

BEFORE THE STATE ENGINEER OF OREGON

Deschutes County

IN THE MATTER OF APPLICATION No. R-24920)
IN THE NAME OF NORTH UNIT IRRIGATION)
DISTRICT, MADRAS, OREGON, FOR PERMIT) FINDINGS AND ORDER
TO CONSTRUCT THE WICKIUP RESERVOIR AND)
TO STORE THEREIN 200,000 ACRE-FEET OF)
WATER OF THE DESCHUTES RIVER.)

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The North Unit Irrigation District on June 26th, 1950, filed in the office of the State Engineer, an application which was numbered R-24920, for permit to construct a reservoir and to store for beneficial use 187,000 acre feet of the unappropriated waters of Deschutes River for irrigation and domestic purposes. The location of the dam and reservoir is that of the Wickiup Dam and Reservoir, constructed by the United States Department of the Interior, Bureau of Reclamation.

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On August 18, 1954 the North Unit Irrigation District filed an amended application for the Wickiup Dam and Reservoir, stating the amount of water to be stored as 200,000 acre feet. This application which is numbered R-24920, the same as the original filed on June 26th, 1950, is complete according to the requirements of the laws of Oregon and of the rules and regulations of the State Engineer, with exception of the statutory fees.

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On January 14, 1938 the North Unit Irrigation District, the applicant herein, entered into a contract with the United States, Department of Interior, Bureau of Reclamation, providing, among other things, for construction of Wickiup Dam. The dam was constructed and placed in operation in December 1942. The reservoir has a normal capacity of 200,000 acre feet and provides the primary water supply for the 50,000 irrigable acres in the North Unit Irrigation District.

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In connection with the cooperative investigation by the State of Oregon and the United States, pursuant to the provisions of Chapter 87, Oregon Laws 1913, the State Engineer, on the 28th day of February 1913, withdrew 900,000 acre feet of water of Deschutes River for storage in Benham Falls Reservoir and on the same date withdrew any other unappropriated water of the Deschutes River for the purpose of irrigation of lands in projects under investigation or to be investigated.

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On the 26th day of November 1921, the State Water Board of the State of Oregon, entered an order allotting to the North Unit Irrigation District, out of the waters withdrawn by the State Engineer as set forth in paragraph 4 above, the amount of water which may be beneficially applied to the irrigable lands in said district, not to exceed 317,500 acre feet per year, with right of storage in Benham Falls Reservoir, together with such additional amount as may be necessary to compensate for seepage and evaporation in said reservoir and between said reservoir and the point of diversion from Deschutes River; provided that in no event should the amount stored exceed 400,000 acre feet per year.

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Subsequent investigation by the Bureau of Reclamation of the Benham Falls reservoir site for storage of 400,000 acre feet disclosed conditions indicating excessive leakage and a number of other reservoir sites were investigated, of which the Wickiup Reservoir was selected and constructed.

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On the 4th day of January 1938 there was entered into a contract by and between the Central Oregon Irrigation District, the Jefferson Water

Conservancy District (now North Unit Irrigation District), the Arnold Irrigation District and Crook County Improvement District No. 1, wherein said districts agreed among themselves on an allocation of storable waters of the Deschutes River and priorities therefor in the Wickiup and Crane Prairie Reservoirs. Said contract is known as the Inter-District Agreement and is still in effect.

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The Oregon State Game Commission filed a protest dated March 15, 1954, to the granting of Application No. R-24920, described in paragraph 1 of these findings, on the grounds that storage of 187,000 acre feet as proposed in said application would reduce the minimum flow of water below Wickiup Dam to less than 200 second feet for a distance of at least 21 miles between the reservoir and Fall River; that said stream contains large numbers of game fish including various species of trout, all of which are dependent upon at least a minimum flow of 200 second feet of water for survival; that the storage of water in the amount applied for will result in tremendous loss and damage to the state with respect to the loss of game fish and also will result in devaluation of property of the state, loss of income to the state, destruction of waterfowl nests, and the destruction of fur bearers, all property of the State of Oregon; that the storage of water as applied for would destroy valuable spawning beds for trout and other game fish and that the applicant intends to assign any permit granted under said application to the United States of America pursuant to provisions of contracts entered into between the applicant and the United States of America, thus placing it beyond the power of the State of Oregon to institute or effectuate proper action either against the applicant or the United States in the interest of the protection, preservation and promulgation of game fish in said stream.

A hearing by the State Engineer on the protest of the State Game Commission was held in Bend, Oregon on September 27 and 28, 1954, at which appearances were made by the North Unit Irrigation District, applicant; the Oregon State Game Commission, protestant; and the following intervenors:

Central Oregon Irrigation District
Deschutes County Municipal Improvement District
Arnold Irrigation District
Crook County Improvement District No. 1

At said hearing the State Engineer heard testimony both in favor of and opposed to the granting of the application and received numerous exhibits and a full and complete transcript of the proceedings was kept by a qualified reporter and reduced to writing.

From the evidence received at said hearing and other documentary information on file in the office of the State Engineer or available to him for reference, the following appear to be the facts with regard to the pertinent issues in this matter.

