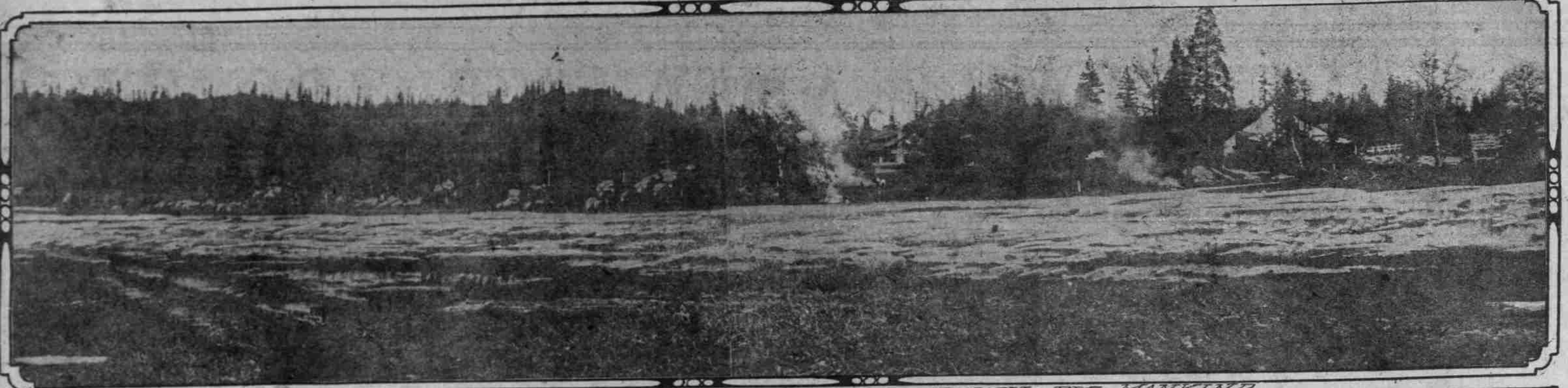
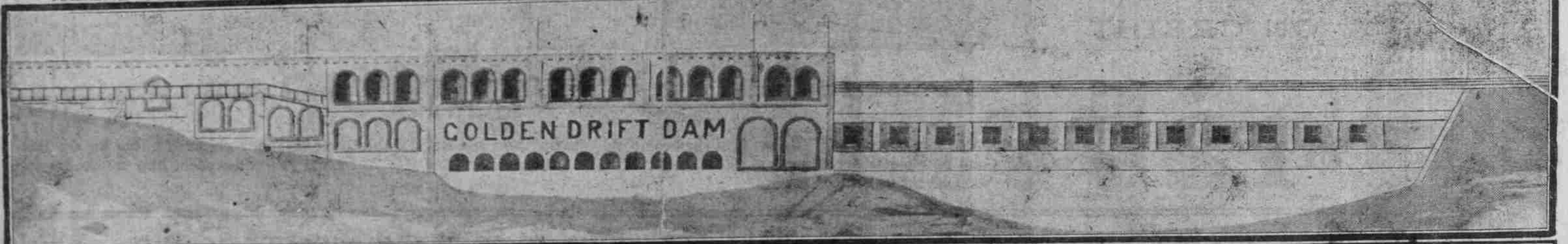


# OLD DAM IS ROGUE VALLEY SAVIOR

Golden Drift Viaduct Rebuilt Stronger to Withstand Floods, to Harness Wasted Power and Distribute Water to Thousands of Acres That Have Long Cried for Moisture.



VALLEY LAND THAT WILL PRODUCE ANYTHING THAT CAN BE GROWN BY MANKIND



GOLDEN DRIFT DAM

## THE DAM FULLY COMPLETED

BY C. H. CLEMENTS.  
GRANTS PASS, Or., Aug. 5.—(Special)—A complete system that will irrigate Rogue River Valley, and increase its productivity 100 per cent is the objective point sought by capital, fully supported by the commercial clubs and business-men's organizations.

The means by which the lower part of the valley is to be made rich and of lasting importance may be found in the aspect of the Golden Drift Dam, a structure erected a number of years ago across Rogue River at a point where the owners might take water for mining purposes. To meet the growing demands and thirst of catching capital this old dam is to be built with solid concrete with walls that will last beyond the present generation that is leading the way for the permanent prosperity that follows water and soil rightly worked.

This dam when completed will have a total length from bank to bank of 480 feet. On its decks will be built a powerhouse, 30x20 feet, that will supply the upper ditches that cling to the hillsides until they reach the points of distribution. The powerhouse will be 52 by 120, and will be filled with machinery that will develop electricity from the river that will pass beneath in artificial flumes to which turbine wheels will be connected. The main spillway of the dam will have a clearance of 40 feet with a height of 25 feet above the level of the flash boards. The powerhouse will stand 15 feet above the spillway.

At intervals along the massive concrete structure emergency flood gates will be built. Of these there will be 15, considered ample to take care of the surplus water that might come against the works in a sudden storm or high water. Should a storm arise, and all the gates had to be opened, they will have an emptying capacity of 16,000 second feet, which, so far as the record is concerned, will give the required result without any immediate strain on any section of the structure. The old spillway had only 17,000 second feet, and as a consequence the dam was wrecked every year by constant pressure greater than it could stand.

