

CHRONOLOGICAL DEVELOPMENT OF CONDITIONAL WATER RIGHTS FOR OIL SHALE DEVELOPMENT

A. DEVELOPMENT IN THE COLORADO RIVER BASIN

The earliest oil shale conditional water right is the Pumping Pipeline of the Union Oil Company of California. It has a 1949 appropriation date. This pipeline is conditionally decreed for diversion of 118.5 cubic feet per second (cfs) from the Colorado River. It is now owned by EnCana Oil and Gas. The following year, the Pacific Oil Company (now Chevron) established the Dragert Pumping Plant and Pipeline, intended to divert 94 cfs from the Colorado River.

In 1951, the Cities Service Pipeline and Pumping Plant conditionally appropriated 100 cfs further downstream on the Colorado, and Getty Oil established the Pumping Pipeline of the Pacific Western Oil Corporation with a diversion of 56 cfs. OXY now owns the Cities Service Pipeline, while Chevron owns the Pumping Pipeline of the Pacific Western Oil Corporation. Also that year, the Eaton Shale Company established the Eaton Pumping Plant and Pipeline, with a diversion decreed for 100 cfs. This right is now owned by Chevron. This early flurry of activity anticipated direct diversions from the Colorado, using pumps to lift the water through pipelines to the ultimate point of use.

In 1953, the Pacific Oil Company established the Pacific Oil Company Pipeline and Pumping Plant No. 1 and No. 2. There are 2 separate appropriations for No. 1: 57.25 and 114.5 cfs; the diversion rate for No. 2 is 28.63 cfs. Chevron now owns the 57.25 portion of No. 1; Shell Frontier owns No. 2.

In 1954 and 1955, Dow Chemical Company established 3 conditional rights: the Dow Pumping Plant and Pipeline with the right to divert 178 cfs from the Colorado River; the Dow East Middle Fork Pipeline with the right to divert 20 cfs from the East Middle Fork of Parachute Creek; and the Dow Middle Fork Pipeline with the right to divert 10 cfs from the Middle Fork of Parachute Creek. Dow also established 3 decreed reservoirs in the Parachute Creek watershed: Davis Gulch with a decreed capacity of 204 acre-feet (af); East Middle Fork with a capacity of 130 af; and Middle Fork with a capacity of 171 af. ExxonMobil now owns these rights.

In 1956, Sinclair Oil established the Sinclair Oil & Gas Co. Pumping Plant and Pipeline, with the conditional right to divert 33 cfs from the Colorado. This right is now owned by the Puckett Land Company. The Oil Shale Corporation established the Oil Shale Corporation Pipeline and Pumping Plant, with a diversion from the Colorado of 100 cfs. Also that year, Rea Eaton established the Eaton Pipeline No. 1 and No. 2, each with a diversion of 10 cfs from the Colorado River. No. 1 is now owned by the Puckett Land Company; No. 2 is owned by the Battlement Mesa Metro District.

The Shale Pumps and Pipeline, established in 1959, provides for diversion of 11.11 cfs from the Colorado River. This right is now owned by Frac Tech Services.

Attention then shifted further downstream and in the adjacent Roan Creek watershed. The Colorado River Water Conservation District established several water rights with appropriation

dates relating back to 1936 involving the water of Roan Creek. The Kobe Canal would divert 50 cfs from the Colorado River. The Mt. Logan Dam and Reservoir provides for storage of 10,000 af of Roan Creek water in an off-channel location. The Roan Creek Feeder Canal is decreed for 75 cfs from Roan Creek. The Mt. Logan Canal would carry water from the dam at a rate of 40 cfs.

In 1965, Sohio established rights to 4 structures in this watershed. Deer Park Gulch Pumping Pipeline would take 150 cfs of Colorado River water and store it in Deer Park Gulch Reservoir, decreed for a capacity of 1533.6 af. The Clear Creek Feeder Canal and the Conn Creek Feeder Canal are each decreed for a diversion rate of 50 cfs. Shell now owns the Deer Park Pipeline, the Deer Park Gulch Reservoir, the Clear Creek Feeder Canal, and the Conn Creek Feeder Canal.

