

# WEST UMATILLA PROJECT ONE OF BEST IN THE ENTIRE UNITED STATES

If Secretary Ballinger and President Taft are inclined to apportion funds for the construction of the West Umatilla irrigation project in Eastern Oregon, they need no stronger justification for making a liberal allotment than is to be found in the report of the Board of Army Engineers says a Washington special to a Portland paper.

Every comment of the board on this project is favorable; the project is found to be feasible, practical and economical. As a matter of fact, the report of the board is strong enough to justify an allotment to this project of \$4,000,000, which, it is estimated, will cover the entire cost of completing the West Side project to a point where it will irrigate 60,000 acres of land.

It is true that the board did not recommend such an allotment, but its failure to so recommend was not based upon any lack of merit or any question as to its feasibility. The board merely said:

"The proposed West Extension being entirely distinct, should be postponed for the present on account of the large amount of money needed for the completion of other projects to which the United States is committed by the large expenditures already made."

**Board Reports Upon Project.**  
Below is quoted in full exactly what the board had to say with regard to the West Umatilla project:

"The people of Hermiston and vicinity are very desirous that the government extend this project to the west side of the Umatilla river, where the reclamation of from 40,000 to 60,000 acres of land by a gravity system is proposed. This extension was the main subject discussed at the public hearing. The development, while being properly an extension of the Umatilla project, inasmuch as it would receive its water from the same source and lie contiguous to the areas at present being irrigated, yet is in the nature of new work as its development bears in no way upon the completion of the present unit of the project. The extension would require the construction of a reservoir of a capacity of about 135,000 acre-feet by building a dam in the Umatilla river near the mouth of Butter creek. The water surface would be raised about 70 feet, and the supply would then be distributed over the land by a gravity system. This gravity plan could be supplemented to cover about 80,000 acres more by electric pumping, should this further extension be deemed desirable. Reservations on the Des Chutes river for a dam site with which to develop power have been made, the power to be used in pumping water from the gravity canals or from the Columbia river to the areas not irrigable by any gravity system. If the water supply is sufficient, the total area of the proposed extensions can be expanded to about 100,000 acres, including the pumping project.

"Experience on the Umatilla project and on private projects at Irrigon and Kennewick indicate that the soil is abundantly able to produce fruits and alfalfa as well as vegetables and berries. The climate is suitable thereto, and although the areas are swept by strong winds throughout the spring of each year the soil can be protected by cultivating wind-breaks. Of the area under the proposed gravity system there are but 17,000 acres of public land. The remaining land belongs either to the Northern Pacific railroad or is now in private ownership through homestead and desert land entries, or thro purchase from the railroad. Hydrographs for 12 consecutive years indicate that there will be a surplus of over 200,000 acre-feet, making allowances for private rights and the requirements for the main Umatilla project.

**Water Assured for 50,000 Acres**  
Allowing five feet evaporation on the average area of the proposed reservoir—3200 acres—and a loss of 5000 acre-feet for a 6 per cent loss in the distribution, a total loss of 21,000 acre-feet of storage water is to be provided for. The use of concrete lined distributaries is proposed by the reclamation service, which it is expected will reduce the losses from seepage to the low amount stated. By using flood water direct it is calculated from the records by the reclamation engineers that a surplus of 22 acre-inches only will need to be stored, which gives a total of 112,000 acre-feet of stored water to be carried over if the reservoir were filled. It thus appears from these assumptions that the water supply will be sufficient for 50,000 acres if the proposed reservoir be built.

"The cost of this extension, exclusive of the pumping system, but including the dam across the Umatilla river with its accessories, estimated at about \$1,000,000, amounts in all to nearly \$4,000,000. This is approximately \$80 per acre for an area of 50,000 acres."

The board's comment in the East Umatilla project is also very favorable, and so strongly is this unit commended that it is somewhat remarkable that the board failed to recommend any allotment for continuing construction on the west side of the Umatilla river. Of the original Umatilla project, the board's report in part says:

"The board visited the Umatilla project near Hermiston. A public hearing was held on the evening of September 7, in Hermiston, at which those interested were given an opportunity to make statements to the board. In general, they expressed their approval of the work under the project, both as to progress and cost.

"The project covers the irrigation of about 25,000 acres lying in the angle between the Umatilla and the Columbia rivers on the east side of

the Umatilla, from which river it takes its water supply at a point several miles upstream. The average elevation of the irrigated areas is 470 feet above sea level.

**Earth Dam Is Leaking**  
"Taking the project as a whole, the engineering structures are apparently satisfactorily designed and executed. The only important engineering structure is the earth dam closing the outlet the cold springs reservoir. This dam has already withstood almost the maximum head and appears stable, although its height of 98 feet makes it one of the high earth dams of the country. Leakage under the dam, amounting to about 1.3 second-feet, was observed. It is said that increase of head against the dam does not increase the flow materially. This is being watched and is not thought to be serious. It is assumed by the reclamation service that this leakage is through seams in the foundation under the dam and at its end.

"The water supply is taken from the Umatilla river and consists of flood flow. None of the low water discharge is available for the project as

all of it has been appropriated. The water rights appear to have never been adjudicated but application has been made by the United States to the State Board of Control for a determination of the priority and amount of all claims. This determination is now in progress.

"The experience of this year (1910) indicates that the return flow to the river will be sufficient to supply the priorities of the Oregon Land & Water Company and Brownell Ditch Company. This will reduce the total in the tabulation of 719 second-feet and 154,000 acre-feet, respectively. Moreover, since the Maxwell Canal will not be operated prior to March 15 it is not likely that the maximum rate of diversion of the Maxwell Canal and the feed canal will occur at the same time, so it appears that priorities for existing project may be considered as a total of 154,000 acre-feet, and a maximum rate of diversion not exceeding 670 second-feet.

**Water Supply Is Ample**  
"It thus appears that the present supply is sufficient to provide water for the proposed project, with considerable surplus.

"The duty of water is assumed at 2 1-2 acre-feet at the farm, requiring 62,500 acre-feet. If 33 per cent loss from evaporation and seepage be allowed in the laterals and five feet evaporation in the reservoir, the total amount required would be about 101,000 acre-feet to supply 2 1-2 acre-feet on the land. The capacity

(Continued on Page Seven.)

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