

Shearings

**Culver To Have Water.**  
The pipe line on the water system is all laid to within about a quarter of a mile from the reservoir. The last car load of pipe is expected here this evening but a day or two will be required to get the plant in operation.—Deschutes Valley Tribune.

**Farmers After Burdick.**  
The Central Oregon Irrigation Co. farmers are after Denton G. Burdick republican nominee for a seat in the state legislature. At a celebration at Tetherow Butte, the populace forgot the day and went after Burdick, declaring him to be the candidate of the irrigation company. It does look queer that Burdick should spend twice as much to get the office as he will receive in salary. His expenses were over \$300, against about \$45 expended by Forbes and \$15 by W. O. Smith.—Crescent News.

**Dry Farmers Succeed.**  
Again we have occasion to tender our thanks to Mr. and Mrs. M. Braun, of the Plains, for a box of fine vegetables, and what was a most delightful surprise, a magnificent bouquet of variegated sweet peas, all grown on their "dry ranch." If such delicious vegetables and beautiful flowers can be grown without irrigation, what might not be done when the Plains get water? The whole country would blossom as the rose.—Madras Pioneer.

**Roads are Good.**  
The roads are good each side of town and some "speed artists" take advantage of this and go through town just like going after a doctor. Good-sized red signs on the north and south sides of town would remedy this.—Madras Pioneer.

**Will Let Architecture.**  
Lumber is being hauled for the building of the Silver Lake school gymnasium and it is hoped that construction will begin at an early date. Mr. P. D. Reeder is expected back from Portland in a few days and immediately upon his return the board will meet and definite plans be laid to go ahead with the building. The board will furnish the lumber and the architect will probably be let by contract.—Silver Lake Leader.

**Is Silver Highway.**  
The road from Paisley up the Chewaucan river is destined to be one of the rare scenic highways of the state and will open to auto travel when completed a series of beautiful camp sites and plenty of excellent fishing. Besides this the Chewaucan river country now contains several ranches and a number of families live there who will be afforded a good outlet to market.—Chewaucan Press.

**Cattle Coming to Jones.**  
Saturday J. A. W. Scoggin and four cow punchers came into Crescent from the Van Valkenberg ranch close to Klamath Falls with 113 head of milk cows and 80 head of young calves. This outfit stopped at the Phoenix ranch of C. E. Street on its way to Bend where the stock will be turned over to Geo. Jones, the dairyman.—La Pine Inter-Mountain.

**Mill Operation Felt.**  
The operation of the mill at Bend is having an effect upon the prosperity of the country that will be felt throughout the southern part of the country where it is in fact most needed. With all of these things and more in evidence there can be no doubt about the greatly improved conditions for everyone.—Crook County Journal.

**Said It of Bend, Too.**  
R. A. Smith, head of the colonization department of the Union Pacific system, I. Wheeler, his assistant, of Omaha, and H. C. Oliver, traveling freight and passenger agent of Portland, came in via Burns on Thursday and spent a day in looking over this section. They expressed the opinion that Redmond, with its large irrigated backing, had the best outlook for future growth and prosperity of anything they had seen in Central Oregon.—Redmond Spokesman.

Deschutes Reclamation Projects FROM OREGON VOTER

The following article by E. G. Hopson, a well known reclamation engineer, appeared in last week's issue of the Oregon Voter. Suggesting, as it does, a plan for the development of several of the irrigation districts of this section it is of especial and timely interest.  
By E. G. HOPSON  
The investigation of irrigation projects in Oregon by the Reclamation Service in co-operation with the state, started some two or three years, is now practically completed, and entirely so as regards the area known as Central Oregon comprising the drainage basin of the Deschutes river.  
The object of this co-operative investigation was to ascertain facts regarding the physical and local situation, to enable both the state and

nation to elaborate policies of development. Initiatory steps have already been taken by the withdrawal of such public land and water as are likely to be required in future operations.

New projects in the Deschutes Basin, using the word "new" to indicate projects in which practically no construction has been started or is likely to start in the near future, or which have not yet been organized, are indicated in the table following:

|                  | Area, A. | Cost, A. |
|------------------|----------|----------|
| The North Unit   | 100,000  | \$56.00  |
| The West Unit    | 20,000   | 41.00    |
| The South Unit   | 48,000   | 60.00    |
| North Canal Unit | 36,000   | 32.00    |
| Ochoco           | 15,000   | 51.00    |

Total ..... 219,000 \$50.00  
Steps have recently been taken to organize the North and Ochoco Units as irrigation districts, and about two years ago, an abortive attempt was made to secure federal assistance in building the West and North Canal Units. The situation is now practically a deadlock, owing to the relatively high cost of these projects, the serious complications involved in reservoir storage for their use, and the practical impossibility of financing new work of this kind.

It is doubtful if anyone has serious expectation of financing any irrigation district in this vicinity under existing conditions. Recent activity in district organization is probably largely based on the hope that the State or possibly the nation, or both, will get back of district irrigation bonds in the near future and thereby enable the work to commence.

The plans for developing this project as outlined in the co-operative reports indicate certain feasible methods of construction.

These plans are not, however, intended to be considered as final in every respect, nor as precluding further consideration or modification.