Also in 1965, Getty Oil established a conditional right for Getty Reservoir No. 1, located on an unnamed tributary to Roan Creek, with a storage capacity of 2,543.9 af and Getty Reservoir No. 2, also located on an unnamed tributary to Roan Creek, with a capacity of 20,670.2 af. In addition, Getty established the Cascade Creek Pipeline that would divert 10 cfs from Cascade, which is a tributary to Conn Creek, also tributary to Roan Creek. Getty established Cascade Canyon Reservoir, to be located on Cascade Creek with a capacity of 619.47 af. The Colorado River, through the Cities Service Pipeline, was decreed as an alternate source of supply for this reservoir. Finally, Cities Service established the Conn Creek Pipeline to take up to 10 cfs from Conn Creek as well as Conn Creek Reservoir, with a capacity of 422.75 af. The Colorado River is also an alternate source of supply for this reservoir. Getty Reservoirs 1 and 2 have been abandoned. OXY USA now owns the rights to Cascade Canyon Reservoir, Cascade Creek Pipeline, Conn Creek Pipeline, and Conn Creek Reservoir.

In that same year, an individual established rights to Roan Creek Reservoir. Subsequently, Getty purchased the rights to Long Point Reservoir, which were senior, and transferred these rights to Roan Creek Reservoir. This reservoir holds a 1961 priority for 12,397 af of storage. The right is now owned by Chevron Texaco.

In 1967, Getty established the Getty-Sleepy Gulch Reservoir, with a capacity of 6,538 af. Sleepy Gulch is tributary to Roan Creek. Getty also established Trail Gulch Reservoir in Roan Creek, with a capacity of 5,669.21 af. Sleepy Gulch is now owned by Texaco, while The Oil Shale Corporation owns Trail Gulch.

Occidental (now OXY USA) established the Logan Wash Pump No. 1 in Roan Creek with a 1979 priority date. This right is decreed for 1.1 cfs absolute and 2.9 cfs conditional.

The Main Elk Reservoir was established with a 1963 priority date on Main Elk Creek above the Town of New Castle, with a capacity of 34,922 af. Also established was the Main Elk Wheeler G Pipeline with a decreed rate of diversion of 40 cfs from Main Elk Creek. These rights are now owned by Exxon.

Even further upstream are the Deep Creek Reservoir and Deep Creek Pipeline, established by ARCO with a 1966 priority date. The reservoir had a decreed capacity of 14,557 af, and the pipeline was decreed for a diversion rate of 33 cfs. These rights have been abandoned.

The Roan Plateau Pumping Pipeline, decreed to divert 100 cfs from the Colorado River, has a 1964 appropriation date. It is owned by Humble Oil Company (Exxon). Humble Oil established the Humble Division Forebay Pump with a 1966 appropriation date, providing for the storage of 8,582 af of Colorado River water. This right has been abandoned.

Chevron established Parachute Creek Reservoir with an appropriation date of 1966 and a capacity of 33,733 af. Water is to come primarily from the Colorado River via the Eaton Pumping Plant and Pipeline, the Dragert Pumping Plant and Pipeline, and the Pumping Pipeline of the Union Oil Company of California.

ARCO then established the Starkey Gulch Reservoir and the South Starkey Gulch Reservoir, on tributaries to Parachute Creek, with 1967 priority dates. South Starkey has a decreed capacity of 5,541 af, and Starkey has a decreed capacity of 7,360 af. In addition to storing legally available water from Starkey Gulch, the reservoirs were decreed to store water appropriated under other rights from the Colorado River, Deep Creek, and Thompson Creek. South Starkey is now owned by Chevron. Starkey is owned by the Puckett Land Company.

