

HOW WATER SYSTEM WORKS IS OUTLINED

MANAGER TELLS OF SOME OF DETAILS OF OFFICE

Co-operation by Settlers Aids in Work; District Costs Less Than Government.

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Project Manager

(Note—The following article, prepared by Mr. Martin at the request of The Herald, enumerates briefly some of the work that must be done in managing the operation and maintenance activities of the district.)

Operation and Maintenance

After the spring cleaning is completed and the ditches are prepared for the handling of the quantities of water necessary for the season's run, water is turned out of the reservoir into the "A" canal and from the diversion at the Umatilla river, into the Maxwell canal. The first water turned into the canals is not intended for delivery to farms, but is used to prime the ditches, gather up and carry to the spillways any debris not collected and burned at the time the ditches were cleaned.

After the first head of water has been worked through the canals, the same system is used in taking the water through the smaller laterals, until the entire system is cleaned out, ditches primed and the general condition and probable capacities of the different canals and laterals determined. The distribution system is then ready for the delivery of water to farms. The number of second feet of water to be needed by each canal rider is determined, the probable losses that occur in the main canals and laterals computed and enough water to provide for the farm deliveries over and above the computed losses is turned into the canals.

Water Delivery

Each ditch rider takes the amount of water allotted to him and distributes it through the different laterals and pipe lines and makes deliveries to the farms as requested by the settlers. The irrigation head is

delivered by the ditch rider to the farm turnout, and is measured over standard Cippoletti weirs and suppressed rectangular weirs where the fall is great enough to permit. At other points submerged orifices are used. The size of the irrigation heads of water vary from two to five second feet, depending on the type of soil, and the topography of the land.

Length of Season

The average length of the irrigation season is about 200 days, extending from March 15 to October 1st. During the early and late parts of the season water is furnished practically on demand, but during mid-season a system of rotation is employed, especially where capacity of laterals is limited. Accurate readings of gauge heights are taken each day by the ditch riders, and these reports are turned into the office at the end of the month where the quantities of water delivered to each farm unit are computed and placed on the water users cards. From these records, together with the daily readings at all important diversions, the amounts of water used, amounts wasted and amounts lost are determined.

Co-operation With Bureaus

At regular intervals current meter measurements of the various canals and laterals are taken and curves established so that the exact amount of water in each may be known at any time. Monthly reports are mailed meteorological bureau at Portland, giving the precipitation, temperature and prevailing winds. At the end of each season daily reading reports are sent in to the state engineering department, showing all diversions of water from the Umatilla river and quantities of water run into the river through the drainage canal. The chief engineer's office at Denver is furnished with a monthly report showing all water diverted, used, wasted and lost.

Crop Census

At the end of each irrigation season a crop census of the project is taken which includes all farm equipment, livestock and crops grown.

This data is all assembled and summarized, then sent into the bureau of reclamation where the average gross receipts per acre for that year are made a part of the ten year average on which is based the construction charge payable to the government the following year.

Lands Irrigated

The number of acres under water right application on the project amounts to approximately 11,000 acres. Aside from these lands we have a considerable area operating under rental contracts.

Fall, Winter Maintenance

At the end of each water delivery season all canals and laterals are inspected and a work schedule made outlining the necessary maintenance work required to put the system in shape for the following year's run. The feed canal is then cleaned and concrete lining repaired where necessary so that the storage system will be in readiness to care for the filling of the reservoir during the fall and winter months. Constant vigilance by all parties concerned is necessary for the successful operation of both our distribution and storage systems. Breaks can not be entirely eliminated, but a great many can be anticipated and prevented by prompt action on the part of the operating force and the co-operation of the settlers.

Costs

The cheapest year's operation of the government's cost per actual acre irrigated, as compared with the past season's operation by the district, shows a difference of \$1.29 in favor of district operation.

FACTS ABOUT OREGON

Oregon is well adapted for the raising of cattle, hogs and sheep, having plenty of native forage and being healthful for animals as well as for people.

The state is one of the leading sheep raising states and produces the finest wool in America.

Oregon flax equals that grown in Ireland and Belgium.

Salmon fishing is one of the state's leading industries.

Oregon is one of the leading states in the production of standard fruit and berries—in fact, Oregon fruits are world famous for their quality, beauty and delicious flavor.

"Mamma, when are the Indians coming?" fearfully inquired a little girl who was attending the opera with her mother.

"Hush, dear, there are no Indians here," replied the mother.

"Well, who scalped all the men in the front seats?"

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Many of our farmer customers are adding poultry flocks to their activities and utilizing skim milk for the hens. The two businesses work well together.

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