	WELL 2	08.00S39.00E-18-SENW	IS	2.25	2.25	N	
73856	SPR/RES 6	08.00S39.00E-18-SESW	LW	0.00	0.00	N	0.25
73856	SPR/RES 6	08.00S39.00E-18-SESW	RC	0.00	0.00	N	0.25
73856	SPR/RES 6	08.00S39.00E-18-SESW	ST	0.00	0.00	N	0.25
57147	A WELL	08.00S39.00E-18-SWSE	IS	0.20	0.20	N	
57147	A WELL	08.00S39.00E-18-SWSE	IS	0.20	0.20	N	
58983	A WELL	08.00S39.00E-19-NENE	IS	0.13	0.13	N	
	A WELL	08.00S39.00E-19-NENE	IR	0.13	0.13	N	
52844	WELL 1	08.00S39.00E-19-NENW	IR	1.03	1.03	N	
76433	RUNOFF	08.00S39.00E-19-NENW	IS	0.89	0.89	N	
39250	WELL (GRAVEL PIT)	08.00S39.00E-19-NESE	IS	0.39	0.39	N	
39250	WELL (GRAVEL PIT)	08.00S39.00E-19-NESE	IS	0.39	0.39	N	
75775	GRAVEL PIT NO 1	08.00S39.00E-19-NESE	IR	0.77	0.77	N	
75775	GRAVEL PIT NO 1	08.00S39.00E-19-NESE	IS	0.55	0.55	N	
75775	GRAVEL PIT NO 1	08.00S39.00E-19-NESE	IR	0.77	0.77	N	
75775	GRAVEL PIT NO 1	08.00S39.00E-19-NESE	IS	0.55	0.55	N	
72614	WASTE WATER	08.00S39.00E-19-NWNW	IS	1.75	0.00	Y	
73856	SPR/RES 5	08.00S39.00E-19-NWNW	LW	0.00	0.00	N	3.7
73856	SPR/RES 5	08.00S39.00E-19-NWNW	RC	0.00	0.00	N	3.7
73856	SPR/RES 5	08.00S39.00E-19-NWNW	ST	0.00	0.00	N	3.7
	A SUMP	08.00S39.00E-20-SENW	IR	1.95	0.65	Y	
	A SUMP	08.00S39.00E-20-SENW	IR	1.95	0.65	Y	
	A WELL	08.00S39.00E-20-SENW	IR	1.95	0.65	Y	
	A WELL	08.00S39.00E-20-SENW	IR	1.95	0.65	Y	
	A SUMP	08.00S39.00E-20-SESW	IC	0.40	0.40	N	
	A WELL	08.00S39.00E-20-SWNW	IR	1.95	0.65	Y	
	A WELL	08.00S39.00E-20-SWNW	IR	1.95	0.65	Y	
64315	PIT WELL 1	08.00S39.00E-20-SWSW	IS	0.25	0.25	N	
	A WELL	08.00S39.00E-20-SWSW	IS	0.22	0.22	N	
	DRAIN TILES/POND 1	08.00S39.00E-21-NESW	IS	0.00	0.00	N	9.12
	MILL CR	08.00S39.00E-21-NESW	IS	0.00	0.00	N	28.97
	PINE CR	08.00S39.00E-21-NESW	IS	0.00	0.00	N	28.97
	SIEGS POND 1	08.00S39.00E-21-NESW	IR	17.40	0.00	Y	
72615	A WELL	08.00S39.00E-21-NWSE	IS	5.87	5.87	N	
72620	A WELL	08.00S39.00E-21-NWSE	IS	2.84	2.84	N	

Certificate	ACF	ACF Estimated	Season	Remarks
52712		N	1/1 - 12/31	
52849		N	1/1 - 12/31	
52849		N	1/1 - 12/31	
46115		N	1/1 - 12/31	
4418		N	1/1 - 12/31	
4418		N	1/1 - 12/31	
42361		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	4/1 10/31
		N	1/1 - 12/31	4/1 10/31
72614		N	1/1 - 12/31	
		N	1/1 - 12/31	
60027		N	1/1 - 12/31	
		N	1/1 - 12/31	
73856	0	Y	1/1 - 12/31	
73856	0	Y	1/1 - 12/31	
73856	0.25	N	1/1 - 12/31	
57147		N	1/1 - 12/31	
57147		N	1/1 - 12/31	
58983		N	1/1 - 12/31	
		N	1/1 - 12/31	3/1 10/31
52844		N	1/1 - 12/31	
76433		N	1/1 - 12/31	
39250		N	1/1 - 12/31	
39250		N	1/1 - 12/31	
75775		N	1/1 - 12/31	
75775		N	1/1 - 12/31	
75775		N	1/1 - 12/31	
75775		N	1/1 - 12/31	
72614		N	1/1 - 12/31	
73856	0	Y	1/1 - 12/31	
73856	0	Y	1/1 - 12/31	
73856	3.7	N	1/1 - 12/31	
		N	3/1 - 9/30	
		N	3/1 - 9/30	
		N	3/1 - 9/30	
		N	3/1 - 9/30	
		N	1/1 - 12/31	
		N	3/1 - 9/30	
		N	3/1 - 9/30	
64315		N	1/1 - 12/31	
		N	1/1 - 12/31	
	9.12	N	1/1 - 12/31	
	0	Y	1/1 - 12/31	
	0	Y	1/1 - 12/31	
		N	1/1 - 12/31	
72615		N	1/1 - 12/31	
72620		N	1/1 - 12/31	

Certificate	Condition Code
52712	
52849	
52849	
46115	
4418	
4418	
42361	
72614	
60027	
73856	
73856	
73856	
57147	
57147	
58983	
52844	
76433	
39250	
39250	
75775	
75775	
75775	
75775	
72614	
73856	
73856	
73856	
64315	
72615	
72620	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
74157	G 7630				1977	1	Norbert & Desmond Sieg	3.1E+07
	G 13416				1997	1	Williams Ditch Co Farm, Tom Mac Kerns	3.1E+07
	R 8554				1982	2	Kerns Brothers Ranch	3.1E+07
	R 8554				1982	3	Kerns Brothers Ranch	3.1E+07
	R 8554				1982	4	Kerns Brothers Ranch	3.1E+07
	S 47283				1982	3	David L & Carol Phillips	3.1E+07
	S 47283				1982	4	David L & Carol Phillips	3.1E+07
	S 47283				1982	5	David L & Carol Phillips	3.1E+07
34970	S 28836				1963	1	Charles M Chinn Jr	3.1E+07
	S 47283				1982	1	David L & Carol Phillips	3.1E+07
	G 11682				1992	1	Charles E & Peggy Payton	3.1E+07
38137	S 31355				1966	1	Glynn Payton	3.1E+07
79417	G 11521				1992	1	David L & Carol Phillips	3.1E+07
4504			Powder River		1870	2	Cynthia C Thomason	3.1E+07
33349	S 22632				1953	1	John A Payton, Mrs J E Spurlock, Estate of W A Payton	3.1E+07
65761	G 6126				1974	1	Lawrence Jepson & Sons	3.1E+07
65761	G 6126				1974	1	Lawrence Jepson & Sons	3.1E+07
67235			Powder River	T 6242	1868	1	Jepson Brothers Ranch Co	3.1E+07
67235			Powder River	T 6242	1969	1	Jepson Brothers Ranch Co	3.1E+07
67235			Powder River	T 6242	1869	2	Jepson Brothers Ranch Co	3.1E+07
67235			Powder River	T 6242	1968	2	Jepson Brothers Ranch Co	3.1E+07
67235			Powder River	T 6242	1868	1	Jepson Brothers Ranch Co	3.1E+07
67235			Powder River	T 6242	1969	1	Jepson Brothers Ranch Co	3.1E+07
67235			Powder River	T 6242	1869	2	Jepson Brothers Ranch Co	3.1E+07
67235			Powder River	T 6242	1968	2	Jepson Brothers Ranch Co	3.1E+07
67236			Powder River	T 6350	1865	1	Jepson Brothers Ranch Co	3.1E+07
67236			Powder River	T 6350	1867	1	Jepson Brothers Ranch Co	3.1E+07
67236			Powder River	T 6350	1865	2	Jepson Brothers Ranch Co	3.1E+07
67236			Powder River	T 6350	1867	2	Jepson Brothers Ranch Co	3.1E+07
67236			Powder River	T 6350	1865	1	Jepson Brothers Ranch Co	3.1E+07
67236			Powder River	T 6350	1867	1	Jepson Brothers Ranch Co	3.1E+07
67236			Powder River	T 6350	1865	2	Jepson Brothers Ranch Co	3.1E+07
67236			Powder River	T 6350	1867	2	Jepson Brothers Ranch Co	3.1E+07
38137	S 31355				1966	2	Glynn Payton	3.1E+07
72412			Powder River	T 6176	1865	1	C Tom & Lynne DHill	3.1E+07
	S 52748				1991	2	C Tom Hill	3.1E+07
	S 52748				1991	2	C Tom Hill	3.1E+07
	S 53488				1989	1	Freeman Angus Ranch Inc	3.1E+07
	S 52683				1990	2	Freeman Angus Ranch Inc	3.1E+07
	S 52683				1990	2	Freeman Angus Ranch Inc	3.1E+07
72392			Powder River	T 6177	1866	1	Lloyd Smith, Tom C & Lynne D Hill	3.1E+07
72393			Powder River	T 6213	1883	1	C Tom & Lynne DHill	3.1E+07
72394			Powder River	T 6388	1866	1	Glen J Davis	3.1E+07
	G 12197				1990	1	Glen J Davis	3.1E+07
	G 12670				1990	1	Freeman Angus Ranch Inc	3.1E+07
	S 52748				1991	1	C Tom Hill	3.1E+07
	S 52748				1991	1	C Tom Hill	3.1E+07
				T 6213	1883	1	C Tom & Lynne DHill	3.1E+07
	S 52683				1990	1	Freeman Angus Ranch Inc	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
74157	A WELL	08.00S39.00E-21-NWSE	IS	7.58	7.58	N	
	A WELL	08.00S39.00E-21-NWSE	IR	0.78	0.78	N	
	DRAIN TILES/POND 2	08.00S39.00E-21-NWSE	IS	0.00	0.00	N	6.75
	DRAIN TILES/POND 3	08.00S39.00E-21-NWSE	IS	0.00	0.00	N	3.9
	DRAIN TILES/POND 4	08.00S39.00E-21-NWSE	IS	0.00	0.00	N	9.2
	SIEGS POND 2	08.00S39.00E-21-NWSE	IR	17.40	0.00	Y	
	SIEGS POND 3	08.00S39.00E-21-NWSE	IR	17.40	0.00	Y	
	SIEGS POND 4	08.00S39.00E-21-NWSE	IR	17.40	0.00	Y	
34970	SPRING CR	08.00S39.00E-21-SESE	IS	0.96	0.96	N	
	SURFACE DRAINAGE	08.00S39.00E-21-SWSE	IS	17.40	17.40	N	
	A WELL	08.00S39.00E-21-SWSW	IS	2.00	2.00	N	
38137	SPRING CR	08.00S39.00E-22-NESE	IR	2.25	2.25	N	
79417	A WELL	08.00S39.00E-22-SENW	IS	1.72	1.72	N	
4504	PINE CR	08.00S39.00E-22-SWSW	IR	4.00	0.00	Y	
33349	SALMON CR	08.00S39.00E-23-NWNE	IR	5.75	5.75	N	
65761	A DUG POND	08.00S39.00E-23-SESE	IC	4.71	4.71	N	
65761	A DUG POND	08.00S39.00E-23-SESE	IC	4.71	4.71	N	
67235	SALMON CR	08.00S39.00E-23-SESE	IR	0.50	0.50	N	
67235	SALMON CR	08.00S39.00E-23-SESE	IR	0.50	0.00	Y	
67235	SALMON CR	08.00S39.00E-23-SESE	IR	0.50	0.00	Y	
67235	SALMON CR	08.00S39.00E-23-SESE	IR	0.50	0.50	N	
67235	SALMON CR	08.00S39.00E-23-SESE	IR	0.50	0.50	N	
67235	SALMON CR	08.00S39.00E-23-SESE	IR	0.50	0.00	Y	
67235	SALMON CR	08.00S39.00E-23-SESE	IR	0.50	0.00	Y	
67235	SALMON CR	08.00S39.00E-23-SESE	IR	0.50	0.50	N	
67236	PINE CR	08.00S39.00E-23-SESE	IR	5.35	5.35	N	
67236	PINE CR	08.00S39.00E-23-SESE	IR	5.35	0.00	Y	
67236	PINE CR	08.00S39.00E-23-SESE	IR	5.35	0.00	Y	
67236	PINE CR	08.00S39.00E-23-SESE	IR	5.35	0.00	Y	
67236	PINE CR	08.00S39.00E-23-SESE	IR	5.35	5.35	N	
67236	PINE CR	08.00S39.00E-23-SESE	IR	5.35	0.00	Y	
67236	PINE CR	08.00S39.00E-23-SESE	IR	5.35	0.00	Y	
67236	PINE CR	08.00S39.00E-23-SESE	IR	5.35	0.00	Y	
38137	PINE CR	08.00S39.00E-23-SWNE	IS	0.23	0.23	N	
72412	PINE CR	08.00S39.00E-26-NENW	IR	0.50	0.50	N	
	PINE CR	08.00S39.00E-26-NENW	IS	1.50	1.50	N	
	PINE CR	08.00S39.00E-26-NENW	IS	1.50	1.50	N	
	UNN STR	08.00S39.00E-26-NESW	IR	1.22	1.22	N	
	PINE CR	08.00S39.00E-26-NWNW	IC	0.71	0.71	N	
	PINE CR	08.00S39.00E-26-NWNW	IC	0.71	0.71	N	
72392	SPRING CR	08.00S39.00E-26-SWNW	IR	1.44	1.44	N	
72393	SPRING CR	08.00S39.00E-26-SWNW	IR	0.50	0.50	N	
72394	SPRING CR	08.00S39.00E-26-SWNW	IR	0.44	0.44	N	
	A POND	08.00S39.00E-26-SWNW	IC	0.50	0.50	N	
	DUG SUMP	08.00S39.00E-26-SWNW	IS	0.48	0.48	N	
	SPRING CR	08.00S39.00E-26-SWNW	IS	0.50	0.50	N	
	SPRING CR	08.00S39.00E-26-SWNW	IS	0.50	0.50	N	
	SPRING CR	08.00S39.00E-26-SWNW	IR	0.50	0.50	N	
	SPRING CR	08.00S39.00E-27-NWSE	IC	0.52	0.52	N	

Certificate	ACF	ACF Estimated	Season	Remarks
74157		N	1/1 - 12/31	
		N	1/1 - 12/31	6/15 10/15
	6.75	N	1/1 - 12/31	
	3.9	N	1/1 - 12/31	
	9.2	N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
34970		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	4/1 10/1
38137		N	1/1 - 12/31	
79417		N	1/1 - 12/31	
4504		N	1/1 - 12/31	
33349		N	1/1 - 12/31	
65761		N	1/1 - 12/31	
65761		N	1/1 - 12/31	
67235		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67235		N	1/1 - 12/31	IF AVALIABLE AT ORIGINAL POINT OF DIVERSION
67235		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67235		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67235		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67235		N	1/1 - 12/31	IF AVALIABLE AT ORIGINAL POINT OF DIVERSION
67235		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67235		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67236		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67236		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67236		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67236		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67236		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67236		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67236		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
67236		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
38137		N	1/1 - 12/31	
72412		N	1/1 - 12/31	
		N	1/1 - 12/31	4/1 6/30
		N	1/1 - 12/31	4/1 6/30
		N	1/1 - 12/31	EXCLUDES USE 7/1 9/30
		N	1/1 - 12/31	EXCEPT JULY, AUGUST AND SEPTEMBER
		N	1/1 - 12/31	EXCEPT JULY, AUGUST AND SEPTEMBER
72392		N	1/1 - 12/31	
72393		N	1/1 - 12/31	
72394		N	1/1 - 12/31	
		N	1/1 - 12/31	EXCEPT JULY, AUGUST & SEPTEMBER
		N	1/1 - 12/31	EXCEPT DURING JULY, AUGUST AND SEPTEMBER
		N	1/1 - 12/31	4/1 6/30
		N	1/1 - 12/31	4/1 6/30
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	EXCEPT JULY, AUGUST AND SEPTEMBER

Certificate	Condition Code
74157	
34970	
38137	
79417	
4504	
33349	
65761	
65761	
67235	
67235	
67235	
67235	
67235	
67235	
67235	
67235	
67236	
67236	
67236	
67236	
67236	
67236	
67236	
67236	
38137	
72412	
	DEF,FSN,MDV,RCU,RPU,UPR
	UPR,RPU,RCU,MDV,DEF,FSN
	MDV,NUP,OUP,RCU,RPU
	DEF,FSN,MDV,NUP,RCU,RPU
	MDV,DEF,NUP,RCU,RPU,FSN
72392	
72393	
72394	
	DEF,FSN,MDV,RCU,RPU,UPR
	UPR,DEF,FSN,MDV,RCU,RPU
	DEF,FSN,MDV,NUP,RCU,RPU