- A. The normal and usual period of storage in Wickiup Reservoir is during the non-irrigation season extending from November 1st of any year through March of the following year and during that period the outlet works in Wickiup Dam may be closed. Until such time as the reservoir is filled the water in the channel of Deschutes River below said dam may be reduced to that from seepage and leakage at said dam totaling about 10 second feet.
- B. About 2 1/4 miles below Wickiup Dam there is an accretion to the Deschutes River from Dillman Swamp ranging between 1 and

10 second feet and between Wickiup Dam and the mouth of Fall River there are numerous unmeasured accretions from small streams, seepages and springs.

- C. The accretions between Wickiup Dam and Pringle Falls, some six miles downstream, during the mid-winter season are on the order of 5 second feet and during periods of rainfall or snow melt such accretions range upward to more than 10 second feet.
- D. There are occasional shut-downs of the Wickiup outlet gates for periods of a few hours when the flow is reduced to 10 second feet, even though the average discharges for that day may be much greater. These shut-downs have been made abruptly, resulting in a rapid fall of the river stage immediately below the dam. This may or could cause stranding of fish.
- E. The records of the flow of Deschutes River immediately below Wickiup Dam show that for the period 1942-1953 there were 14 days when the average daily flow was less than 30 second feet. Of this 14 days, there were 8 days when it was less than 20 second feet and 4 days when it was less than 15 second feet. All 14 days were during the water year 1951-1952. Throughout the balance of the eleven years, the daily average flow was never below 30 second feet.
- F. During the fishing season which falls within the irrigation season of each year, the releases from Wickiup Reservoir for irrigation are in accordance with irrigation demands and may reach or exceed 2,000 second feet.
- G. The 21 mile reach of Deschutes River between Wickiup Dam and the mouth of Fall River is a habitat for game fish, produces

a considerable yield of fish food and is used to some degree for spawning. Due to the character of the bottom materials it is not ideal spawning territory. The river is stocked from time to time but is fished to a rather minor extent. Better accessibility for fishermen and better catches can usually be had in Wickiup and Crane Prairie Reservoirs and in other streams in the vicinity.

H. There is little evidence of use of the 21 mile section of Deschutes River below Wickiup Dam for waterfowl nesting or as a habitat for fur-bearing animals.

I. The flow of Deschutes River, including storage water in Wickiup and Crane Prairie Reservoirs is not sufficient in all years to provide a full irrigation water supply for irrigated and irrigable lands in the Deschutes Basin.

With no avoidable releases during the non-irrigation season, Wickiup Reservoir cannot be filled during years of less than normal run-off. During such years, any releases made specifically for the benefit of aquatic life in the stream will reduce the irrigation supply, resulting in insufficient water to mature crops grown. Studies covering the ten year period 1924-1934 show that with releases of 200 second feet through the storage season, there would have been only two years out of the ten in which Wickiup and Crane Prairie Reservoirs would be filled.

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Water supply studies originally prepared by the Bureau of Reclamation to evaluate the irrigation potential of the North Unit

contemplated a storage season release of 20 second feet of water past Wickiup Dam. This release was for the purpose of maintaining aquatic life in the Deschutes River. Recent studies by the Bureau indicate that with this release of 20 second feet there would be a detrimental effect on the lands of the North Unit Irrigation District. Based upon stream flow records of the 29 years (1925 to 1953), there would be shortages averaging 42,000 acre feet per year and a maximum shortage of 92,000 acre feet per year.

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The question must be decided as to whether the release of water from Wickiup Reservoir is of greater value in the preservation and propagation of fish life than for irrigation of lands. The State Engineer finds in the negative. He believes that creation of the Wickiup Reservoir and its operation in the customary and usual manner has resulted in fish propagation and recreational opportunities far greater than were previously existant.

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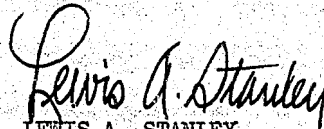
It is therefore ORDERED that Application No. R-24920 will be approved upon payment of the statutory fees. The permit will be for storage of 200,000 acre feet in Wickiup Reservoir with priority of February 28, 1913, provided however, that priorities of exercise of storage shall be in accordance with the Inter-District Contract described in paragraph 7 hereof and which is by reference made a part of this order. A minimum release of 20 second feet at Wickiup Dam will be required to maintain aquatic life in the stream.

It is FURTHER ORDERED that in the operation of Wickiup Dam and Reservoir, except in emergency, the rates of opening and closing

outlet gates be such as will prevent a rise or fall of the water surface in the river at gaging station No. 3136 at a rate greater than one foot per hour.

And it is FURTHER ORDERED that the permittee shall operate the Wickiup Dam and Reservoir insofar as practicable, in view of the water stage in the reservoir and the then current forecast of storage inflow, to maintain a uniform release of water at a rate which will assure filling the reservoir, but will avoid excessive spill.

Dated at Salem, Oregon this 20th day of January 1955.


LEWIS A. STANLEY
State Engineer