

BEFORE THE STATE ENGINEER OF OREGON

Umatilla County

IN THE MATTER OF THE APPLICATIONS)
R--37414 and 37415 IN THE NAME OF)
KEY BROTHERS, INC.)
- - - - -

FINDINGS OF FACT,
CONCLUSIONS AND ORDER
APPROVING APPLICATION

FINDINGS OF FACT

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On February 21, 1962, Key Brothers, Inc. filed in the office of the State Engineer an application for a permit to construct a reservoir in the NW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 5, Township 5 North, Range 35 East, W. M., and store therein 80 acre feet of water from Dry Creek for irrigation, and an application for a permit to appropriate 4 cubic feet per second of water from Dry Creek and reservoir for irrigation of 264.4 acres of land in the NW $\frac{1}{4}$ SW $\frac{1}{4}$, Section 4 and the N $\frac{1}{2}$, Section 5, Township 5 North, Range 36 East, W. M. The applications were identified in the records of the State Engineer as Nos. R-37414 and 37515 respectively.

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On March 15, 1962, a protest against the approval of these applications was filed by Fred Phillips, Merle Phillips, Ivor Williams, Casper Hohn, Neal Blessinger, James Taylor, Harris Hamper, Marion Cockburn, L. M. Marlatt, M. A. Buroker, Ralph Franklin, Ed Emerson, Martha Pfeiffer, Ernest Key, John Ross and Dee Wallace. In the protest it is alleged that each of the protestants are owners or claimants of rights to appropriate the waters of Dry Creek and that approval of the applications would conflict with existing rights.

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After due notice given, a hearing was held before Chris L. Wheeler, State Engineer, in the Milton-Freewater City Hall, Milton-Freewater, Oregon, on August 30, 1962, commencing at 1:30 p.m. At the hearing, applicant appeared represented by its Attorney, Henry Hess, Jr., and the protestants

appeared represented by their Attorney, Mr. William Galbreath.

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It was stipulated that the protestants herein were the owners of the rights to the use of the waters of Dry Creek, as determined by the Decree of the Circuit Court for Umatilla County, dated March 17, 1924, In the Matter of the Determination of the Relative Rights to the Use of the Waters of Pine Creek and its Tributaries, and that insofar as they were applicable to these proceedings, such rights, together with all others appearing of record in the office of the State Engineer, could be considered without specific enumeration herein.

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According to such records and from personal examination, Dry Creek is a perennial stream rising in the West slope of the Blue Mountains and flowing in a general northwesterly direction to its confluence with Pine Creek in the SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 26, Township 6 North, Range 34 East, W. M. It has a drainage area of about 48 square miles, characterized by flat-topped ridges (normally dry farmed) with very steep slopes into the canyons and stream system. The upper drainage contains some timber, but primarily it is a low watershed, subject to early runoff with flash floods that can occur at any time of the year from melting snow or heavy rainstorms.

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The duty of water and irrigation season as fixed in said Decree is as follows:

That considering the character of the soil, the kind of crops grown thereon, and the length of the irrigation season, three acre feet of water per acre is sufficient for the proper irrigation of any of the lands irrigated from Pine Creek and its tributaries during the irrigation season beginning April 1st and ending October 1st, and not more than one acre foot per acre is necessary for use during any thirty-day period. That considering the character of the flow of Pine Creek and its tributaries, excepting Schwartz Spring Branch, it appears that there is a surplus of water in the streams during the beginning of the irrigation season when the spring runoff occurs, but that after

the crest of the spring floods has passed, the stream fails rapidly until there is practically no water available during a part of June and for the remainder of the irrigation season thereafter. That due to the shortness of the period of runoff of Pine Creek and Dry Creek, it is necessary to use a large head of water in order to get over the ground while water is available.

That the quantity of water diverted from Pine Creek and Dry Creek and their tributaries, excepting Schwartz Spring Branch, shall be limited at all times to the amount which can be applied to beneficial use, and shall not exceed one acre foot per acre during any thirty-day period, nor three acre-feet per acre during the irrigation season beginning April 1st and ending October 1st. That there shall be no limitation on the head of water diverted unless there is insufficient water flowing in either of said streams to provide all lands irrigated therefrom with one-sixtieth of a second foot per acre, and when that condition exists the head of water diverted shall be limited to one-sixtieth of a second foot per acre of land irrigated.