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
	S 52683				1990	1	Freeman Angus Ranch Inc	3.1E+07
32606			Powder River	I 17	1864	2	Glen Morin	3.1E+07
32606			Powder River	I 17	1865	2	Glen Morin	3.1E+07
32606			Powder River	I 17	1888	2	Glen Morin	3.1E+07
32606			Powder River	I 17	1864	1	Glen Morin	3.1E+07
32606			Powder River	I 17	1865	1	Glen Morin	3.1E+07
32606			Powder River	I 17	1888	1	Glen Morin	3.1E+07
32607			Powder River	I 17	1868	1	Nellie M Irby & Fannie Rohner	3.1E+07
32607			Powder River	I 17	1868	2	Nellie M Irby & Fannie Rohner	3.1E+07
	G 11040				1989	1	Glenabell M Lewis	3.1E+07
4386			Powder River		1864	1	Milton S Osborn	3.1E+07
4386			Powder River		1870	1	Milton S Osborn	3.1E+07
4386			Powder River		1866	2	Milton S Osborn	3.1E+07
	G 13157			T 7975	1994	2	Kerns Rainbow Ranch Inc	3.1E+07
64010	G 9056				1977	1	David L & Jennifer J Blatchford	3.1E+07
	G 11077				1987	1	David & Jennifer Blatchford	3.1E+07
	G 11077				1987	2	David & Jennifer Blatchford	3.1E+07
16690	S 15428				1943	1	Nellie M Irby	3.1E+07
68434			Powder River		1898	4	Roland George, Brian R Spencer, Ralph Calloway, David Blatchford	3.1E+07
48851	S 38921				1974	1	Wallace Simrell Estate	3.1E+07
34642	S 29016				1962	5	Norman Butler	3.1E+07
34642	S 29016				1962	1	Norman Butler	3.1E+07
34642	S 29016				1962	2	Norman Butler	3.1E+07
34317	G 2768				1964	1	A F Moser	3.1E+07
43736			Powder River	T 3372	1869	2	C O & D A Jeffery	3.1E+07
43736			Powder River	T 3372	1889	2	C O & D A Jeffery	3.1E+07
43736			Powder River	T 3372	1869	1	C O & D A Jeffery	3.1E+07
43736			Powder River	T 3372	1889	1	C O & D A Jeffery	3.1E+07
57559			Powder River	T 3554	1898	1	William I Pierce	3.1E+07
57559			Powder River	T 3554	1908	2	William I Pierce	3.1E+07
68412			Powder River		1869	1	Joy E Foltz, F C & K E Zimmer, R C & B L Austin	3.1E+07
				T 7944	1890	1	Russell John Marcum	3.1E+07
57922	G 7283				1977	1	William I Pierce	3.1E+07
75775	G 2877			T 7933	1965	2	Norman Butler	3.1E+07
34321	S 28008				1962	1	Fred S Weishaar	3.1E+07
39117	G 4953				1971	1	James W Coleman	3.1E+07
72621			Powder River		1863	2	David & Carol Phillips	3.1E+07
75775	G 2877			T 7933	1965	3	Norman Butler	3.1E+07
39116	G 3840				1967	1	James W Coleman	3.1E+07
56630	G 9260				1981	1	Virgil H Bailey	3.1E+07
39251	G 4966				1970	1	Frank E Adams, Hale E Hoopes	3.1E+07
50943	G 5399				1971	1	Wistar M Adair Jr & Carlotte M	3.1E+07
4041			Powder River		1877	2	I S/M F Burnside	3.1E+07
4041			Powder River		1877	1	I S/M F Burnside	3.1E+07
4041			Powder River		1896	1	I S/M F Burnside	3.1E+07
4041			Powder River		1906	1	I S/M F Burnside	3.1E+07
	G 12664				1993	1	Robert M Richmond	3.1E+07
73409	S 296				1910	1	Donald & Dorthy Hubbard	3.1E+07
48213	G 6364				1972	1	Truman S Bennett	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
	SPRING CR	08.00S39.00E-27-NWSE	IC	0.52	0.52	N	
32606	LITTLE SPRING CR	08.00S39.00E-27-NWSW	IR	0.65	0.00	Y	
32606	LITTLE SPRING CR	08.00S39.00E-27-NWSW	IR	0.65	0.00	Y	
32606	LITTLE SPRING CR	08.00S39.00E-27-NWSW	IR	0.65	0.00	Y	
32606	SPRING CR	08.00S39.00E-27-NWSW	IR	0.48	0.48	N	
32606	SPRING CR	08.00S39.00E-27-NWSW	IR	0.88	0.88	N	
32606	SPRING CR	08.00S39.00E-27-NWSW	IR	0.65	0.65	N	
32607	SPRING CR 2	08.00S39.00E-27-NWSW	IR	2.00	2.00	N	
32607	SPRING CR 3	08.00S39.00E-27-NWSW	IR	2.00	0.00	Y	
	A SUMP	08.00S39.00E-27-SESW	IS	0.22	0.22	N	
4386	PINE CR	08.00S39.00E-27-SWNW	IR	0.30	0.30	N	
4386	PINE CR	08.00S39.00E-27-SWNW	IR	0.38	0.38	N	
4386	PINE CR	08.00S39.00E-27-SWNW	IR	0.88	0.88	N	
	WELL 2	08.00S39.00E-28-NWNW	IS	2.00	2.00	N	
64010	IRBY POND	08.00S39.00E-28-NWSE	IS	1.00	1.00	N	
	WELL 1	08.00S39.00E-28-NWSE	IS	1.78	1.78	N	
	WELL 2	08.00S39.00E-28-NWSE	IS	1.78	0.00	Y	
16690	PINE CR	08.00S39.00E-28-NWSW	IR	0.20	0.20	N	
68434	SPRING CR	08.00S39.00E-28-SESE	IR	0.20	0.20	N	
48851	DRAIN DITCH	08.00S39.00E-28-SWNE	IS	1.21	1.21	N	
34642	SEEPAGE COLL DITCH 1	08.00S39.00E-28-SWSE	IR	0.50	0.50	N	
34642	UNN DRAINAGEWAY A	08.00S39.00E-28-SWSE	IR	0.25	0.25	N	
34642	UNN DRAINAGEWAY B	08.00S39.00E-28-SWSE	IR	0.13	0.13	N	
34317	MOSER WE	08.00S39.00E-29-NENE	IS	0.40	0.40	N	
43736	PINE CR	08.00S39.00E-29-NESE	IR	1.95	0.00	Y	
43736	PINE CR	08.00S39.00E-29-NESE	IR	1.95	0.00	Y	
43736	PINE CR	08.00S39.00E-29-NESW	IR	0.25	0.25	N	
43736	PINE CR	08.00S39.00E-29-NESW	IR	1.95	1.95	N	
57559	PINE CR	08.00S39.00E-29-NESW	IR	4.00	4.00	N	
57559	PINE CR	08.00S39.00E-29-NESW	IR	4.00	0.00	Y	
68412	PINE CR	08.00S39.00E-29-NESW	IR	1.71	1.71	N	
	PINE CR	08.00S39.00E-29-NESW	IR	0.13	0.13	N	
57922	A WELL	08.00S39.00E-29-NWNE	IS	0.99	0.99	N	
75775	GRAVEL PIT NO 2	08.00S39.00E-29-NWNW	IS	0.72	0.72	N	
34321	PINE CR	08.00S39.00E-29-NWSE	IS	0.50	0.50	N	
39117	GRAVEL PIT	08.00S39.00E-29-NWSE	IS	0.21	0.21	N	
72621	PINE CR	08.00S39.00E-29-NWSE	IR	7.86	0.00	Y	
75775	GRAVEL PIT NO 3	08.00S39.00E-29-NWSW	IS	0.21	0.21	N	
39116	GRAVEL PIT	08.00S39.00E-29-SENE	IS	0.39	0.39	N	
56630	A WELL	08.00S39.00E-29-SESE	IS	0.28	0.28	N	
39251	A SUMP	08.00S39.00E-29-SWNE	IS	0.55	0.55	N	
50943	PIT WE	08.00S39.00E-29-SWNW	IR	0.48	0.48	N	
4041	PINE CR	08.00S39.00E-29-SWSE	IR	3.40	0.00	Y	
4041	SPRING CR	08.00S39.00E-29-SWSE	IR	3.40	3.40	N	
4041	SPRING CR	08.00S39.00E-29-SWSE	IR	3.40	3.40	N	
4041	SPRING CR	08.00S39.00E-29-SWSE	IR	3.40	3.40	N	
	A WELL	08.00S39.00E-29-SWSW	IS	0.50	0.50	N	
73409	POWDER R	08.00S39.00E-2-SWSE	IR	1.96	1.96	N	
48213	SUMP WELL	08.00S39.00E-30-NENE	IR	0.45	0.45	N	

Certificate	ACF	ACF Estimated	Season	Remarks
		N	1/1 - 12/31	EXCEPT JULY, AUGUST AND SEPTEMBER
32606		N	1/1 - 12/31	
32606		N	1/1 - 12/31	
32606		N	1/1 - 12/31	
32606		N	1/1 - 12/31	
32606		N	1/1 - 12/31	
32606		N	1/1 - 12/31	
32607		N	1/1 - 12/31	
32607		N	1/1 - 12/31	
		N	1/1 - 12/31	
4386		N	1/1 - 12/31	
4386		N	1/1 - 12/31	
4386		N	1/1 - 12/31	
		N	1/1 - 12/31	
64010		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
16690		N	1/1 - 12/31	
68434		N	1/1 - 12/31	
48851		N	1/1 - 12/31	
34642		N	1/1 - 12/31	
34642		N	1/1 - 12/31	
34642		N	1/1 - 12/31	
34317		N	1/1 - 12/31	
43736		N	1/1 - 12/31	
43736		N	1/1 - 12/31	
43736		N	1/1 - 12/31	
43736		N	1/1 - 12/31	
57559		N	1/1 - 12/31	
57559		N	1/1 - 12/31	
68412		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
		N	1/1 - 12/31	DIVERSION LIMITED TO QUANTITY AVAILABLE AT ORIGINAL POD
57922		N	1/1 - 12/31	
75775		N	1/1 - 12/31	
34321		N	1/1 - 12/31	
39117		N	1/1 - 12/31	
72621		N	1/1 - 12/31	
75775		N	1/1 - 12/31	
39116		N	1/1 - 12/31	
56630		N	1/1 - 12/31	
39251		N	1/1 - 12/31	
50943		N	1/1 - 12/31	
4041		N	1/1 - 12/31	
4041		N	1/1 - 12/31	
4041		N	1/1 - 12/31	
4041		N	1/1 - 12/31	
		N	1/1 - 12/31	
73409		N	1/1 - 12/31	
48213		N	1/1 - 12/31	

Certificate	Condition Code
	FSN,MDV,NUP,RCU,RPU,DEF
32606	
32606	
32606	
32606	
32606	
32606	
32607	
32607	
4386	
4386	
4386	
64010	
16690	
68434	
48851	
34642	
34642	
34642	
34317	
43736	
43736	
43736	
43736	
57559	
57559	
68412	
57922	
75775	
34321	
39117	
72621	
75775	
39116	
56630	
39251	
50943	
4041	
4041	
4041	
4041	
73409	
48213	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
50761	G 7116				1977	1	Gordys B Diers	3.1E+07
37497	G 3471				1967	1	Ronald Johnson	3.1E+07
37497	G 3471				1967	1	Ronald Johnson	3.1E+07
80116	R 13546				2002	1	Ronald Johnson	3.1E+07
	R 13546				2002	1	Ronald Johnson	3.1E+07
4018			Powder River		1872	1	G L/Bertha/Fred/Bessie Bowman	3.1E+07
75726			Powder River	T 7944	1888	1	W J Selby	3.1E+07
75726			Powder River	T 7944	1890	1	W J Selby	3.1E+07
3763	S 3735				1918	1	Thomas Freeland	3.1E+07
4018			Powder River		1890	2	G L/Bertha/Fred/Bessie Bowman	3.1E+07
49151	S 42344				1977	1	Ronald E Johnson	3.1E+07
49151	S 42344				1977	1	Ronald E Johnson	3.1E+07
47250	G 1751			B 205	1961	1	Norman Butler	3.1E+07
63787			Powder River	T 5086	1866	2	Wanda Holland	3.1E+07
68415			Powder River		1864	1	Gary S & Shirley J Devos	3.1E+07
7415	S 7569				1926	1	A J Brannock	3.1E+07
4322			Powder River		1885	1	J B Luster	3.1E+07
68705	G 6901				1976	1	Elvin E Carter	3.1E+07
45722	G 6455				1975	1	Glen W Swilling	3.1E+07
67217			Powder River	T 3940	1898	1	Glen Swilling	3.1E+07
63787			Powder River	T 5086	1866	1	Wanda Holland	3.1E+07
68414			Powder River		1866	1	Aaron & Lavonne Kasper	3.1E+07
68414			Powder River		1866	2	Aaron & Lavonne Kasper	3.1E+07
68415			Powder River		1864	2	Gary S & Shirley J Devos	3.1E+07
54726	S 39831				1975	2	Deal J/Arlene A Spriet	3.1E+07
54726	S 39831				1975	3	Deal J/Arlene A Spriet	3.1E+07
19446	S 16289				1945	1	Harold Doherty	3.1E+07
	S 39167				1975	6	Floyd E Duncan	3.1E+07
4288			Powder River		1899	1	Peter Klinefelter	3.1E+07
	S 39167				1975	11	Floyd E Duncan	3.1E+07
	S 39167				1975	7	Floyd E Duncan	3.1E+07
54726	S 39831				1975	1	Deal J/Arlene A Spriet	3.1E+07
54726	S 39831				1975	4	Deal J/Arlene A Spriet	3.1E+07
	S 39167				1975	4	Floyd E Duncan	3.1E+07
	S 39167				1975	5	Floyd E Duncan	3.1E+07
	S 39167				1975	2	Floyd E Duncan	3.1E+07
	S 39167				1975	3	Floyd E Duncan	3.1E+07
37777	G 3080				1965	1	Charles Simpson	3.1E+07
1441	E 157				1912	1	D C Perkins	3.1E+07
1442	E 158				1912	1	Flavius Perkins	3.1E+07
3574	S 3766				1918	1	F S Johnston	3.1E+07
3574	S 3766				1918	1	F S Johnston	3.1E+07
44132	S 32773				1967	1	V H Bailey	3.1E+07
44132	S 32773				1967	2	V H Bailey	3.1E+07
50653	G 5907				1973	1	Gary Oliver Weythman	3.1E+07
33791	S 27122				1960	1	N E Dodd	3.1E+07
33791	S 27122				1960	1	N E Dodd	3.1E+07
33792	S 27121				1960	1	Nellie M Irby	3.1E+07
33794	S 26508				1959	1	Fred J Schuetz	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
50761	A WELL	08.00S39.00E-30-NESE	IR	0.10	0.10	N	
37497	A WELL	08.00S39.00E-30-NESW	IR	0.12	0.12	N	
37497	A WELL	08.00S39.00E-30-NESW	IS	0.25	0.25	N	
80116	PINE CR	08.00S39.00E-30-NESW	MP			N	5
	PINE CR	08.00S39.00E-30-NESW	MP			N	5
4018	PINE CR	08.00S39.00E-30-NWSE	IR	0.49	0.49	N	
75726	PINE CR	08.00S39.00E-30-NWSE	IR	0.38	0.38	N	
75726	PINE CR	08.00S39.00E-30-NWSE	IR	0.15	0.15	N	
3763	PINE CR	08.00S39.00E-30-NWSW	IR	0.25	0.25	N	
4018	PINE CR	08.00S39.00E-30-NWSW	IR	1.10	1.10	N	
49151	PINE CR	08.00S39.00E-30-NWSW	IR	0.12	0.12	N	
49151	PINE CR	08.00S39.00E-30-NWSW	IS	0.24	0.24	N	
47250	BUTLER'S PIT	08.00S39.00E-30-SENE	IS	0.19	0.19	N	
63787	SPRING CR	08.00S39.00E-30-SESE	IR	2.00	0.00	Y	
68415	PINE CR	08.00S39.00E-30-SESE	IR	0.98	0.98	N	
7415	WASTE WATER	08.00S39.00E-30-SESW	I*	0.75	0.75	N	
4322	PINE CR	08.00S39.00E-30-SWNE	IR	2.00	2.00	N	
68705	CARTER SUMP 1	08.00S39.00E-30-SWNW	IC	0.72	0.72	N	
45722	SWILLING SUMP POND	08.00S39.00E-30-SWSE	IS	0.54	0.54	N	
67217	SPRING CR	08.00S39.00E-30-SWSE	IR	1.13	1.13	N	
63787	PINE CR	08.00S39.00E-30-SWSW	IR	2.00	2.00	N	
68414	SPRING CR	08.00S39.00E-30-SWSW	IR	1.98	1.98	N	
68414	SPRING CR	08.00S39.00E-30-SWSW	IR	1.98	0.00	Y	
68415	PINE CR	08.00S39.00E-30-SWSW	IR	0.98	0.00	Y	
54726	POND 1	08.00S39.00E-31-NENW	IR	0.50	0.50	N	
54726	POND 2	08.00S39.00E-31-NENW	IR	0.50	0.50	N	
19446	WASTE WATER	08.00S39.00E-31-NESE	IS	0.58	0.58	N	
	SPRING 6	08.00S39.00E-31-NESW	ID	8.00	0.00	Y	
4288	DRAINAGE	08.00S39.00E-31-NWNW	IR	0.80	0.80	N	
	SPRING 11	08.00S39.00E-31-NWSW	ID	8.00	0.00	Y	
	SPRING 7	08.00S39.00E-31-NWSW	ID	8.00	0.00	Y	
54726	WASTE WATER	08.00S39.00E-31-SENE	IS	0.65	0.65	N	
54726	POND 3	08.00S39.00E-31-SENW	IR	0.93	0.93	N	
	SPRING 4	08.00S39.00E-31-SESW	ID	8.00	0.00	Y	
	SPRING 5	08.00S39.00E-31-SWSE	ID	8.00	0.00	Y	
	SPRING 2	08.00S39.00E-31-SWSW	ID	8.00	0.00	Y	
	SPRING 3	08.00S39.00E-31-SWSW	ID	8.00	0.00	Y	
37777	A SUMP	08.00S39.00E-32-NESE	IS	0.63	0.63	N	
1441	MILL CR	08.00S39.00E-32-NWSE	IR	0.50	0.50	N	
1442	MILL CR	08.00S39.00E-32-NWSE	IR	0.50	0.50	N	
3574	MILL CR	08.00S39.00E-32-NWSE	IR	0.15	0.15	N	
3574	MILL CR	08.00S39.00E-32-NWSE	IS	0.85	0.85	N	
44132	GOODRICH CR	08.00S39.00E-32-NWSE	IS	0.96	0.96	N	
44132	GOODRICH CR	08.00S39.00E-32-NWSE	IR	0.96	0.00	Y	
50653	A WELL	08.00S39.00E-32-NWSE	IR	0.96	0.96	N	
33791	MILL CR	08.00S39.00E-32-SESW	IR	1.99	1.99	N	
33791	MILL CR	08.00S39.00E-32-SESW	IS	11.77	11.77	N	
33792	MILL CR	08.00S39.00E-32-SESW	IS	1.88	1.88	N	
33794	MILL CR	08.00S39.00E-32-SESW	IS	1.39	1.39	N	