Getty established the Getty West Fork of Parachute Creek Reservoir, with a decreed capacity of 4,658 af, also with a 1967 appropriation date. Water is to come primarily from the Colorado River via the Pumping Pipeline of the Pacific Western Oil Corporation. This right is now owned by Chevron Texaco.

The Colony Development Corporation and ARCO obtained a decree for the enlargement of Davis Gulch Reservoir in Parachute Creek by an additional 996 af, to a total capacity of 1,200 af, with a 1974 appropriation date. They also obtained an enlargement of Middle Fork Reservoir by 1438.4 af. Exxon now owns these rights.



Photo courtesy of The Story Group

In 1982, Exxon established the Lower East Middle Fork Reservoir in Parachute Creek, with a decreed capacity of 6,200 af. The water is to come primarily from the Colorado River via the Dow Pumping Plant and Pipeline.

Also in 1982, Exxon established 5 additional storage rights, each for 160 af: the Mahaffey Terminal Reservoir and the Allenwater Creek Terminal Reservoir, both in the Colorado River; the Rulison Gulch Terminal Reservoir and the Sheep Trail H Terminal Reservoir in Parachute Creek; and the Cottonwood G Terminal Reservoir in Cottonwood Gulch. Exxon also established the Mahaffey Pumping Plant and Pipeline, to withdraw 60 cfs from the Colorado River.

In 1983, Getty filed on 11 springs in Parachute Creek, with a collection rate of 1.15 cfs. These rights are now owned by Chevron. Shortly thereafter, Cities Service filed on five springs in Parachute Creek, with a collective rate of 0.22 cfs. OXY USA now owns Cities Service.

Shell holds 10 decrees for springs in Clear and Conn Creeks, tributaries to Roan Creek. The appropriation date is 1982. The collective flow rate for these springs is 0.47 cfs. Getty filed on 17 springs in Clear Creek, with an appropriation date of 1983. Chevron now owns these rights. Cities Service filed shortly thereafter on 13 springs in Clear and Conn Creeks. OXY now owns these rights.

B. DEVELOPMENT IN THE WHITE RIVER BASIN

Initiation of conditional water rights for oil shale in the White River Basin was not far behind that in the Colorado River Basin. Two individuals established rights to Stillwater Reservoir, Stillwater Power Plant, and South Fork-Piceance Pipeline on the South Fork of the White River with a 1955 appropriation date. The reservoir is decreed to store 12,548 af, the power plant 300 cfs, and the pipeline 70 cfs. Exxon now owns the reservoir decree, while Shell owns the power plant and pipeline decrees.

The Yellow Jacket Water Conservancy District initiated plans for the Yellow Jacket Project, located in the North Fork of the White River, in the early 1950s. This project includes Ripple Creek Reservoir on the North Fork, with a decreed capacity of 27,992 af; Lost Park Reservoir on Lost Creek, with a decreed capacity of 33,541 af; Lost Creek Feeder Canals 1 and 2, which would bring water to Lost Park Reservoir, with headgates on tributaries to the Williams Fork River in the Colorado River Basin, both decreed for 100 cfs; and the Yellow Jacket Canal, which would divert water out of the North Fork and carry it 38 miles for distribution to different uses, with a decreed capacity of 500 cfs.

In 1957, the Energy Resources Technology Land Company established claims to water from several tributaries of the South Fork as part of the ERTL Pipeline. Headgate No. 1 is located on Buck Creek; Headgate No. 2 is located on Wagon Wheel Creek; Headgate No. 3 is located on the East Branch of Patterson Creek; and Headgate No. 4 is located on the West Branch of Patterson Creek. The original decree was for 30 cfs. Now Headgate 1 is decreed for 15 cfs, Headgate 2 for 1 cfs, Headgate 3 for 7 cfs, and Headgate 4 for 7 cfs. Tosco now owns these rights.