That when irrigation is practiced outside of the irrigation season as herein fixed, the quantity of water so diverted shall not exceed one acre foot per acre of land irrigated during such period, and such irrigation shall otherwise be governed by the same limitations as are herein fixed for diversion and use during the irrigation season proper.

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According to the records of the State Engineer, rights were allowed, in said Decree, to the use of the waters of Dry Creek for the irrigation of 1,060.85 acres and an additional 674.20 acres have acquired rights through permit from the State Engineer. Utilizing a duty of water of 1/60th of one cubic foot per second per acre irrigated, the decreed rights would require 17.68 cubic feet per second and the rights acquired through State Engineer permits were allowed 7.75 cubic feet per second.

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There are no continuous stream flow records available on Dry Creek, nor were any measurements presented upon which to base flow data.

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Mr. James D. Hanley, Registered Professional Engineer of Baker, Oregon, and witness for the protestants, computed a theoretical watershed

yield based on the precipitation records at Weston, Oregon. It appears that this precipitation station used is located just east of the town of Weston on the edge of the watershed at an elevation of about 2100 feet mean sea level. The mean annual yield obtained by these computations of 5400 acre feet is probably conservative, since a substantial part of the drainage area is at a higher elevation. A straight computation of 3 acre feet per acre as allowed in the decree for each acre irrigated indicates that many years there would be no water available for the proposed appropriation. No evidence was presented of the actual capacity of each of the ditches and pumps diverting water from Dry Creek, however, the general testimony of the witnesses would indicate that there is some surplus water that passes on down Dry Creek and goes to waste during the winter and flood runoff period which normally occurs between the 1st of February and the last of April. Mr. Lloyd Key, testifying for the applicant, stated that during this period the stream would rise rapidly in a period of about an hour from normal flow to flood flow and continue for from two to five days and return rapidly to normal flow conditions. No testimony was presented nor is evidence available to determine what either of these flows are.

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According to the application and accompanying sketches, the applicant proposes to divert water by means of a 3-foot high reinforced concrete dam across the stream with inlet to the ditch by 20 feet of 24-inch corrugated metal pipe controlled by a 24-inch Model 101 Calco metergate. An opening 4 feet wide and 2 feet 9 inches high is placed in the concrete wall and controlled by flashboards. No complete plans have been submitted, nor is sufficient data included to accurately determine the hydraulic characteristics.

CONCLUSIONS

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Under the conditions set forth and since the existing rights do

not include storage reservoirs, the mean annual yield is not the controlling factor. The actual question is whether or not the rate of flow exceeds the total quantity that is diverted and used at any particular time that it could be beneficially used or stored as proposed in the pending applications. It appears that some surplus water does exist in a normal water year and the applications should be approved subject to the construction and maintenance of adequate headgate and measuring devices to enable the watermaster to control the diversion and close the ditch at any time the water is required for prior rights. Due to the flashy character of the stream indicated by the testimony, it would appear that the diversion works should be so constructed as to pass the water required for prior rights below the elevation of the intake to the headgate controlling the appropriation.

ORDER

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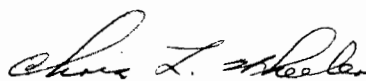
NOW, THEREFORE, it is hereby ORDERED that application No. R-37414 and No. 37415 in the name of Key Brothers, Inc. be approved and permits issued subject to the following conditions:

(1) The diversion works shall be so constructed as to provide free passage of the water required for prior rights. The plans for such works including suitable measuring devices to determine the quantity appropriated shall be approved by the Watermaster for the District prior to construction.

(2) Detailed plans and specifications, prepared by a registered professional engineer, for the construction of storage dam provided for in application No. R-37414 shall be submitted to and approved by the State Engineer prior to construction or placing of any portion of the embankment.

(3) In the event modifications are required in the measuring devices, diversion dam or storage dam, then such changes shall be made as directed by the State Engineer and/or Watermaster as provided by law.

Dated at Salem, Oregon, this 22nd day of February, 1963.



CHRIS L. WHEELER
State Engineer