Certificate	ACF	ACF Estimated	Season	Remarks
50761		N	1/1 - 12/31	
37497		N	1/1 - 12/31	
37497		N	1/1 - 12/31	
80116	5	N	2/1 - 4/30	
	5	N	2/1 - 4/30	
4018		N	1/1 - 12/31	
75726		N	1/1 - 12/31	
75726		N	1/1 - 12/31	
3763		N	1/1 - 12/31	
4018		N	1/1 - 12/31	
49151		N	1/1 - 12/31	
49151		N	1/1 - 12/31	
47250		N	1/1 - 12/31	
63787		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
68415		N	1/1 - 12/31	
7415		N	1/1 - 12/31	
4322		N	1/1 - 12/31	
68705		N	1/1 - 12/31	
45722		N	1/1 - 12/31	
67217		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
63787		N	1/1 - 12/31	IF AVAILABLE AT ORIGINAL POINT OF DIVERSION
68414		N	1/1 - 12/31	
68414		N	1/1 - 12/31	
68415		N	1/1 - 12/31	
54726		N	1/1 - 12/31	
54726		N	1/1 - 12/31	
19446		N	1/1 - 12/31	
		N	1/1 - 12/31	
4288		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
54726		N	1/1 - 12/31	
54726		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
37777		N	1/1 - 12/31	
1441		N	1/1 - 12/31	
1442		N	1/1 - 12/31	
3574		N	1/1 - 12/31	
3574		N	1/1 - 12/31	
44132		N	1/1 - 12/31	
44132		N	1/1 - 12/31	
50653		N	1/1 - 12/31	
33791		N	1/1 - 12/31	
33791		N	1/1 - 12/31	
33792		N	1/1 - 12/31	
33794		N	1/1 - 12/31	

Certificate	Condition Code
50761	
37497	
37497	
80116	
4018	
75726	
75726	
3763	
4018	
49151	
49151	
47250	
63787	
68415	
7415	
4322	
68705	
45722	
67217	
63787	
68414	
68414	
68415	
54726	
54726	
19446	
4288	
54726	
54726	
37777	
1441	
1442	
3574	
3574	
44132	
44132	
50653	
33791	
33791	
33792	
33794	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
33794	S 26508				1959	1	Fred J Schuetz	3.1E+07
33796	S 27123				1960	1	Williams Ditch Co	3.1E+07
34004	S 26505				1959	1	Lynn A Sieg	3.1E+07
34004	S 26505				1959	1	Lynn A Sieg	3.1E+07
72616	S 26507				1959	1	Kerns Bros Inc	3.1E+07
72616	S 26507				1959	1	Kerns Bros Inc	3.1E+07
72624	S 26504				1959	1	Jepson Brothers Ranch Co, Susan Hedgpeth	3.1E+07
73613	S 26506				1959	1	Marcus Sachos	3.1E+07
73613	S 26506				1959	1	Marcus Sachos	3.1E+07
29064	S 23086				1954	1	Nellie M Irby	3.1E+07
31546	R 3168				1963	1	Marie De Vos	3.1E+07
31547	S 28422				1963	2	Marie De Vos	3.1E+07
31547	S 28422				1963	1	Marie De Vos	3.1E+07
31547	S 28422				1963	1	Marie De Vos	3.1E+07
54988			Powder River	T 3959	1866	1	Norman Butler	3.1E+07
54988			Powder River	T 3959	1880	1	Norman Butler	3.1E+07
34412	G 2563				1963	1	R C Marshall	3.1E+07
34642	S 29016				1962	6	Norman Butler	3.1E+07
34642	S 29016				1962	3	Norman Butler	3.1E+07
45591	R 6259				1974	2	Norman Butler	3.1E+07
45591	R 6259				1974	1	Norman Butler	3.1E+07
45592	S 39079				1974	3	Norman Butler	3.1E+07
45592	S 39079				1974	1	Norman Butler	3.1E+07
	S 52934				1990	1	SSI Land and Cattle Co	3.1E+07
	S 52934				1990	1	SSI Land and Cattle Co	3.1E+07
34642	S 29016				1962	7	Norman Butler	3.1E+07
34642	S 29016				1962	8	Norman Butler	3.1E+07
34642	S 29016				1962	4	Norman Butler	3.1E+07
45592	S 39079				1974	2	Norman Butler	3.1E+07
54728	S 45212				1979	1	Norman Butler	3.1E+07
54728	S 45212				1979	2	Norman Butler	3.1E+07
16683	S 15236				1942	1	L A/Anna Pearl Sieg	3.1E+07
61472	G 6210				1974	1	Don Hill	3.1E+07
58474	S 40732				1976	1	Freeman Angus Ranch Inc	3.1E+07
45589	S 38890				1973	1	Fred J Cochram	3.1E+07
54986			Powder River	T 3579	1864	1	Freeman Angus Ranch Inc	3.1E+07
68119	E 2				1909	1	Fred Cochram, Rex & Rosalie M Wilson, Annette Cockram	3.1E+07
	S 50217				1985	2	Pocahontas Farmer Ditch Co	3.1E+07
	S 50217				1985	2	Pocahontas Farmer Ditch Co	3.1E+07
34841	S 1713			B 120	1913	1	Norman Butler	3.1E+07
9608			Powder River	T 5665	1962	2	City of Baker	3.1E+07
39253	R 2615				1961	1	City of Baker	3.1E+07
39254	S 27371				1961	1	City of Baker	3.1E+07
9608			Powder River	T 5665	1962	5	City of Baker	3.1E+07
9608			Powder River	T 5665	1962	28	City of Baker	3.1E+07
68121			Powder River		1871	1	Edna Harrell, Harrell Hereford Ranch	3.1E+07
68121			Powder River		1873	1	Edna Harrell, Harrell Hereford Ranch	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
33794	MILL CR	08.00S39.00E-32-SESW	IS	1.79	1.79	N	
33796	MILL CR	08.00S39.00E-32-SESW	IS	3.85	3.85	N	
34004	MILL CR	08.00S39.00E-32-SESW	IS	1.98	1.98	N	
34004	MILL CR	08.00S39.00E-32-SESW	IS	2.00	2.00	N	
72616	MILL CR	08.00S39.00E-32-SESW	IS	5.88	0.00	Y	
72616	MILL CR	08.00S39.00E-32-SESW	IS	5.88	5.88	N	
72624	MILL CR	08.00S39.00E-32-SESW	IS	5.88	5.88	N	
73613	MILL CR	08.00S39.00E-32-SESW	IR	1.88	1.88	N	
73613	MILL CR	08.00S39.00E-32-SESW	IR	3.00	3.00	N	
29064	MILL CR	08.00S39.00E-32-SWSE	IR	4.35	4.35	N	
31546	SPRING CR	08.00S39.00E-33-NENW	IR	0.00	0.00	N	2.25
31547	DEVOS RES	08.00S39.00E-33-NENW	IR	1.92	0.00	Y	
31547	SPRING CR	08.00S39.00E-33-NENW	IR	1.92	1.92	N	
31547	SPRING CR	08.00S39.00E-33-NENW	IS	1.98	1.98	N	
54988	SPRING CR	08.00S39.00E-33-NENW	IR	1.13	1.13	N	
54988	SPRING CR	08.00S39.00E-33-NENW	IR	1.13	1.13	N	
34412	A SUMP	08.00S39.00E-33-NESW	IS	1.00	1.00	N	
34642	SEEPAGE COLL DITCH 2	08.00S39.00E-33-NWNE	IR	0.50	0.50	N	
34642	UNN DRAINAGEWAY C	08.00S39.00E-33-NWNE	IR	0.13	0.13	N	
45591	DITCH YY	08.00S39.00E-33-NWNE	IR	0.00	0.00	N	9
45591	UNN DRAINAGEWAY C	08.00S39.00E-33-NWNE	IS	0.00	0.00	N	9
45592	BUTLER'S RES	08.00S39.00E-33-NWNE	IR	1.34	0.00	Y	
45592	UNN DRAINAGEWAY C	08.00S39.00E-33-NWNE	IS	1.34	1.34	N	
	MILL CR	08.00S39.00E-33-NWNW	IS	4.00	4.00	N	
	MILL CR	08.00S39.00E-33-NWNW	IS	4.00	4.00	N	
34642	SEEPAGE COLL DITCH 2	08.00S39.00E-33-SWNE	IR	0.50	0.00	Y	
34642	SEEPAGE COLL DITCH 3	08.00S39.00E-33-SWNE	IR	0.50	0.50	N	
34642	UNN DRAINAGEWAY D	08.00S39.00E-33-SWNE	IR	0.50	0.50	N	
45592	DITCH YY	08.00S39.00E-33-SWNE	IR	1.34	0.00	Y	
54728	UNN DRAIN DITCH	08.00S39.00E-33-SWNE	IS	3.40	3.40	N	
54728	UNN DRAIN DITCH	08.00S39.00E-33-SWNE	IR	3.40	0.00	Y	
16683	SPRING CR	08.00S39.00E-34-NENW	IS	0.98	0.98	N	
61472	HILL WELL	08.00S39.00E-34-NESW	IS	0.95	0.95	N	
58474	SPRING CR	08.00S39.00E-34-NWNE	IS	1.50	1.50	N	
45589	SPRING CR	08.00S39.00E-34-NWNW	IS	3.43	3.43	N	
54986	WAGGIE CR	08.00S39.00E-34-SENW	IR	3.00	3.00	N	
68119	GOODRICH CR	08.00S39.00E-36-SWSW	IR	1.98	1.98	N	
	MILL CR	09.00S38.00E-1-NWSE	IR	0.17	0.00	Y	
	MILL CR	09.00S38.00E-1-NWSE	IS	0.17	0.00	Y	
34841	MILL CR	09.00S38.00E-1-SWNE	IS	1.78	1.78	N	
9608	COYOTE SPRS	09.00S38.00E-2-NWSW	MU	0.50	0.50	N	
39253	GOODRICH CR	09.00S38.00E-4-NESE	MU	0.00	0.00	N	233.2
39254	GOODRICH RS	09.00S38.00E-4-NESE	MU	10.80	10.80	N	
9608	HAWK SPRS	09.00S38.00E-11-NESE	MU	0.50	0.50	N	
9608	MARBLE CR	09.00S38.00E-13-NWNW	MU	5.00	5.00	N	
68121	SALMON CR	09.00S39.00E-4-NESW	IR	1.66	1.66	N	
68121	SALMON CR	09.00S39.00E-4-NESW	IR	1.66	1.66	N	

Certificate	ACF	ACF Estimated	Season	Remarks
33794		N	1/1 - 12/31	
33796		N	1/1 - 12/31	
34004		N	1/1 - 12/31	
34004		N	1/1 - 12/31	
72616		N	1/1 - 12/31	
72616		N	1/1 - 12/31	
72624		N	1/1 - 12/31	
73613		N	1/1 - 12/31	
73613		N	1/1 - 12/31	
29064		N	1/1 - 12/31	
31546	2.25	N	1/1 - 12/31	
31547		N	1/1 - 12/31	
31547		N	1/1 - 12/31	
31547		N	1/1 - 12/31	
54988		N	1/1 - 12/31	
54988		N	1/1 - 12/31	
34412		N	1/1 - 12/31	
34642		N	1/1 - 12/31	
34642		N	1/1 - 12/31	
45591	0	Y	1/1 - 12/31	
45591	9	N	1/1 - 12/31	
45592		N	1/1 - 12/31	
45592		N	1/1 - 12/31	
		N	1/1 - 12/31	10/1 5/31
		N	1/1 - 12/31	10/1 5/31
34642		N	1/1 - 12/31	
34642		N	1/1 - 12/31	
34642		N	1/1 - 12/31	
45592		N	1/1 - 12/31	
54728		N	1/1 - 12/31	
54728		N	1/1 - 12/31	
16683		N	1/1 - 12/31	
61472		N	1/1 - 12/31	
58474		N	1/1 - 12/31	
45589		N	1/1 - 12/31	
54986		N	1/1 - 12/31	
68119		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
34841		N	1/1 - 12/31	
9608		N	1/1 - 12/31	
39253	233.2	N	1/1 - 12/31	
39254		N	1/1 - 12/31	STORED WATER ONLY FROM 233.2 ACRE FOOT RESERVOIR
9608		N	1/1 - 12/31	
9608		N	1/1 - 12/31	TRANSFER 5665
68121		N	1/1 - 12/31	
68121		N	1/1 - 12/31	

Certificate	Condition Code
33794	
33796	
34004	
34004	
72616	
72616	
72624	
73613	
73613	
29064	
31546	
31547	
31547	
31547	
54988	
54988	
34412	
34642	
34642	
45591	
45591	
45592	
45592	
	DEF,FSN,MDV,RCU,RPU,UPR
	UPR,RPU,RCU,DEF,MDV
34642	
34642	
34642	
45592	
54728	
54728	
16683	
61472	
58474	
45589	
54986	
68119	
34841	
9608	
39253	
39254	
9608	
9608	
68121	
68121	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
68122			Powder River		1871	1	Edna Harrell, Harrell Hereford Ranch	3.1E+07
68122			Powder River		1873	1	Edna Harrell, Harrell Hereford Ranch	3.1E+07
43624	G 3595				1967	1	G Lowell & Nettie Lee Fuller	3.1E+07
4416			Powder River		1863	12	Pocahontas Farmer Ditch Co	3.1E+07
4416			Powder River		1873	12	Pocahontas Farmer Ditch Co	3.1E+07
34968	S 27199				1961	2	Alvin Frank Little	3.1E+07
34968	S 27199				1961	3	Alvin Frank Little	3.1E+07
34968	S 27199				1961	4	Alvin Frank Little	3.1E+07
37875	G 3748				1967	1	James R Evans	3.1E+07
	S 50217				1985	1	Pocahontas Farmer Ditch Co	3.1E+07
	S 50217				1985	1	Pocahontas Farmer Ditch Co	3.1E+07
52009			Powder River	T 5280	1863	4	Pocahontas Mining & Irrig Co	3.1E+07
52009			Powder River	T 5280	1906	4	Pocahontas Mining & Irrig Co	3.1E+07
74205	S 43376				1978	1	Joseph O Rudi	3.1E+07
52009			Powder River	T 5280	1863	8	Pocahontas Mining & Irrig Co	3.1E+07
73169	G 10150				1983	1	Carney Lansford	3.1E+07
34968	S 27199				1961	1	Alvin Frank Little	3.1E+07
73170	S 47837				1983	1	Carney Lansford	3.1E+07
73171	S 22160			T 5279	1953	1	Carney Lansford	3.1E+07
4117			Powder River		1902	2	C W Durkee	3.1E+07
52009			Powder River	T 5280	1863	5	Pocahontas Mining & Irrig Co	3.1E+07
52009			Powder River	T 5280	1910	5	Pocahontas Mining & Irrig Co	3.1E+07
73168	G 8236				1978	1	Carney Lansford	3.1E+07
73168	G 8236				1978	2	Carney Lansford	3.1E+07
66773	G 8150				1978	1	Paula A & Donna L Crabill	3.1E+07
4416			Powder River		1880	10	Pocahontas Mining & Irrig Co	3.1E+07
4416			Powder River		1890	10	Pocahontas Mining & Irrig Co	3.1E+07
4416			Powder River		1899	10	Pocahontas Farmer Ditch Co	3.1E+07
52009			Powder River	T 5280	1880	3	Pocahontas Mining & Irrig Co	3.1E+07
52009			Powder River	T 5280	1908	3	Pocahontas Mining & Irrig Co	3.1E+07
4297			Powder River		1895	1	Matthew Landreth	3.1E+07
70500					1993	1	Cathie Lee Roach, Richard Charles Shellito	3.1E+07
70500					1993	1	Cathie Lee Roach, Richard Charles Shellito	3.1E+07
70500					1993	2	Cathie Lee Roach, Richard Charles Shellito	3.1E+07
70500					1993	2	Cathie Lee Roach, Richard Charles Shellito	3.1E+07
66114	R 7512				1978	1	Paula A & Donna L Crabill	3.1E+07
66115	S 43183				1978	1	Paula A & Donna L Crabill	3.1E+07
4416			Powder River		1863	9	Pocahontas Farmer Ditch Co	3.1E+07
4416			Powder River		1879	9	Pocahontas Farmer Ditch Co	3.1E+07
4416			Powder River		1880	9	Pocahontas Farmer Ditch Co	3.1E+07
4416			Powder River		1890	9	Pocahontas Farmer Ditch Co	3.1E+07
4416			Powder River		1899	9	Pocahontas Farmer Ditch Co	3.1E+07
4416			Powder River		1908	9	Pocahontas Farmer Ditch Co	3.1E+07
52009			Powder River	T 5280	1880	2	Pocahontas Mining & Irrig Co	3.1E+07
52009			Powder River	T 5280	1908	2	Pocahontas Mining & Irrig Co	3.1E+07
	S 50217				1985	4	Pocahontas Farmer Ditch Co	3.1E+07
	S 50217				1985	4	Pocahontas Farmer Ditch Co	3.1E+07
73171	S 22160			T 5279	1953	2	Carney Lansford	3.1E+07
67810	R 8346				1977	1	Robert L Harrell	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
68122	SALMON CR	09.00S39.00E-4-NESW	IR	1.88	1.88	N	
68122	SALMON CR	09.00S39.00E-4-NESW	IR	1.88	1.88	N	
43624	SUMP WELL	09.00S39.00E-4-NWNE	IS	0.46	0.46	N	
4416	MCCORD G	09.00S39.00E-4-NWNW	IR	78.70	0.00	Y	
4416	MCCORD G	09.00S39.00E-4-NWNW	IR	78.70	0.00	Y	
34968	SALMON CR	09.00S39.00E-4-NWSW	IR	0.26	0.00	Y	
34968	SALMON CR	09.00S39.00E-4-NWSW	IR	0.26	0.00	Y	
34968	SALMON CR	09.00S39.00E-4-NWSW	IR	0.26	0.00	Y	
37875	A SUMP	09.00S39.00E-4-SWNW	IR	0.15	0.15	N	
	SALMON CR	09.00S39.00E-4-SWSW	IR	0.17	0.17	N	
	SALMON CR	09.00S39.00E-4-SWSW	IS	8.56	8.56	N	
52009	MORIN SPR	09.00S39.00E-5-NENE	IR	23.28	0.00	Y	
52009	MORIN SPR	09.00S39.00E-5-NENE	IR	23.28	0.00	Y	
74205	NELSON SPR	09.00S39.00E-5-NESW	IC	3.00	3.00	N	
52009	MCCORD G	09.00S39.00E-5-NWSE	IR	23.28	0.00	Y	
73169	DRAIN TILE LINE	09.00S39.00E-5-SENW	IS	2.73	2.73	N	
34968	SALMON CR	09.00S39.00E-5-SESE	IR	0.26	0.26	N	
73170	SALMON CR	09.00S39.00E-5-SESE	IS	2.24	2.24	N	
73171	SALMON CR	09.00S39.00E-5-SESE	IR	1.10	1.10	N	
4117	SPRS	09.00S39.00E-5-SESW	IR	1.05	0.00	Y	
52009	KELLY SPR	09.00S39.00E-5-SWNE	IR	23.28	0.00	Y	
52009	KELLY SPR	09.00S39.00E-5-SWNE	IR	23.28	0.00	Y	
73168	HORIZONTAL WELL 1	09.00S39.00E-5-SWNE	IS	2.73	2.73	N	
73168	HORIZONTAL WELL 2	09.00S39.00E-5-SWNE	IS	2.73	0.00	Y	
66773	SUMP/DRAIN TILES	09.00S39.00E-5-SWNW	IS	1.93	1.93	N	
4416	ROBERTS SPRS	09.00S39.00E-6-NESW	IR	78.70	0.00	Y	
4416	ROBERTS SPRS	09.00S39.00E-6-NESW	IR	78.70	0.00	Y	
4416	ROBERTS SPRS	09.00S39.00E-6-NESW	IR	78.70	0.00	Y	
52009	ROBERTS SPR 3	09.00S39.00E-6-NESW	IR	23.28	0.00	Y	
52009	ROBERTS SPR 3	09.00S39.00E-6-NESW	IR	23.28	0.00	Y	
4297	MILL CR	09.00S39.00E-6-NWNW	IR	1.35	1.35	N	
70500	RUNOFF/RES 1	09.00S39.00E-6-NWNW	AS	0.00	0.00	N	0.01
70500	RUNOFF/RES 1	09.00S39.00E-6-NWNW	LW	0.00	0.00	N	0.01
70500	RUNOFF/RES 2	09.00S39.00E-6-NWNW	AS	0.00	0.00	N	0.005
70500	RUNOFF/RES 2	09.00S39.00E-6-NWNW	LW	0.00	0.00	N	0.005
66114	CAVIN SPRS	09.00S39.00E-6-NWSE	IR	0.00	0.00	N	1.1
66115	RESERVOIR	09.00S39.00E-6-NWSE	IS	0.00	0.00	N	1.1
4416	CAVIN SPRS	09.00S39.00E-6-SENW	IR	78.70	0.00	Y	
4416	CAVIN SPRS	09.00S39.00E-6-SENW	IR	78.70	0.00	Y	
4416	CAVIN SPRS	09.00S39.00E-6-SENW	IR	78.70	0.00	Y	
4416	CAVIN SPRS	09.00S39.00E-6-SENW	IR	78.70	0.00	Y	
4416	CAVIN SPRS	09.00S39.00E-6-SENW	IR	78.70	0.00	Y	
4416	CAVIN SPRS	09.00S39.00E-6-SENW	IR	78.70	0.00	Y	
52009	ROBERTS SPR 2	09.00S39.00E-6-SESW	IR	23.28	0.00	Y	
52009	ROBERTS SPR 2	09.00S39.00E-6-SESW	IR	23.28	0.00	Y	
	MARBLE CR	09.00S39.00E-6-SWSW	IR	3.09	0.00	Y	
	MARBLE CR	09.00S39.00E-6-SWSW	IS	3.09	3.09	N	
73171	SALMON CR	09.00S39.00E-8-NESW	IR	1.10	0.00	Y	
67810	SALMON CR	09.00S39.00E-8-NWNE	IR	0.00	0.00	N	255