Also in 1961, the Socony-Mobil Oil Company initiated an appropriation for Boies Reservoir, Piceance Pipeline, and Piceance Canal. The sources of water for Boies Reservoir are Black Sulfur Creek, Fawn Creek, Piceance Creek, and water diverted into Piceance Creek from other drainages. The reservoir is decreed for storage of 31,020.8 af. The canal is decreed for 50 cfs. These rights are now owned by ExxonMobil.

Later that same year, the CRWCD established the Flattops Project. The remaining elements of this project include the Rio Blanco Reservoir, to be constructed on the South Fork, and the Patterson Creek Collection System. The reservoir is decreed for 131,035 af. The collection system is decreed for 75 cfs.

Shortly thereafter, the Moon Lake Electric Association initiated the Moon Lake-Staley Mine Pipeline and Reservoir on the White River. The pipeline is decreed for 125 cfs. In 1964, Moon Lake appropriated an additional 55 cfs for this pipeline, which is now owned by Blue Mountain Energy.

In 1962, the CRWCD initiated an appropriation for the Rangely Project, including a reservoir. Subsequently, CRWCD changed the place of storage for 49,256 af to the Wolf Creek Reservoir, to be located on the White River.

In 1963, the Humble Oil Company established Ryan Gulch Reservoir, to be located on Piceance Creek, with a capacity of 22,635.2 af. Simultaneously, it established the White River Pumping

Pipeline, to withdraw 100 cfs of water from the White River for delivery to Ryan Gulch Reservoir. These rights are now owned by Exxon.

The same two individuals who first initiated an oil shale-related conditional right in the White Basin established the White River Pumping Pipeline in late 1963. The pipeline is decreed to divert 100 cfs from the White River. The owners are Wheeler and Phillips.

In 1964, Humble established an appropriation for Jumps Cabin Reservoir, to be located on West Hunter Creek, with a decreed capacity of 7,868.8 af. Humble is still listed as the owner. At the same time, it established Howells Cabin Reservoir, to be constructed on Willow Creek, a tributary of Piceance Creek, with a decreed capacity of 8,096 af. Also established with the same priority date is Dietz Cabin Reservoir, also to be constructed on Willow Creek, with a decreed capacity of 29,900 af. This right is currently owned by an individual, Pat Johnson. Later in 1964, Humble established the White River Pipeline No. 2, decreed for 120 cfs. Exxon currently owns this right.

Also in 1964, the Fourteen Mile Land Company initiated the Fourteen Mile Reservoir 1, to be located on Fourteen Mile Creek, with a decreed capacity of 85,988 af. In addition to taking water from Twelve Mile, Thirteen Mile, and Fourteen Mile Creeks, all tributaries of Piceance Creek, water is to come from the South Fork of the White River through the South Fork-Piceance Pipeline and from the White River. Shell Frontier currently owns this right. The same company also established the White River-Fourteen Mile Pipeline at this time, with the decreed right to divert 200 cfs from the White River. This right is now owned by Shell Frontier.

Just two days later, the same company established the South Fork Reservoir and the South Fork Pipeline, both located on the South Fork of the White River. The reservoir is decreed for a capacity of 85,342 af. The pipeline is decreed to divert 100 cfs. Both of these rights are now owned by Shell.

In 1967, Mobil Oil Company established appropriations for the Hunter Creek Wells, Nos. 1-30. The source of water is the Parachute Creek member of the Green River Formation. Each well is decreed to withdraw 1 cfs. In a subsequent proceeding, Mobil obtained recognition that the Hunter Creek Wells are part of an integrated water supply system that also includes Boies Reservoir, Piceance Pipeline, and Piceance Canal.