To a large extent they are based on the idea of including as large an area as possible under the canals for reasons of general public welfare.

There is strong probability that advantageous modifications of the general concept can be introduced, possibly including rearrangement of the supply system of some localities, or changes in the size of the units, and perhaps somewhat different methods of construction, that may render the work much more feasible and attractive than the co-operative report indicates.

The desirability of early development of nearly a quarter of a million acres on the Deschutes Project will be admitted without discussion. That this territory when irrigated at a reasonably low cost by a dependable system of works, will be settled within a reasonable period may also be assumed with certainty.

The one question at issue is that of ways and means.

Regarding these, it may also be assumed there is no hope in procedure under the Carey Act; in fact much of this land is already included in Carey Act segregations, the organizers of which have been unable to further finance the work.

Public attention appears, at this time, to be concentrating around the irrigation district plan, coupled with state or Government aid, or both.

This irrigation district plan appears to offer more real ground for hope of the early utilization of Oregon's vacant land than any other, and if this hope ultimately proves baseless, it seems certain that great areas of the interior must remain almost profitless for many years.

The Deschutes Basin is, however, somewhat peculiar, in that its many irrigation projects are so correlated as regards water supply, that individual action in project development is hardly possible.

The present low water flow of the stream is already used or appropriated for use by projects now in course of development; new projects must, therefore, mainly depend on a water supply from reservoirs; this in turn involves heavy construction expense and commitments beyond the scope of any single unit or project.

For instance, storage is proposed principally at two large reservoirs in the upper Deschutes, one at Benham Falls, the other at Crane Prairie. This storage is very cheap when considered in reference to all the irrigation development proposed in the Deschutes Basin, but from the nature of the situation it is evident these reservoirs cannot be developed piecemeal, nor even can they be economically used for a single project without reference to others.

Thus, even if we had legislation in force today enabling the State or Nation to lend its credit to back irrigation district bonds of these projects, it would still be a very difficult or perhaps impossible thing for any project to go ahead and develop its storage in the absence of collective action.

A close study of the physical situation indicated by data prepared in the co-operative investigation reveals the probable fact that not less than three of these units can advantageously use a common diversion dam and main canal. These are the North Unit, The Ochoco Unit and the North Canal Unit.  
A single canal starting from the Deschutes river near Bend and extending easterly and northerly to the Crooked river will place these three units in a condition of immediate feasibility, provided its construction be coupled with a co-ordinate plan of storage development in the

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upper Deschutes in order to enable the canal to be filled. Such a canal will cost about \$1,250,000.

With such a main supply system provided, the North Unit will merely have to continue a canal across the Crooked river to supply its lands, the Ochoco system can be fed by a branch canal and siphon across Crooked river near Prineville, and the North Canal Unit will merely have to build a system of distributing laterals.

Under present conditions each individual unit has to cope with the situation individually, and is practically helpless. If, however, the State, or the Government, or both, should build this main canal system, it will mean the successful organization of all these projects. It appears to be, therefore, distinctly a state or a Government enterprise.

The storage works proposed at Benham Falls and Crane Prairie are estimated to cost about \$1,400,000; owing, however, to reduced prices of land and construction that now prevail, it appears likely that actual costs will fall far below this amount.

There are thus two central features that should be built and operated by the State or Government, being beyond the scope of individual action and involving a gross cost of about \$2,600,000 and an annual interest charge of 4 per cent of about \$100,000, or about 45 cents per acre, if evenly distributed on the land to be benefited.

This expense need not all be incurred at once. The canal must of course be built entirely to be available for use, but the storage reservoirs need be developed only as required.

Thus for years the Crane Prairie reservoir will probably keep abreast of the requirements without need for the reservoir at Benham Falls.

Probably not to exceed \$1,500,000 for canal and reservoir need be expended during the next ten years; the charge for interest should not, therefore, exceed 30 cents per acre.

At the date when the Benham Falls reservoir is needed, the agricultural development of this region should have advanced to a point where the additional burden of 15 cents per acre will be unimportant. If this reservoir and main canal be built by the State or Government, the various units dependent thereon will then have to finance the remaining work, which will probably cost as follows, for canal and distributing laterals:

|                         |              |
|-------------------------|--------------|
| North Unit, about       | \$30 to \$35 |
| West Unit, about        | \$32 to \$34 |
| South Unit, about       | \$50         |
| North Canal Unit, about | \$15         |
| Ochoco Unit, about      | \$25 to \$29 |

All of these amounts, except for the South Unit, are relatively low, and the work remaining to be done consists mainly of distributing canals and is simply and quickly executed. With State or Federal aided bonds, there should be no difficulty on the part of the several districts completing the systems and placing their land under irrigation.

The construction of this trunk canal and reservoir system practically means unlocking the door of the Deschutes country to development. Without some such action nothing seems humanly possible. With it an accomplished fact, there is no serious obstacle in the way of each unit going ahead as soon as it is ready.

The work is too large and too complicated for any one project or unit to handle; it must be a state or federal project or nothing. It is not by any means a difficult project for these agencies; the amount indorsed is moderate and the engineering features are simple. It is now suggested as an extremely appropriate field for the use of the Reclamation fund, whenever money for Oregon can be found in that fund.

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