Certificate	ACF	ACF Estimated	Season	Remarks
68122		N	1/1 - 12/31	
68122		N	1/1 - 12/31	
43624		N	1/1 - 12/31	
4416		N	1/1 - 12/31	
4416		N	1/1 - 12/31	
34968		N	1/1 - 12/31	
34968		N	1/1 - 12/31	
34968		N	1/1 - 12/31	
37875		N	1/1 - 12/31	
		N	1/1 - 12/31	
		N	1/1 - 12/31	
52009		N	1/1 - 12/31	79AC
52009		N	1/1 - 12/31	36AC
74205		N	1/1 - 12/31	
52009		N	1/1 - 12/31	6.8AC
73169		N	1/1 - 12/31	
34968		N	1/1 - 12/31	
73170		N	1/1 - 12/31	
73171		N	1/1 - 12/31	ORIGINAL POD
4117		N	1/1 - 12/31	
52009		N	1/1 - 12/31	77.5AC
52009		N	1/1 - 12/31	26AC
73168		N	1/1 - 12/31	
73168		N	1/1 - 12/31	
66773		N	1/1 - 12/31	
4416		N	1/1 - 12/31	
4416		N	1/1 - 12/31	
4416		N	1/1 - 12/31	
52009		N	1/1 - 12/31	18AC
52009		N	1/1 - 12/31	7.5AC
4297		N	1/1 - 12/31	
70500	0	Y	1/1 - 12/31	
70500	0.01	N	1/1 - 12/31	
70500	0.005	N	1/1 - 12/31	
70500	0.005	N	1/1 - 12/31	
66114	1.1	N	1/1 - 12/31	
66115	1.1	N	1/1 - 12/31	
4416		N	1/1 - 12/31	
4416		N	1/1 - 12/31	
4416		N	1/1 - 12/31	
4416		N	1/1 - 12/31	
4416		N	1/1 - 12/31	
4416		N	1/1 - 12/31	
52009		N	1/1 - 12/31	18AC
52009		N	1/1 - 12/31	7.5AC
		N	1/1 - 12/31	
		N	1/1 - 12/31	
73171		N	1/1 - 12/31	ADDITIONAL POD
67810	255	N	1/1 - 12/31	

Certificate	Condition Code
68122	
68122	
43624	
4416	
4416	
34968	
34968	
34968	
37875	
52009	
52009	
74205	
52009	
73169	
34968	
73170	
73171	
4117	
52009	
52009	
73168	
73168	
66773	
4416	
4416	
4416	
52009	
52009	
4297	
70500	
70500	
70500	
70500	
66114	
66115	
4416	
4416	
4416	
4416	
4416	
4416	
52009	
52009	
73171	
67810	

Certificate	Permit	Claim	Decree Name	Transfer	Priority Year	POD #	Applicant Name	WAB .
67815	S 46426				1979	1	Harrell Hereford Ranch	3.1E+07
	S 51732				1989	2	Harrell Land & Livestock LTD	3.1E+07
	S 51732				1989	2	Harrell Land & Livestock LTD	3.1E+07
4117			Powder River		1902	1	C W Durkee	3.1E+07
73170	S 47837				1983	2	Carney Lansford	3.1E+07
	S 51732				1989	1	Harrell Land & Livestock LTD	3.1E+07
7397	S 6306				1924	1	H M Evitt	3.1E+07
28767	S 19472				1950	1	Chas & Grace Lewis	3.1E+07

Certificate	Source	POD Location	Use	Max CFS	CFS	CFS Estimated	Max ACF
67815	HARRELL SALMON CR RS	09.00S39.00E-8-NWNE	IS	0.00	0.00	N	255
	A RES	09.00S39.00E-8-NWNE	IS			N	46.2
	A RES	09.00S39.00E-8-NWNE	IS			N	46.2
4117	SPRS	09.00S39.00E-8-NWNW	IR	1.05	1.05	N	
73170	SALMON CR	09.00S39.00E-8-SENW	IS	2.24	0.00	Y	
	SALMON CR	09.00S39.00E-8-SENW	IR	1.01	1.01	N	
7397	SALMON CR & TRIBS	09.00S39.00E-18-NENW	MI	7.50	7.50	N	
28767	SALMON CR	09.00S39.00E-18-SENW	MI	3.00	3.00	N	

Certificate	ACF	ACF Estimated	Season	Remarks
67815	255	N	1/1 - 12/31	
	46.2	N	1/1 - 12/31	
	46.2	N	1/1 - 12/31	
4117		N	1/1 - 12/31	
73170		N	1/1 - 12/31	
		N	1/1 - 12/31	NO LIVE FLOW 7/1 9/30
7397		N	1/1 - 12/31	
28767		N	1/1 - 12/31	

Certificate	Condition Code
67815	
	DEF,FSN,JUN,MDV,OUP,RCU,RPU,TRN
	OUP,TRN,RCU,DEF,JUN,RPU,FSN,MDV
4117	
73170	
	DEF,FSN,MDV,RCU,RPU,TRN,UPR
7397	
28767	

Use Codes

Mining (0)

MI - Mining

Agriculture (1)

AG - Agriculture
CF - Supplemental Flood Harvesting
CH - Harvesting of Cranberries
CR - Cranberries

DB - Dairy Barn
FR - Frost Protection
GH - Greenhouse
MS - Mint Still
NU - Nursery Uses
TC - Temperature Control

Domestic (2)

DI - Domestic Including Lawn & Garden

DN - Domestic Expanded Including Non-Commercial Garden
DO - Domestic
DS - Domestic & Livestock
GD - Group Domestic
HC - Human Consumption

RR - Restroom
SC - School

Irrigation (3)

CI - Irrigation of Cranberries
I* - Irrigation, Livestock & Domestic
IC - Primary & Supplemental Irrigation
ID - Irrigation & Domestic
IL - Irrigation & Livestock
IR - Irrigation
IS - Supplemental Irrigation
OI - Out of Season Irrigation

Commercial (4)

CM - Commercial Uses
GT - Geo-Thermal (Heating & Cooling)

IM - Manufacturing
LA - Laboratory
LD - Log Deck Sprinkling
SH - Shop
SM - Sawmill

Recreation (5)

CS - Campsite
RC - Recreation
SW - Swimming

Power (6)

PW - Power Development

Fish (7)

AQ - Aquaculture
FI - Fish Culture
FW - Fish & Wildlife

Livestock (8)

LV - Livestock

LW - Livestock & Wildlife

Municipal (9)

MU - Municipal
QM - Quasi-Municipal

Instream (I)

F1 - Supporting Aquatic Life
F2 - Best Use of Waters from Storage
F3 - Anadromous & Resident Fish Habitat
F4 - Instream
F5 - Instream Fishery Enhancement
F6 - Fisheries Enhancement
F7 - Flow Augmentation for Fish Enhancement
F8 - Anadromous & Resident Fish Rearing
FE - Fish Habitat for Resident Borax Lake Chub
PF - Supporting Aquatic & Minimizing Pollution
R1 - Anadromous & Recreation Fish & Recreation
R2 - Supporting Aquatic Life, Recreation & Aesthetics
R3 - Supporting Recreation & Aesthetic Benefits
RA - Supporting Recreational Boating
RF - Supporting Aquatic Life & Recreation

Miscellaneous (M)

AH - Air Conditioning or Heating
AS - Aesthetics
FM - Forest Management
FP - Fire Protection
GR - Groundwater Recharge
MP - Multiple Purpose
PA - Pollution Abatement
PM - Pond Maintenance
RW - Road Construction
ST - Storage

Wildlife (W)

WI - Wildlife

condition_code	short_description	long_description
CNT	BOR Contract	Contract between BOR and applicant
CSP	Water management conservation plan	Water and management conservation plan
DEF	Deficiency in available supply	Limited to any deficiency in the available supply
DSF	Required DEQ Sediment Removal	Treatment facilities meeting current DEQ requirements to remove sediment
DSH	Declining trigger shutoff	Determines if shutoff was due to a declining trigger
DSS	Fullfilled DEQ Sediment Standards	Water may be diverted only when DEQ sediment standards are being met
DTR	Declining trigger	At what level is the declining water level trigger set to
FIR	Maintain	To maintain the fire suppression system
FSN	Fish Screen	Requires a Fish Screen
FSW	Fish Bypass	Bypass
HDG	Headgate	Shall install and maintain a headgate
HEX	Human consumption accepted	Human consumption is accepted from non-use period
IMP	Implact plan	Is an impact plan in place
JUN	Junior Priority	Water is junior in priority to all subsequent rights
LEN	Livestock delivery requirements	Requirements for delivery system, water shall not exceed .10 cfs per 1000 head of livestock
LEX	Livestock consumption accepted	Livestock consumption is accepted from non-use period
MDV	Measuring Device	Shall install and maintain a meter
NUP	Period of Non Use	Period where use is not allowed
OCN	Other special condition	Other special conditions exist
ODM	ODFW must be contacted before dam construction	Shall not construct, operate or maintain any dam, contact ODFW
OTP	ODFW Flow Temperature Requirement	Flow temperature requirement, contact ODFW
OUP	Period of Other Use	Special use periods
QST	Quality standard	Use may be restricted due to decrease in quality of the source stream
RCU	Record Use	Record Use
REF	Reference level	Number rewflecting reference level established
RIP	Riparian Injury	If riparian is disturbed, restoration of riparian by water user
RLD	Reference level date	The date when the refence level was taken
RPU	Report Use	Report Use
SCW	Scenic waterway	Regulating the use if there is a reduction in flows necessary to maintain a scenic waterway
SDU	How long are SWL measurements taken	How long are SWL measurements taken in a period of time
SFR	SWL frequency	How often a surface water level measurement is taken
SMO	Which month SWL measurement is taken	Which month SWL measurement is taken in various months of the year
SPL	Associated with limited duration	Associated with limited duration
STO	Stored Water Only	Stored Water Only
SWL	Static water level	Static water level
TRN	Transfer	Transfer
UPR	Period of Use	Period of allowed use
WST	Not compel continuance of waste water	Shall not carry with it the right to compel the continuances of the waste water

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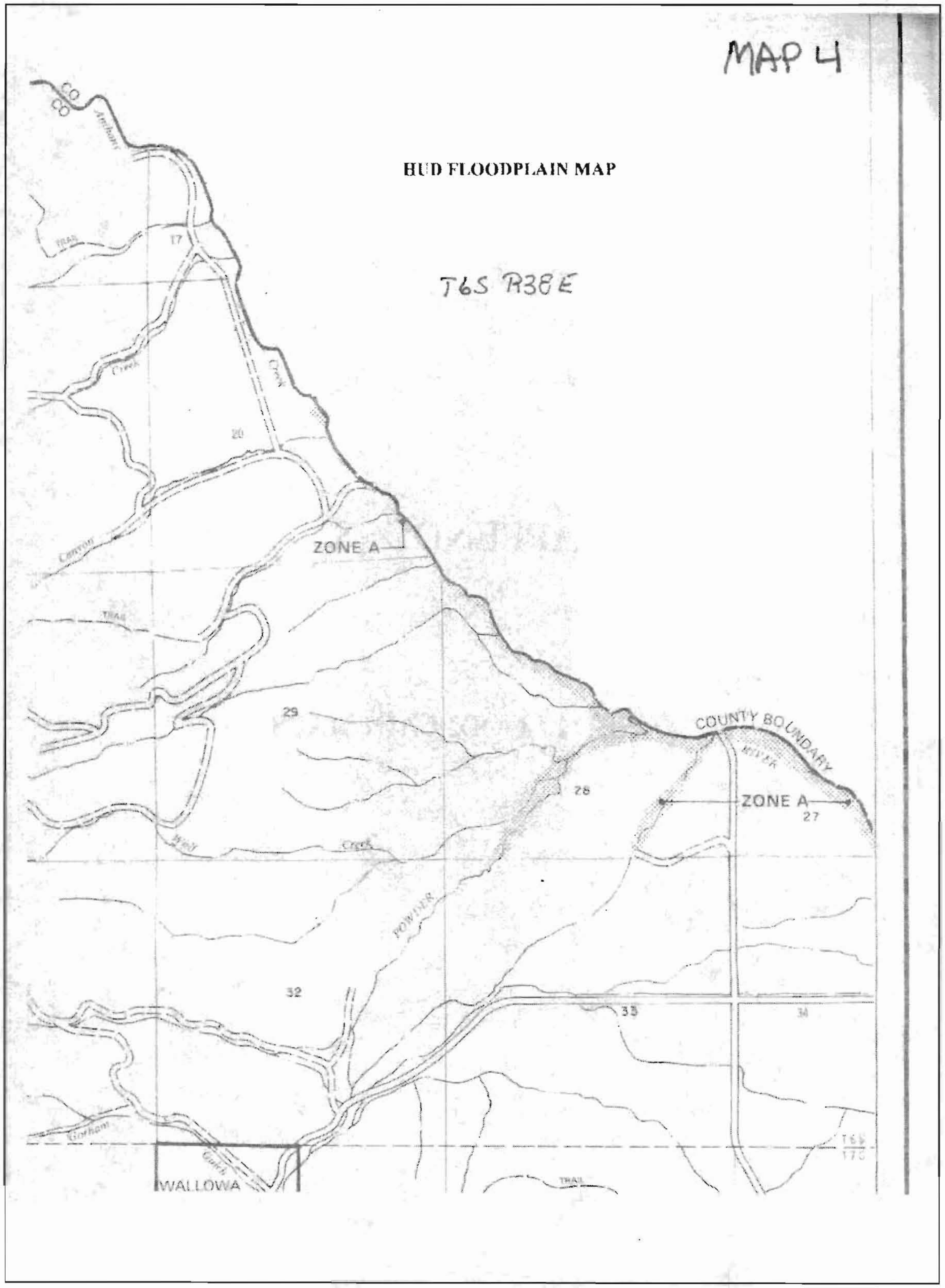
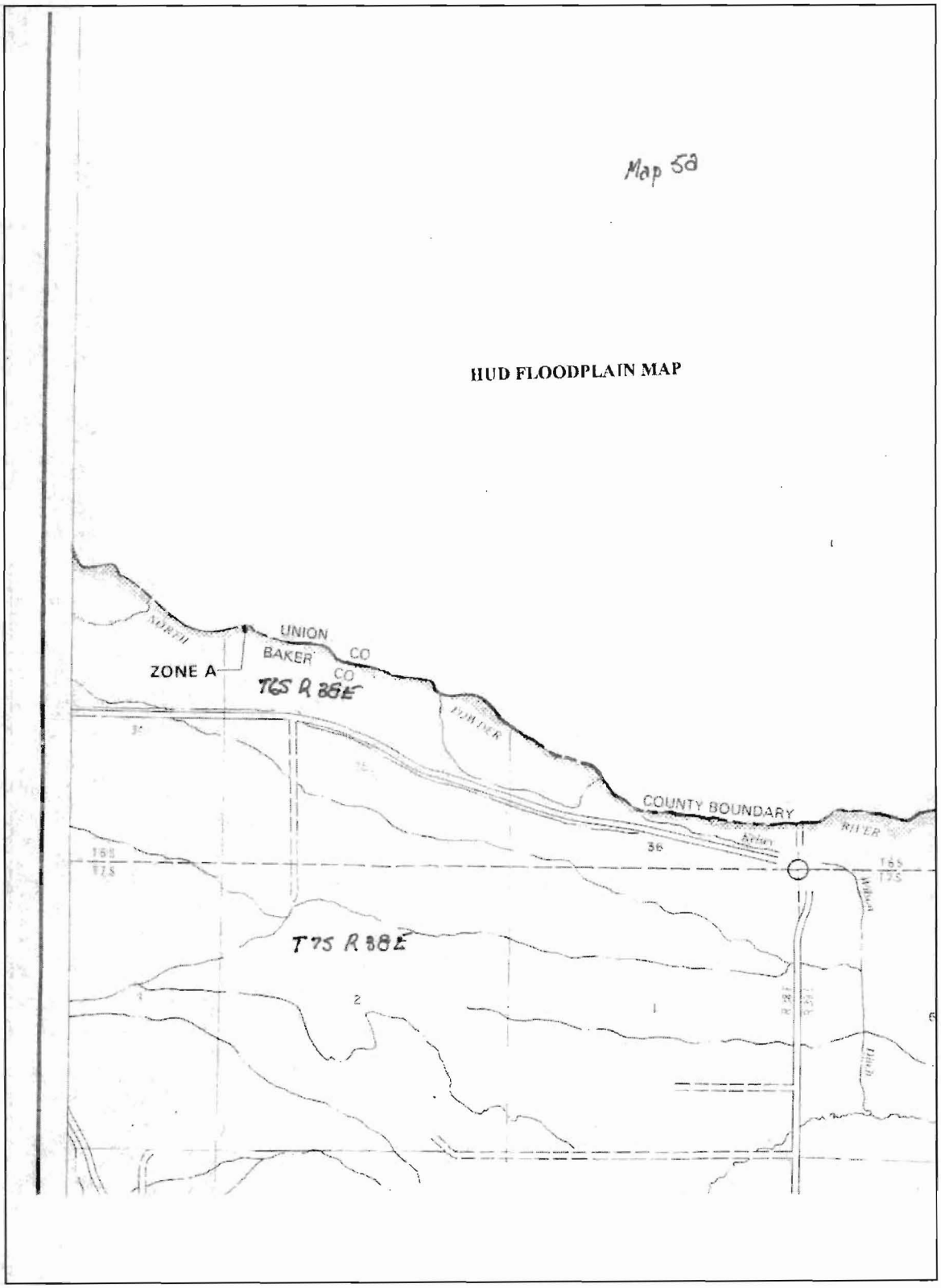
APPENDIX S