In 1968, the Superior Oil Company established a diversion and storage project that included the Superior Oil Company Pipeline and Terminal Reservoirs and the Superior Oil Company Storage System. The pipeline is decreed to divert 12 cfs from the White River and carry water to 2 terminal reservoirs, with a combined capacity of 800 af. Superior obtained an enlargement, adding an additional 12 cfs in a subsequent filing. The storage system consists of 4 reservoirs and 4 pipelines. Crooked Wash Reservoir is decreed for 11,800 af, Wray Gulch Reservoir for 13,500 af, Blacks Gulch Reservoir for 13,900 af, and Kellog Gulch Reservoir for 3,700 af. Water for these reservoirs would come from the White River through pipelines with the names of the reservoir sites, each decreed for a capacity of 100 cfs. Superior also established the Superior Oil Company Pumpback Pipeline Nos. 1, 2, and 3-1, each decreed for 12 cfs. These rights are now owned by Exxon.

An entity called White River Resources then established the White River-Piceance Pipeline, decreed to carry 100 cfs from the White River to Powell Park Reservoir, to be constructed in the Piceance Basin. The reservoir is decreed for storage of 75,970 af. These rights are now owned by two individuals, Walter Wilson and Thomas Cameron.

The Atlantic Richfield Company initiated the White River Figure Four Pipeline later that same year, with a decreed capacity of 70 cfs to come from the White River. This right is now owned by the Puckett Land Company.



Industrial Resources, Inc. initiated the appropriation for the Wolf Ridge Reservoir and the Wolf Ridge Feeder Pipeline in 1966, but did not obtain an adjudication until 1971. The reservoir has a decreed capacity of 7,379.7 af. The pipeline has a decreed capacity of 100 cfs with its point of diversion on the White River. These rights are now owned by Natural Soda, Inc.

In 1967, the Oil Shale Corporation (Tosco) established the Ohio/Ertl Pipeline and the Story Gulch/Parachute Pipeline, each decreed to divert 55 cfs from the White River. Simultaneously, Tosco established Hunter Creek Reservoir, with a decreed capacity of 24,362 af; Story Gulch Reservoir, with a decreed capacity of 10,200 af; and Miller Creek Reservoir, with a decreed capacity of 22,600 af.

In 1971, two individuals — Winston Wheeler and L.E. Phillips — established two new appropriations: Wolf Creek Reservoir and Wolf Creek Pipeline. The reservoir is decreed for 35,000 af; the pipeline is decreed to divert 70 cfs from the White River. These rights are now owned by Exxon.

In 1972, the CRWCD initiated the Wray Gulch Pipeline, the Wray Gulch Dam and Reservoir, the Strawberry Creek Pipeline, and the Strawberry Creek Dam and Reservoir. The Wray Gulch pipeline is decreed to divert 450 cfs from the White River. The Wray Gulch Reservoir has a decreed capacity of 29,374 af. The Strawberry Creek pipeline has a decreed capacity of 400 cfs, and Strawberry Creek Reservoir has a decreed capacity of 75,957 af. In 1974, the CRWCD obtained a change of right to shift 31,944 af of water from the Rangely Enlargement to Wolf Creek Reservoir. Wolf Creek Reservoir now is decreed to store 81,200 af.

In 1976, the Yellow Jacket WCD established the Sawmill Mountain Reservoir and the North Fork Feeder Conduit. The reservoir is decreed to store 80,000 af; the conduit is decreed to carry 500 cfs of water from the North Fork.

Also in 1976, Tosco established the Miller Creek Reservoir with the right to store 23,300 af of water, including that brought from the White River through the Miller Creek Pipeline with its 100-cfs capacity. In 1979, Tosco established an enlargement of Story Gulch Reservoir from 10,200 af to 25,000 af.

In 1981, the Yellow Jacket WCD established the Colorado White River Reservoir at Warner Point, with a decreed capacity of 105,000 af. It also established the Colorado White River Hydroelectric Plant, decreed for 500 cfs.

In 1984, Mobil established the Mobil Pumping Station and Pipeline, with a decreed capacity of 200 cfs. Its purpose is to exchange water upstream to Taylor Draw as necessary to enable pumping of up to 30 cfs from its Hunter Creek Wells. This right is now owned by Exxon.