HUD FLOODPLAIN MAPS


MAP 4
HUD FLOODPLAIN MAP
T6S R38E
17
Creek
Creek
20
Canyon
ZONE A
TRAIL
29
28
COUNTY BOUNDARY
RIVER
ZONE A
27
Wolf
Creek
POWDER
32
33
34
Gorham
Gulch
WALLOWA
TRAIL

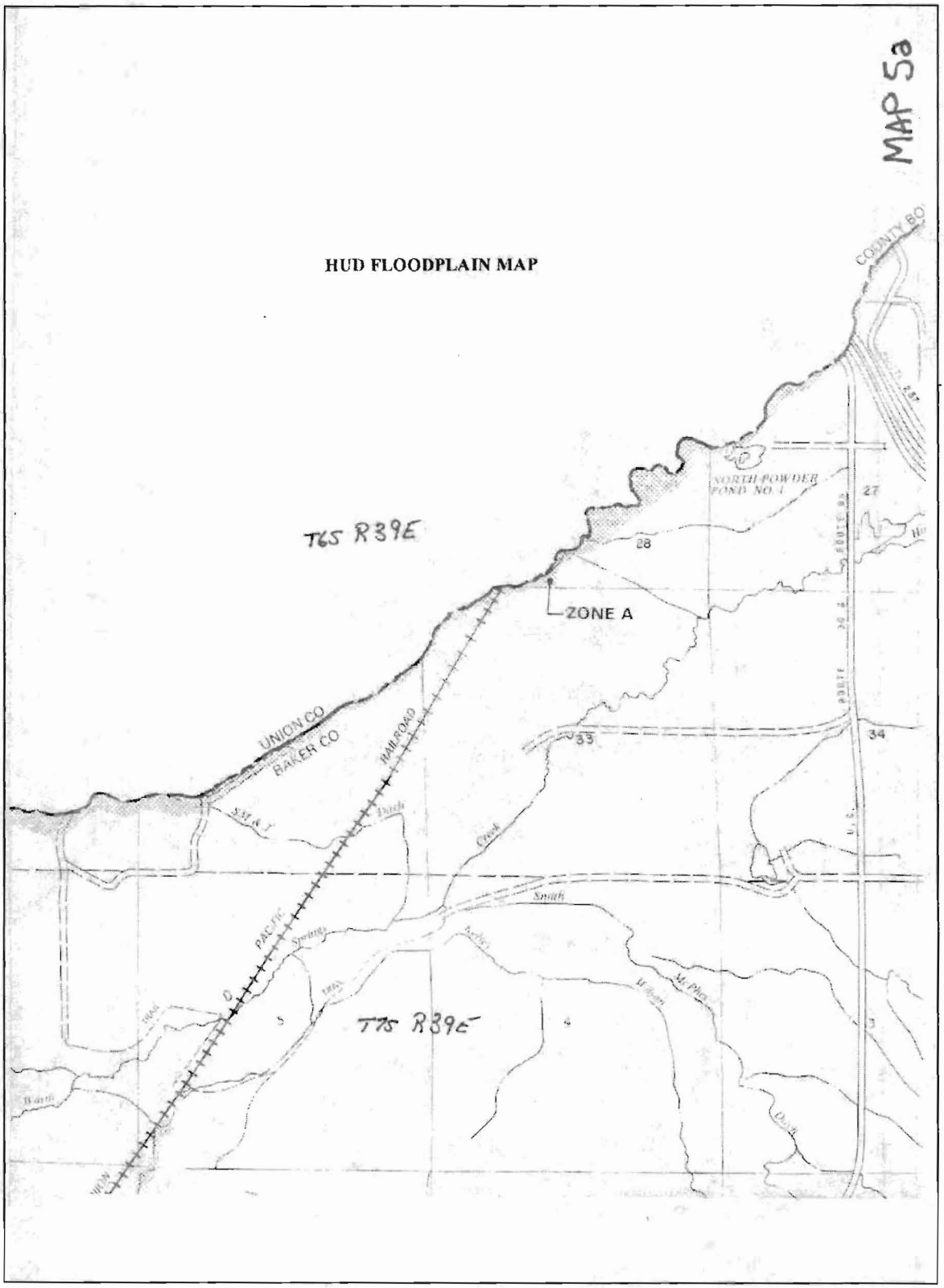
Map 5a

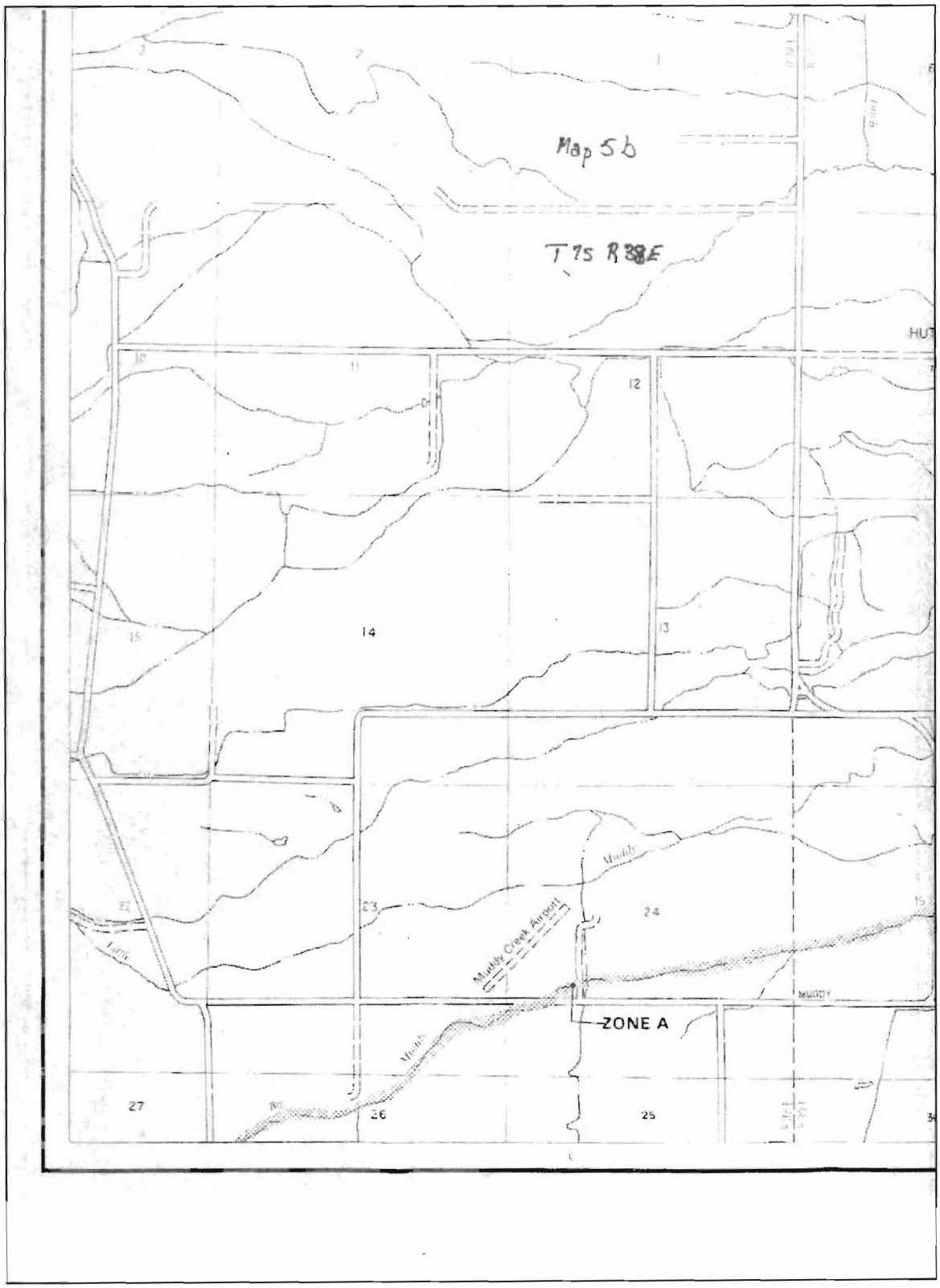
HUD FLOODPLAIN MAP

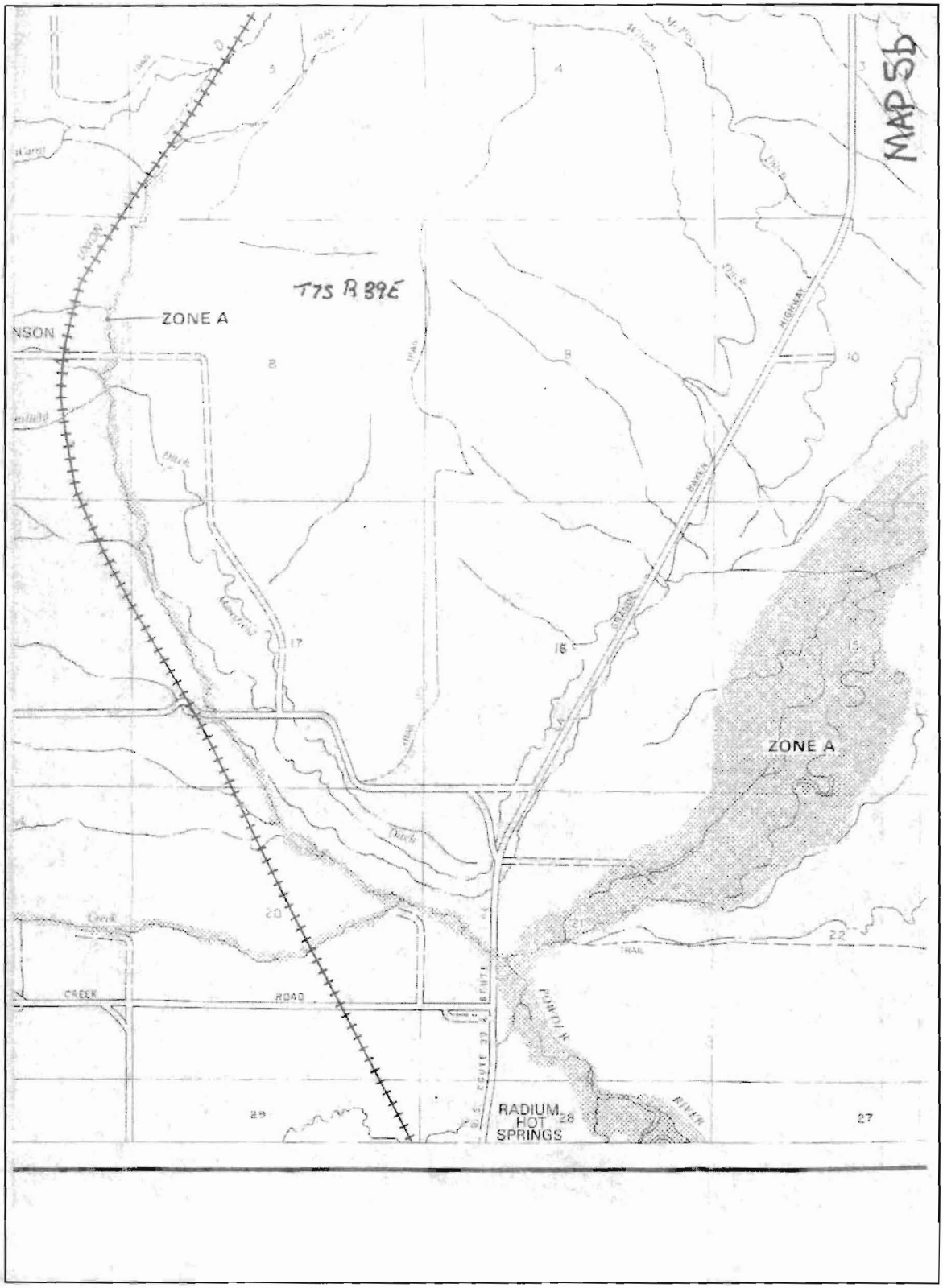


MAP 5a

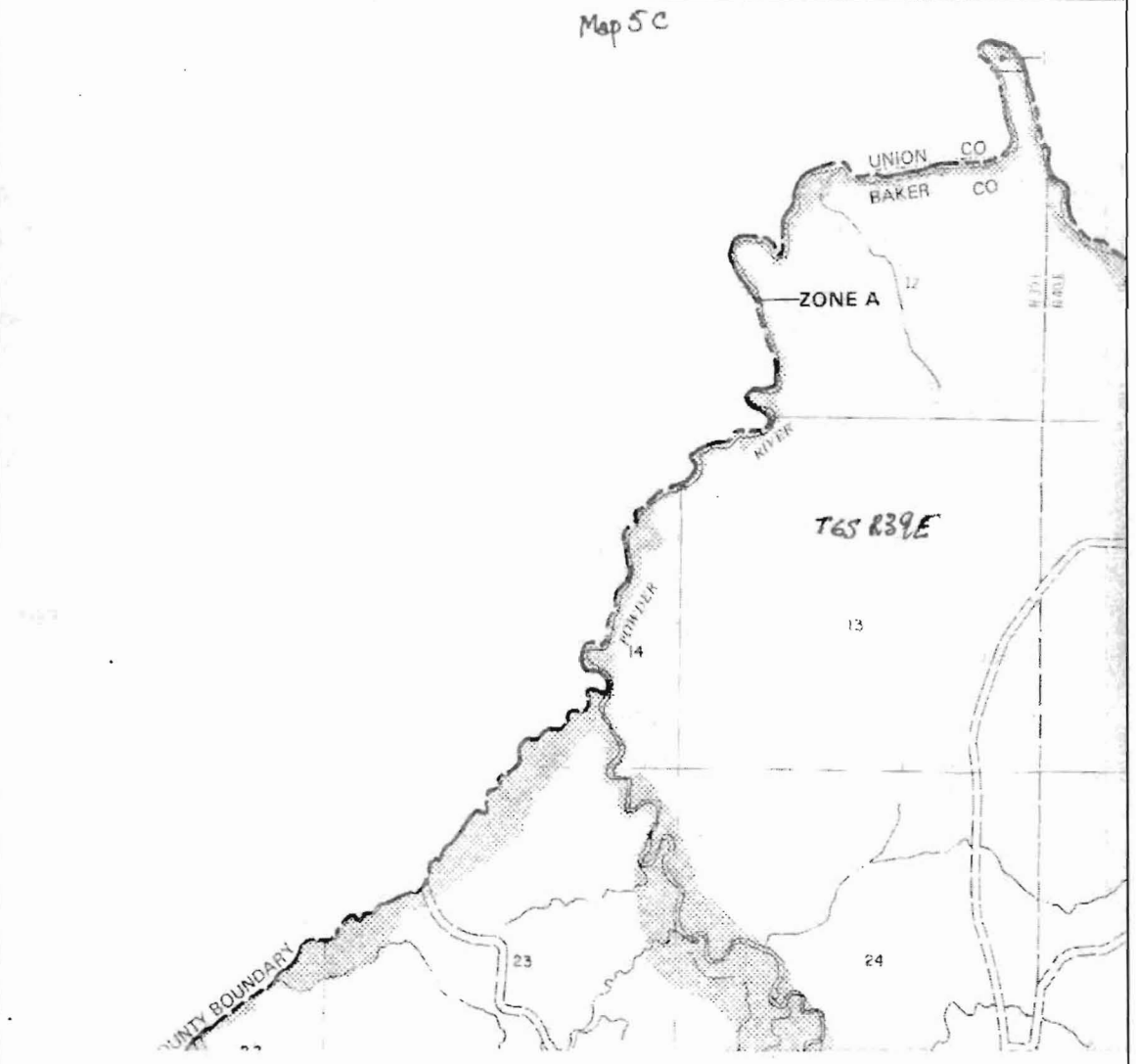
HUD FLOODPLAIN MAP




Map 5b
T 7S R 38E
HUT
10
11
12
14
15
13
22
23
24
Muddy
Muddy Creek Airport
MUDDY
ZONE A
27
26
25

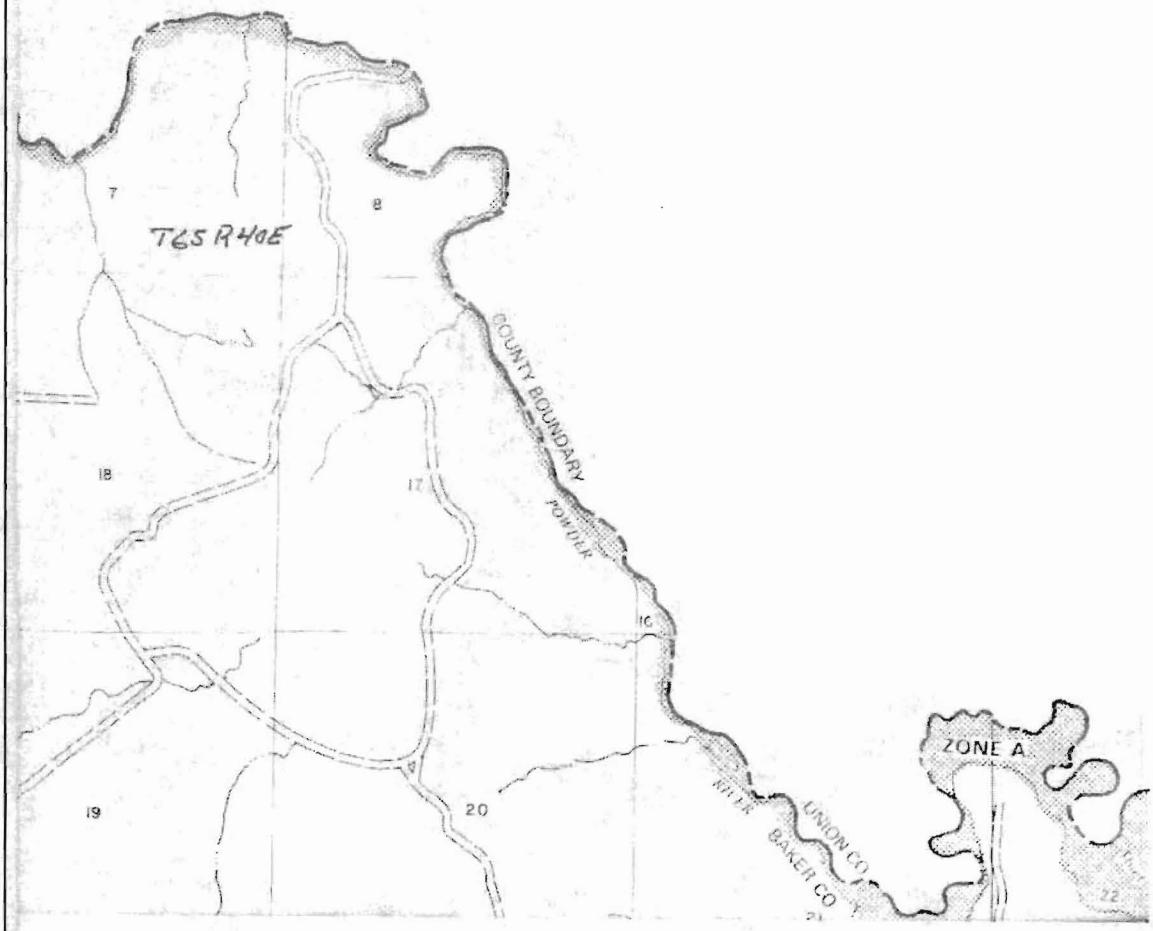

MAP 5b
T7S R 39E
ZONE A
ZONE A
RADIUM HOT SPRINGS
CREEK
ROAD
HIGHWAY
TRAIL
RIVER

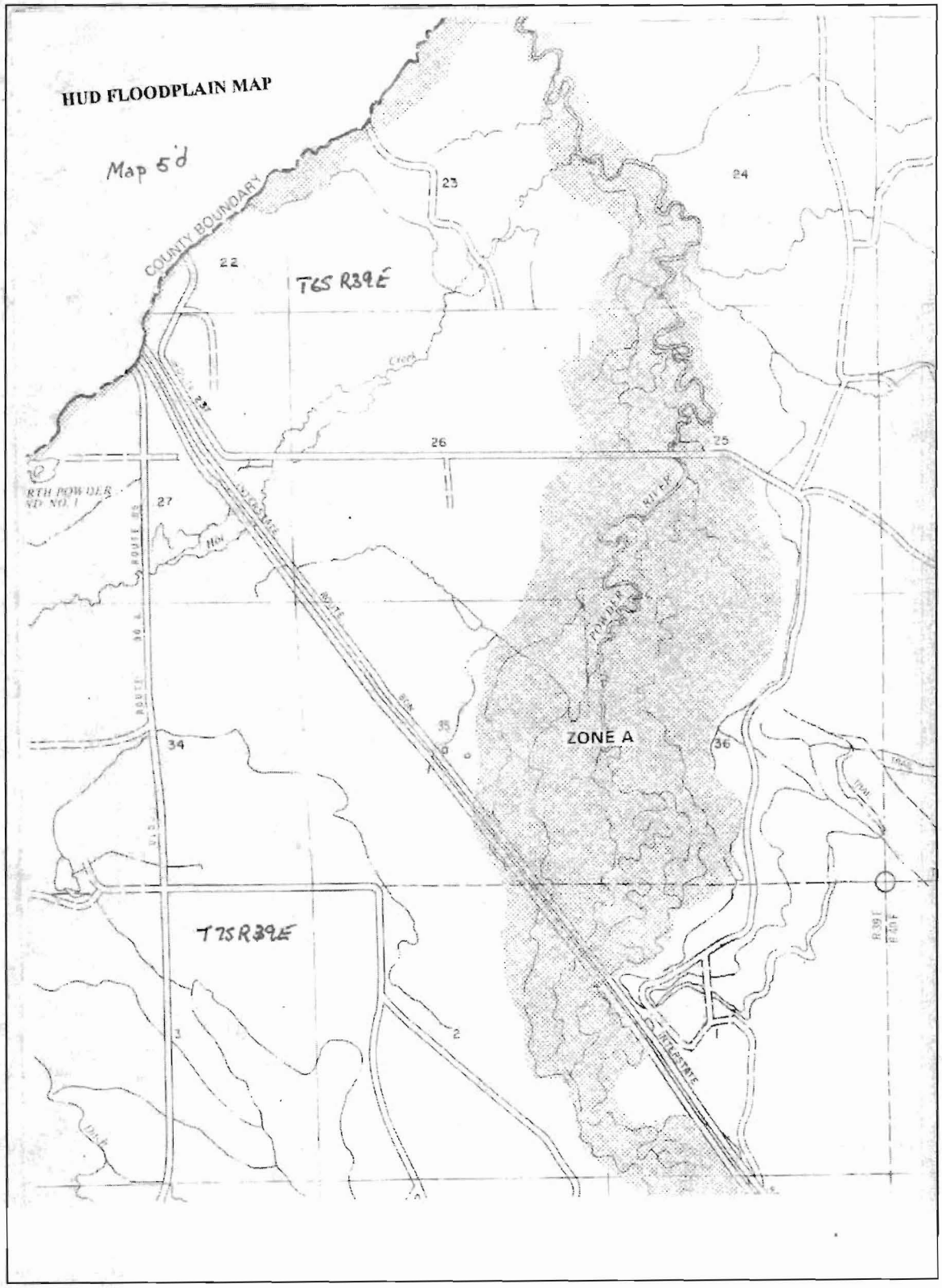
HUD FLOODPLAIN MAP

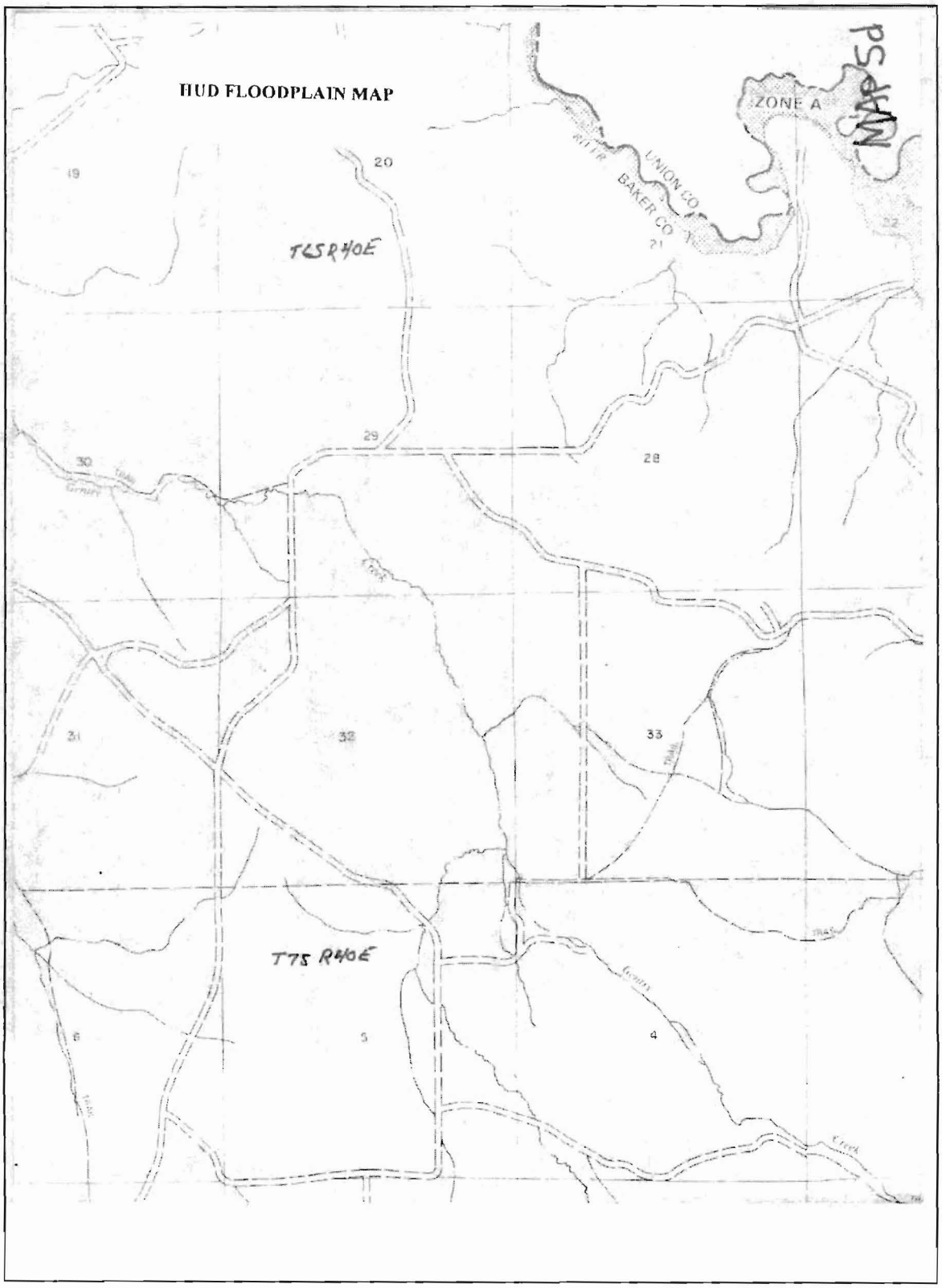


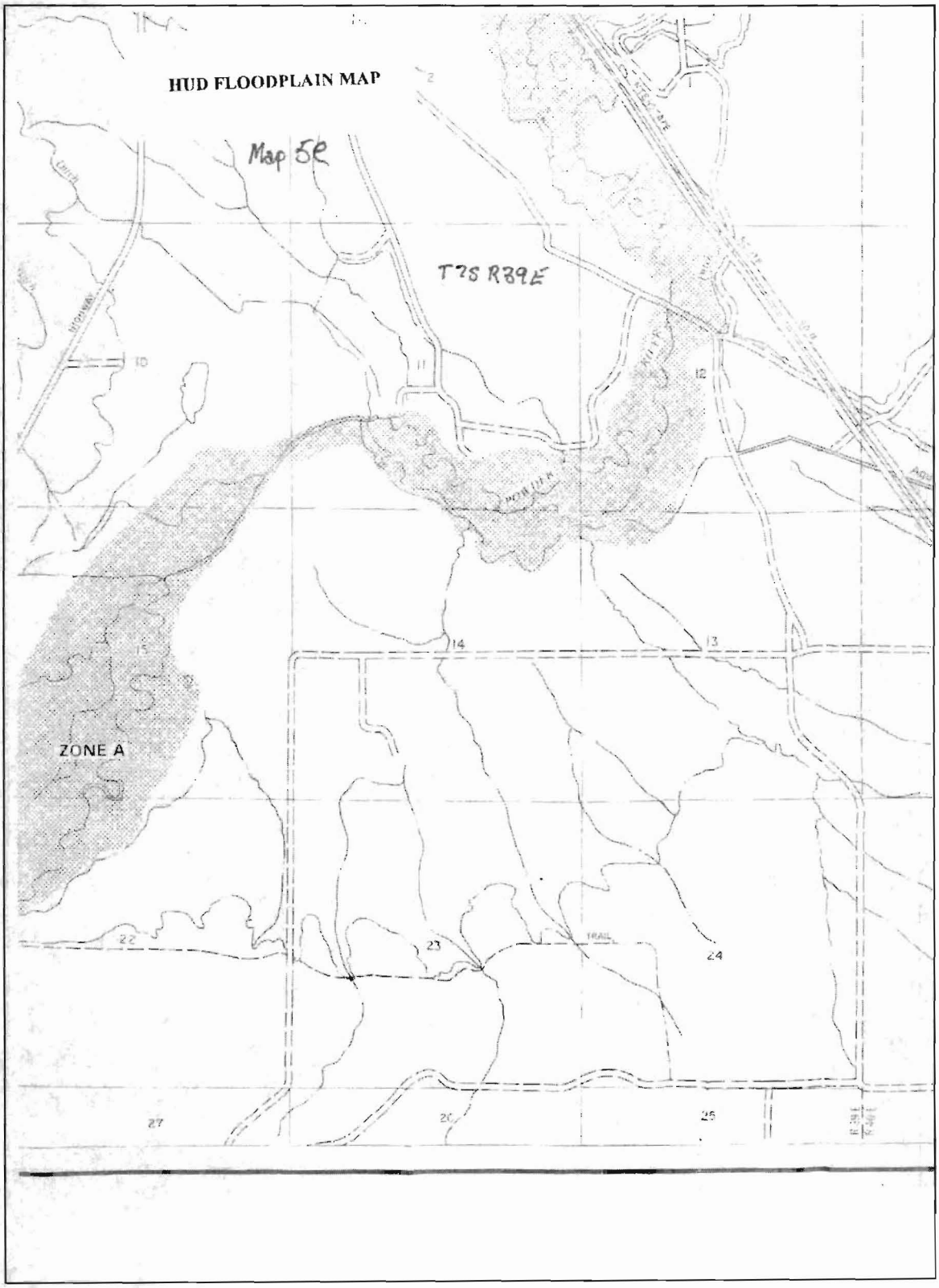
MAP 5c

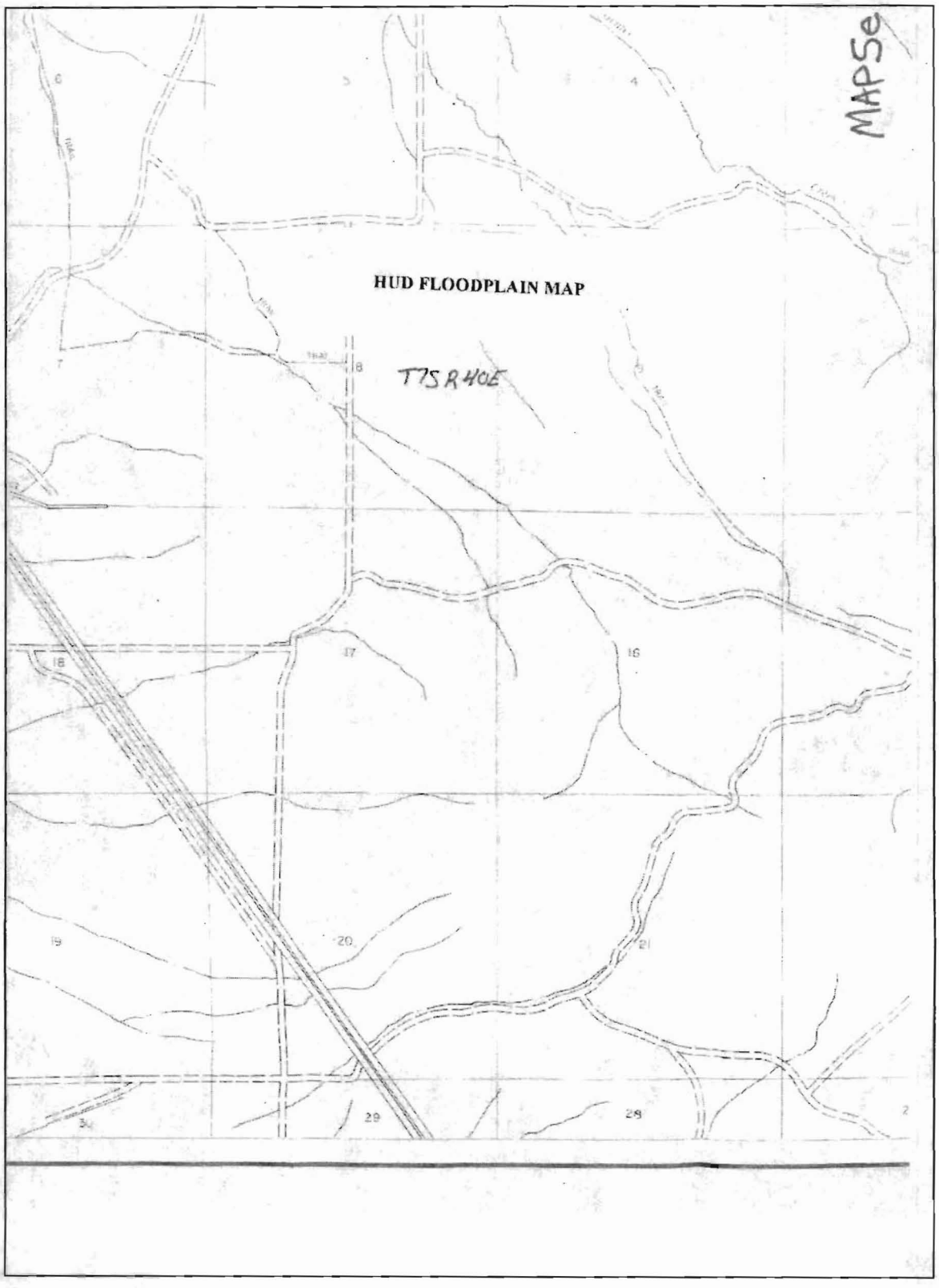
HUD FLOODPLAIN MAP

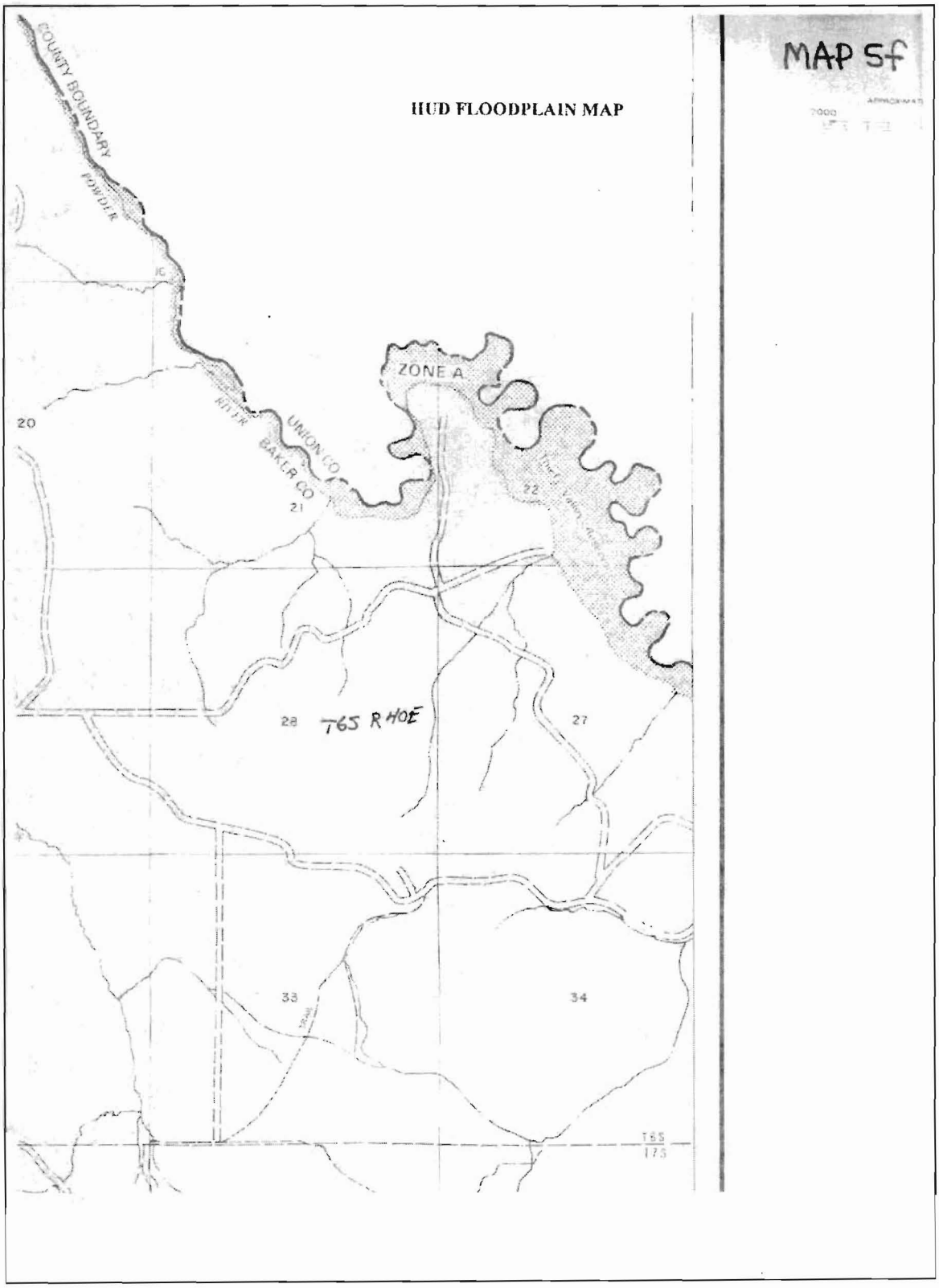


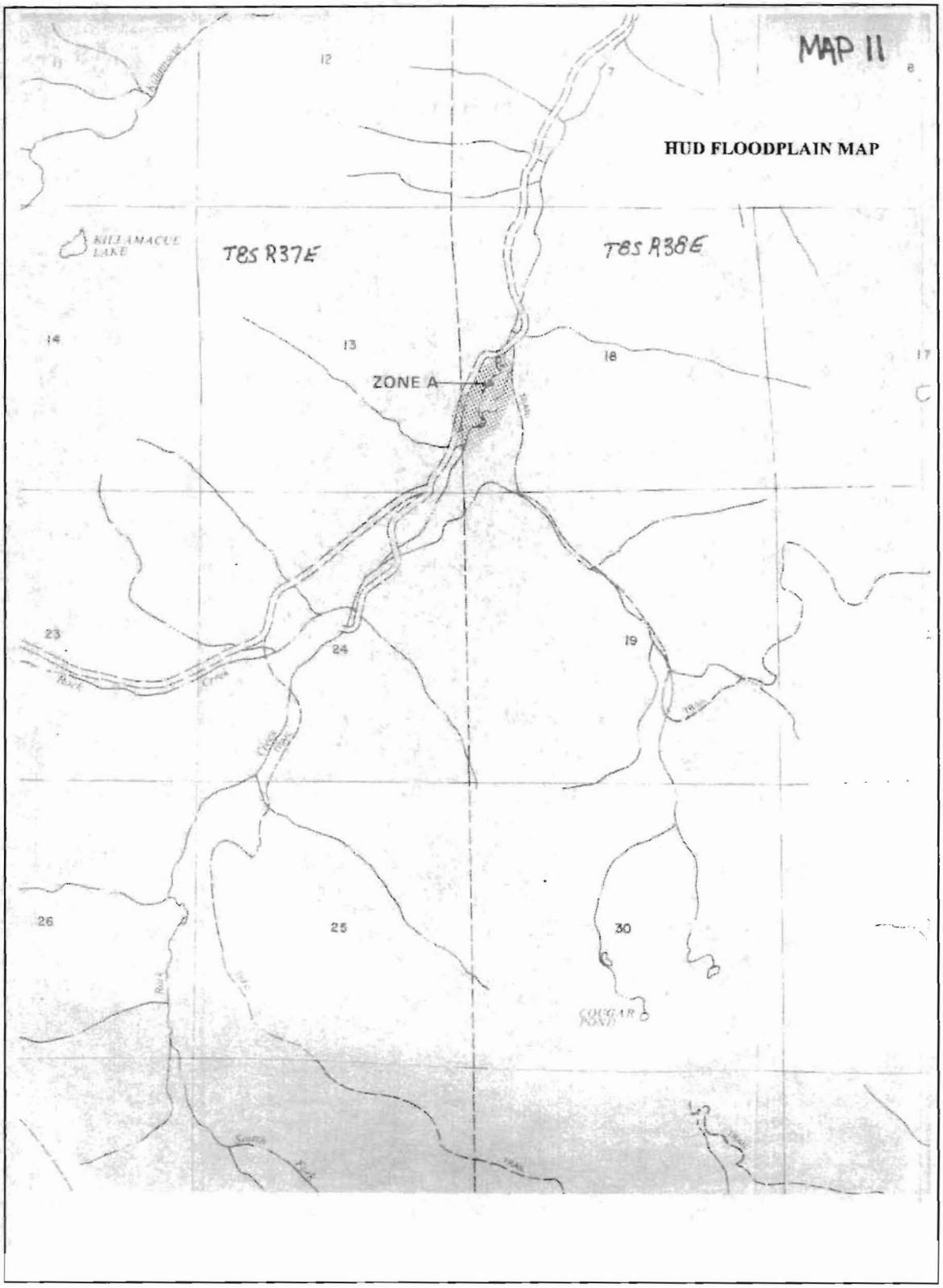

HUD FLOODPLAIN MAP
Map 5d
COUNTY BOUNDARY
22
23
24
T6S R39E
26
25
27
ZONE A
34
35
36
T7S R39E
3
2
1

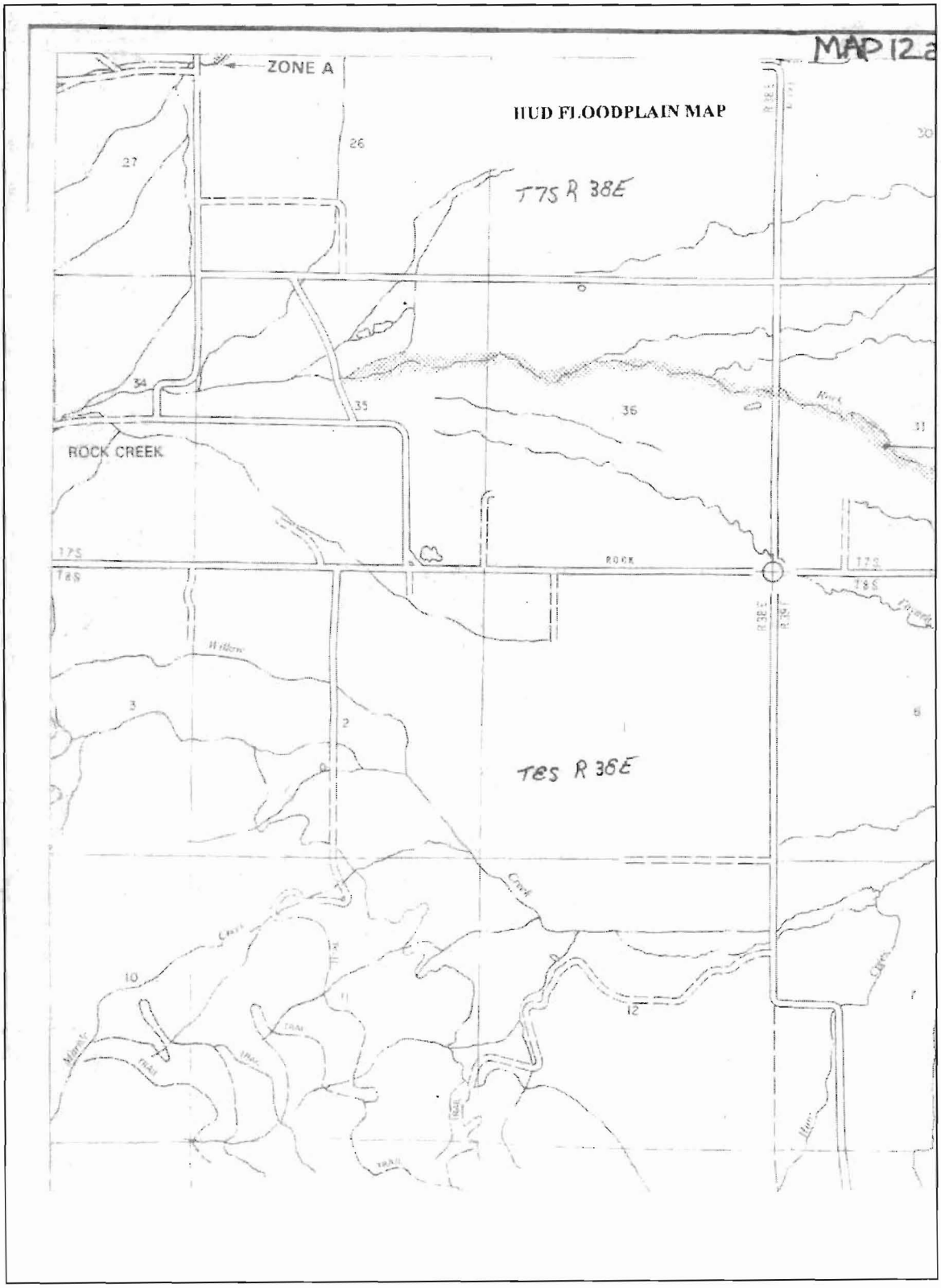

HUD FLOODPLAIN MAP
ZONE A
UNION CO
BAKER CO
T6S R40E
T7S R40E
19
20
29
28
30
31
32
33
6
5
4

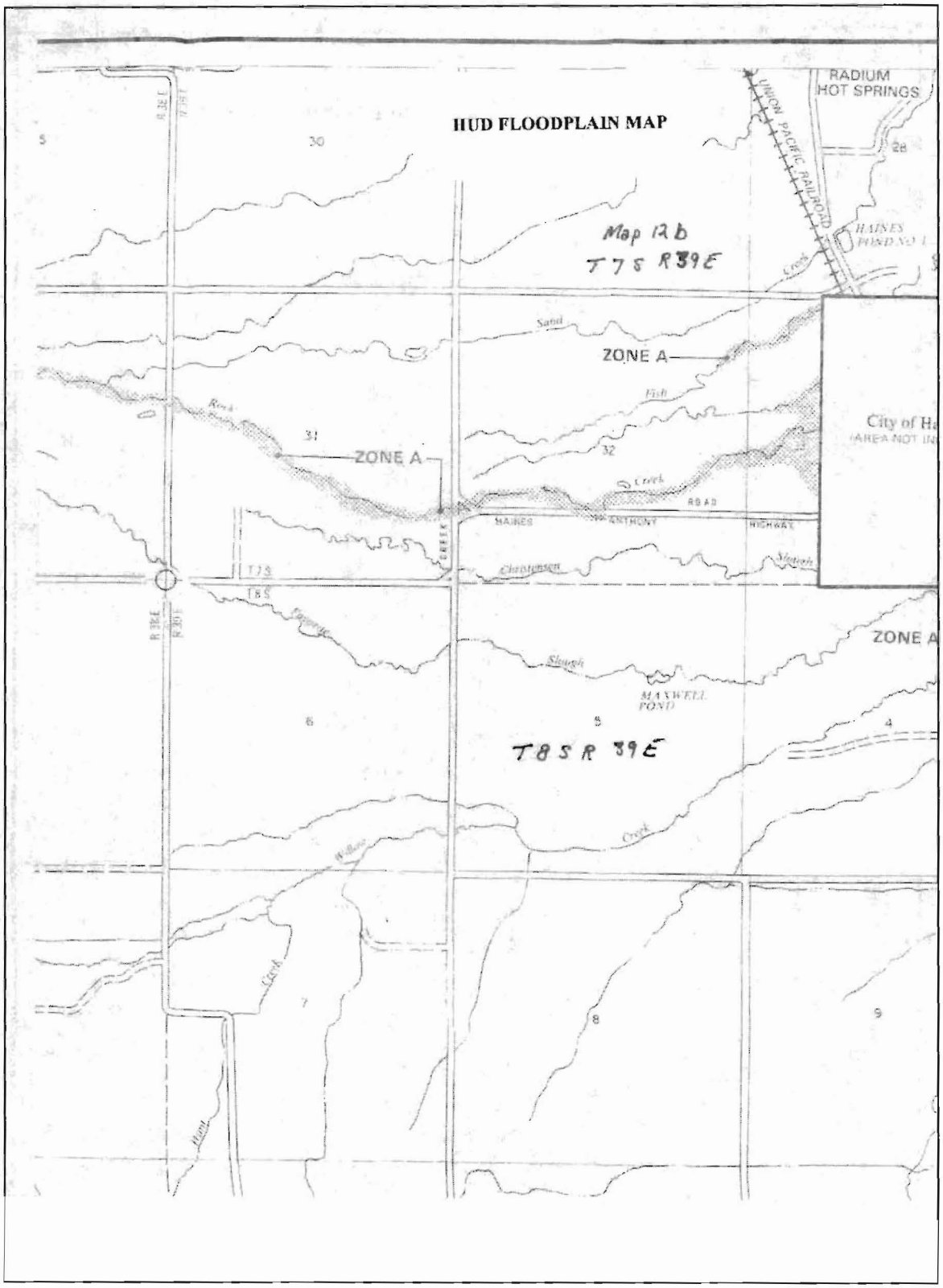

HUD FLOODPLAIN MAP
Map 5R
T7S R89E
ZONE A

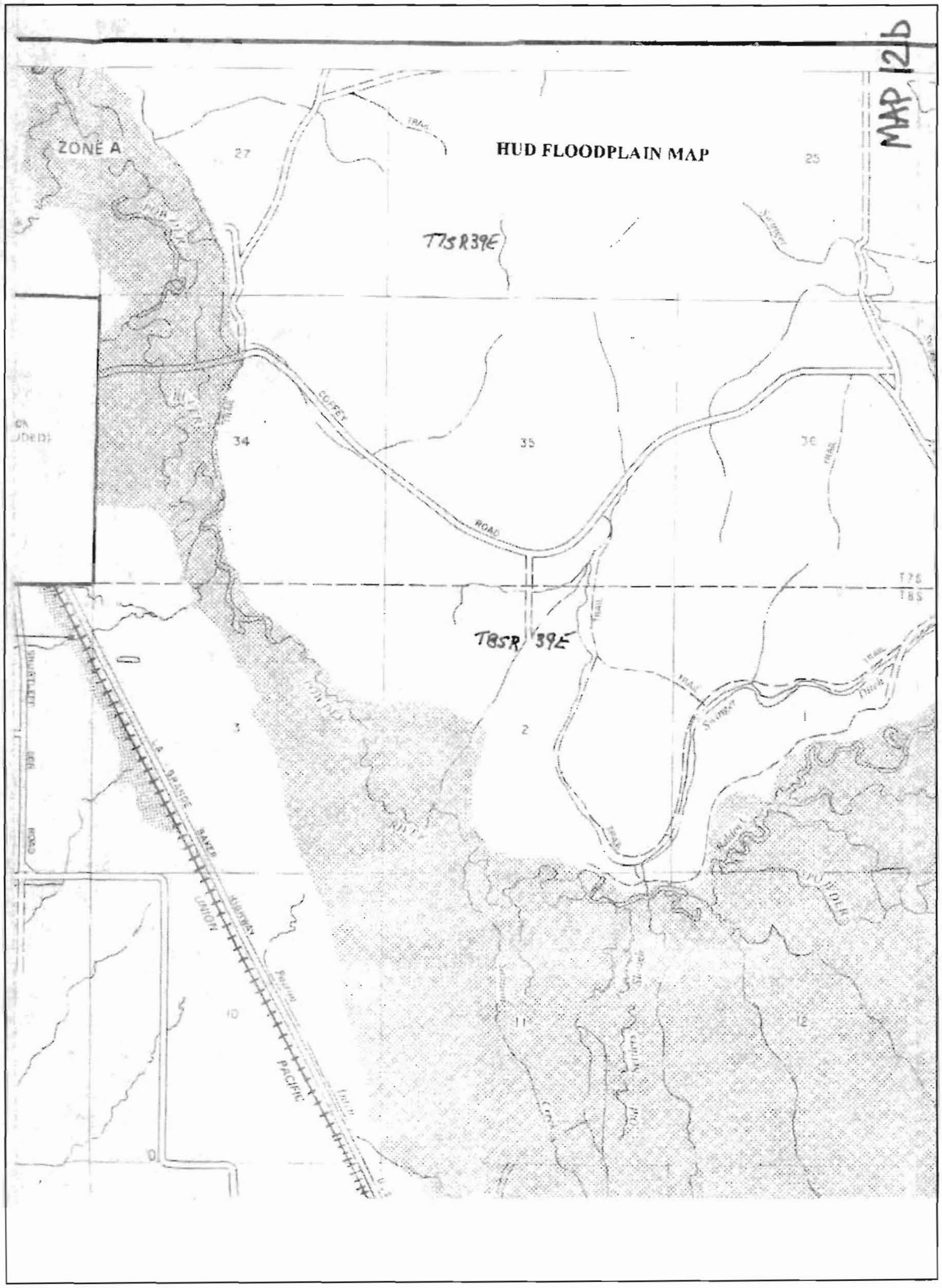

MAPSe
HUD FLOODPLAIN MAP
T7SR40E

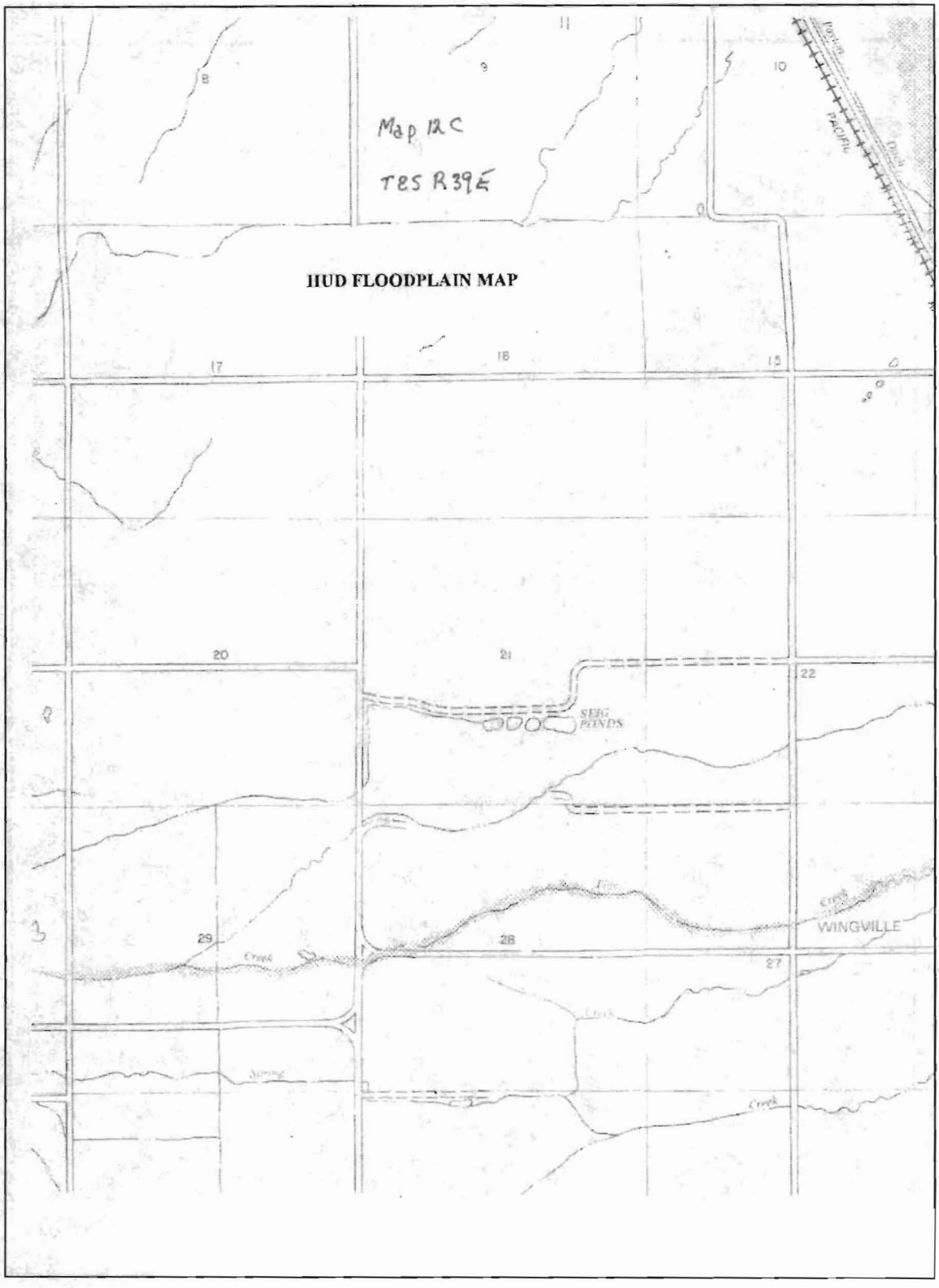

HUD FLOODPLAIN MAP
MAP 5f
COUNTY BOUNDARY
POWDER R
ZONE A
RIVER
UNION CO
BAKER CO
20
21
22
28
T6S R40E
27
33
34
T6S
T7S

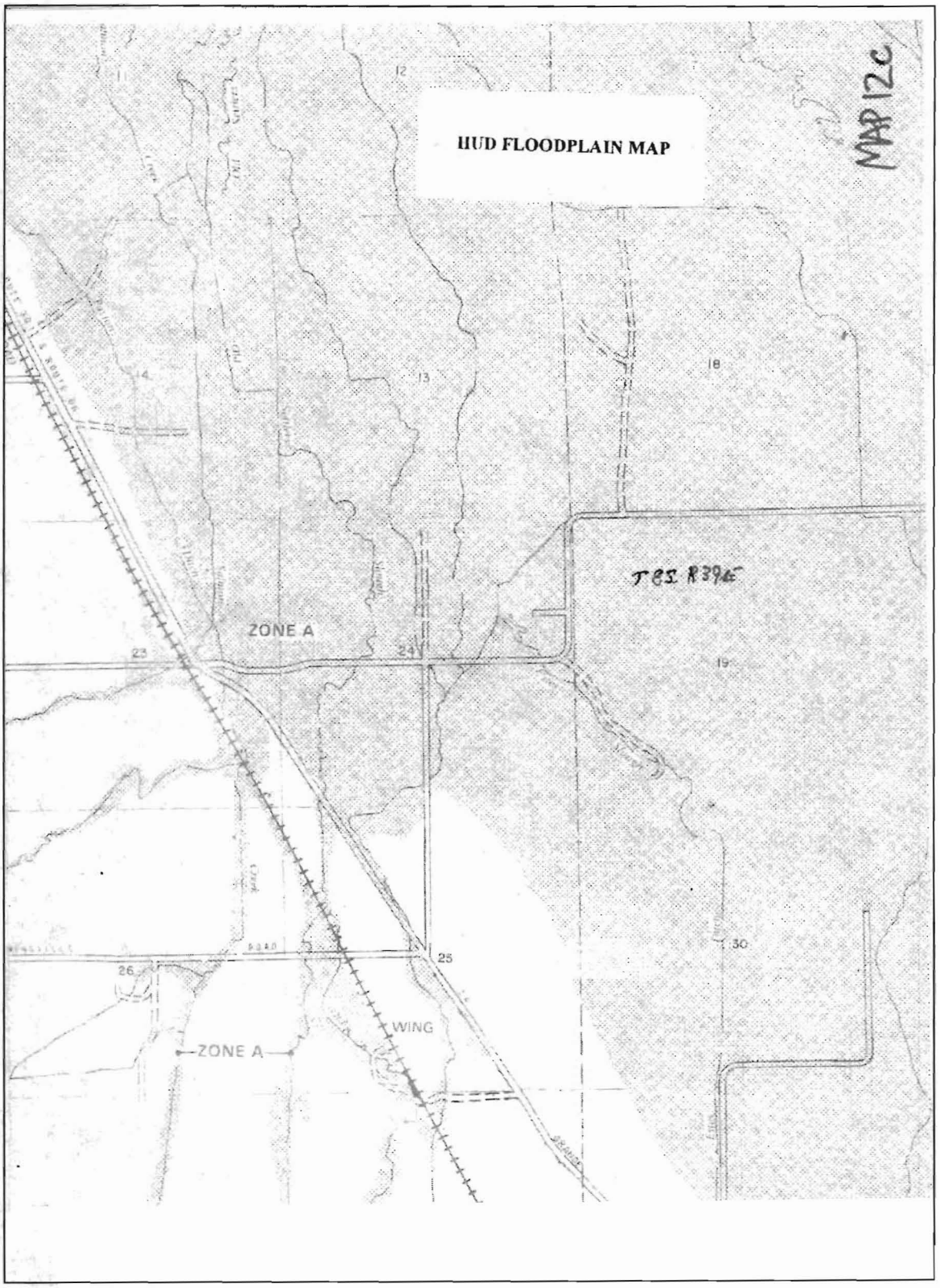

MAP 11
HUD FLOODPLAIN MAP
KILLAMACUE LAKE
T8S R37E
T8S R38E
ZONE A
12
7
8
14
13
18
17
23
24
19
26
25
30
COUGAR POINT

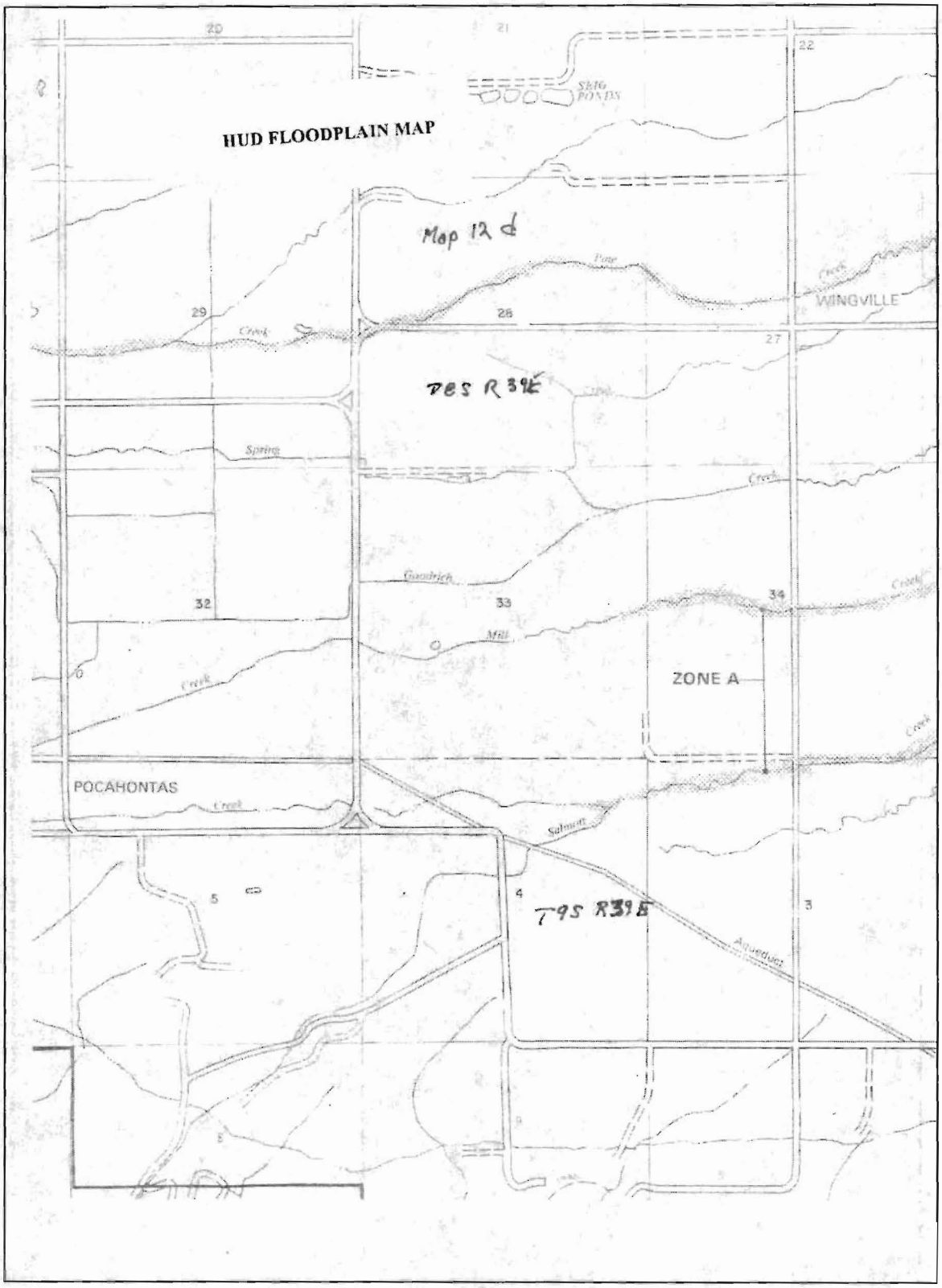

MAP 12a
ZONE A
HUD FLOODPLAIN MAP
T7S R 38E
ROCK CREEK
T8S R 38E

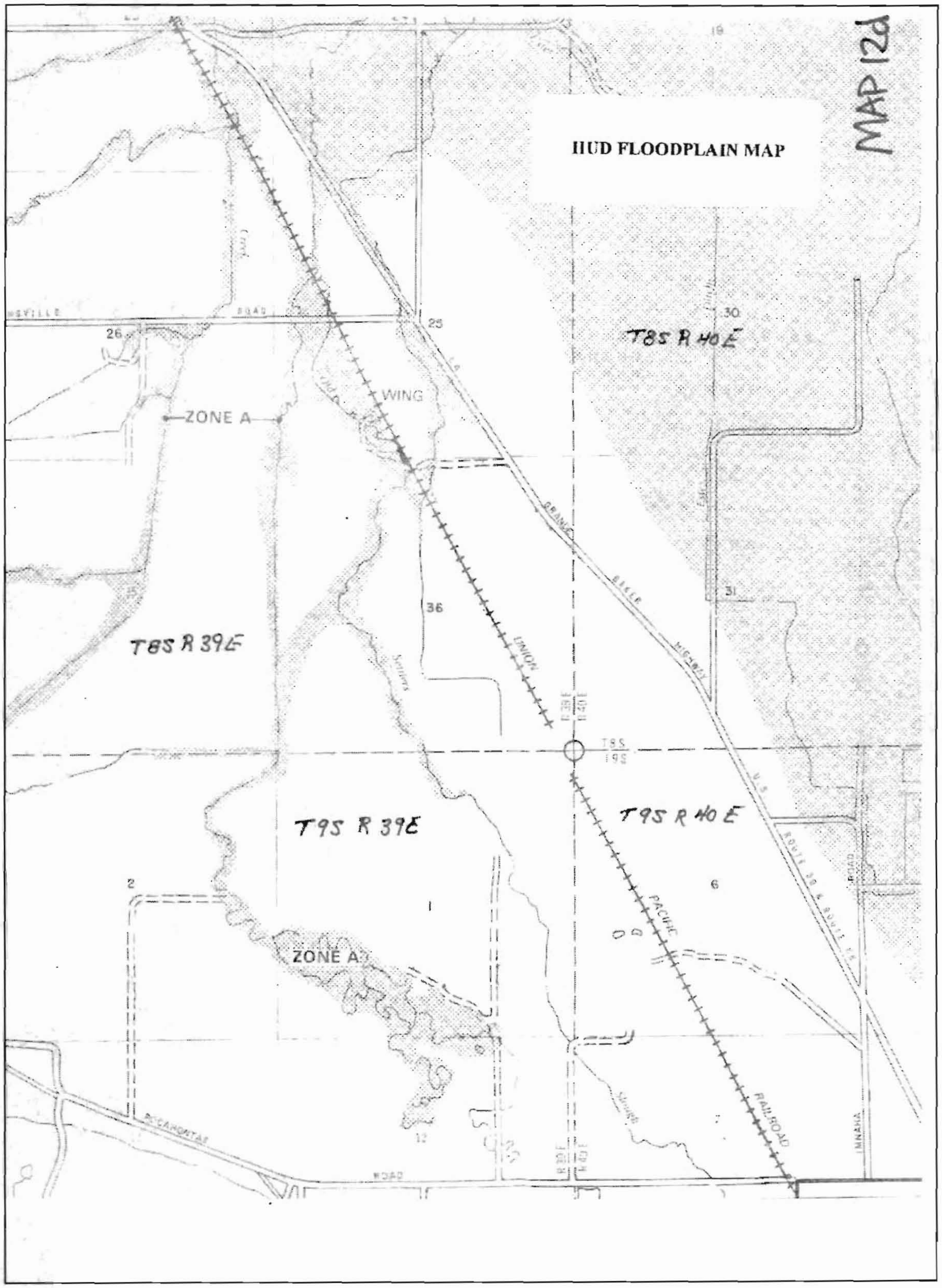

HUD FLOODPLAIN MAP
RADIUM HOT SPRINGS
UNION PACIFIC RAILROAD
Map 12b
T7S R39E
ZONE A
ZONE A
ZONE A
City of H
AREA NOT IN
MAINES
ANTHONY
HIGHWAY
ROAD
MAXWELL POND
T8S R39E
T7S
T8S
R38E
R39E
30
31
32
5
6
7
8
9
4
28


MAP 12b
HUD FLOODPLAIN MAP
ZONE A
T7S R39E
T8S R39E
27
25
34
35
36
3
2
1
10
11
12
COFFEY
ROAD
TRAIL
T7S
T8S
UNION
PACIFIC
POWDER


Map 12C
T8S R39E
HUD FLOODPLAIN MAP
SEIG PONDS
WINGVILLE


HUD FLOODPLAIN MAP
MAP 12c
T 6S R 39E
ZONE A
ZONE A
WING
12
13
14
18
19
23
24
25
26
30


HUD FLOODPLAIN MAP
Map 12 d
T6S R3E
T7S R3E
ZONE A
WINGVILLE
POCAHONTAS
Creek
Spring
Mill
Aqueduct
20
21
22
29
28
27
32
33
34
5
4
3


HUD FLOODPLAIN MAP
MAP 12d
ZONE A
WING
T8S R 40E
T8S R 39E
T9S R 39E
T9S R 40E
ZONE A
UNION
PACIFIC
RAILROAD
POCAHONTAS
ROAD
IMNAHA
25
26
30
31
36
6
2
1
12
7