### Largest Pump to Serve.

Five thousand horsepower will be developed and devoted to pumping water into the several ditches that are intended to cover the high lands. In the powerhouse will be 10 powerful vertical turbines, that will be hooked up to pumps that have not less than a total capacity of 20,000 gallons a second. The largest pump will be 1000 gallons a minute. This large piece of machinery destined to wet the dry lands weighs 40 tons without piping and connections, and is the largest pump manufactured. The seven vertical turbines and the six horizontal turbines in the powerhouse will be connected directly with five generator units and made to operate tandem or independent. Behind the spillway a concrete dam will be provided, where, at all times, the machinery and river working harmoniously may be seen at a glance.

### Cry for Water Heeded.

Everything is done to advance the country's interest and supply the farmers who are anxiously waiting for ditches to be extended into their neighborhood. The prejudices against the use of water on land have been swept aside, and now the clamor is for water, with not enough in sight to satisfy the commercial needs. At present the Golden Drift dam is supplying the basins on the south side of the river, and north and east of Grants Pass. On the north the ditch is to be operated for six miles. This piece of highland ditch will be extended four miles by next season. Then it will reach out into the lower valley with laterals and cover a territory of 4000 acres. The ditch has a carrying capacity of four feet on bottom, eight feet on top, and three feet deep, and is connected with pumps that fill a 22-inch pipe. This stretch of ditch is 200 feet in elevation, and not only supplies the farmers and fruitgrowers but all the gardens and the city inhabitants are receiving benefit. Along this canal just north of Grants Pass will be placed two ponderous pumps driven by electricity generated at the dam, which will throw water into a second ditch 200 feet higher and cover the entire basin around Grants Pass, and take a course westwardly across the saddle-back hills and empty into the Merlin basin. For the coming season the

## Jones Creek territory will be supplied with laterals. This ditch will be 20 feet above the river and will be attached to a pump at the dam. A 22-inch, five-step high lift centrifugal pump will send 3000 gallons a minute through the steel artery that will provide Jones Creek farmers with water. A like supply will be diverted into the Fruitdale ditch, which now has seven miles in operation, and one of the prettiest sections around Grants Pass.

From the dam there is already constructed a gravity ditch three miles long, 12 feet on the bottom, 18 feet on the top and six feet deep. To open this gravity canal was a Titanic task, that required powder to overcome the difficulties met in the first 1000 feet, which is tunneled through solid granite.

### Ditch Nearly Completed.

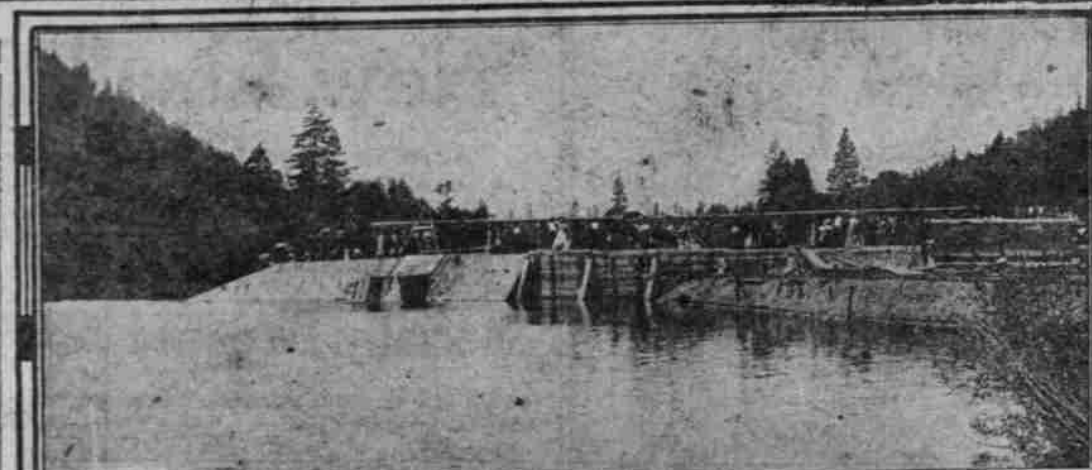
At the point of diversion two steel gates, six by nine feet will supply the intake. This ditch is nearly completed to the east side of the city, and when extended below into the deep sandy soil it will be the largest supply ditch through the territory that is watered by the dam. By the coming season will be extended five miles below town and will then furnish water to 5000 acres now under high state of cultivation. On this ditch, two miles below Grants Pass will be another pumping plant, with a four-step pump to raise the water into an irrigation ditch that will supply the lower basin in and around Merlin not otherwise supplied. This basin includes about 8000 acres of land and will not be under irrigation until 1912, as the concrete furnishing the means for carrying out the plan of watering the whole valley cannot possibly complete the laterals before the time.

Since June 15 the new company has put in 11 miles of canals, and before the end of this irrigation season, 16 miles will have been completed. That will represent the head ends of three of the main canals of the system. Six canals will mark the progress for 1912 and 10 main canals by 1913. All the highland ditches are supplied with gates to carry off the surplus water at every natural gulch or creek.

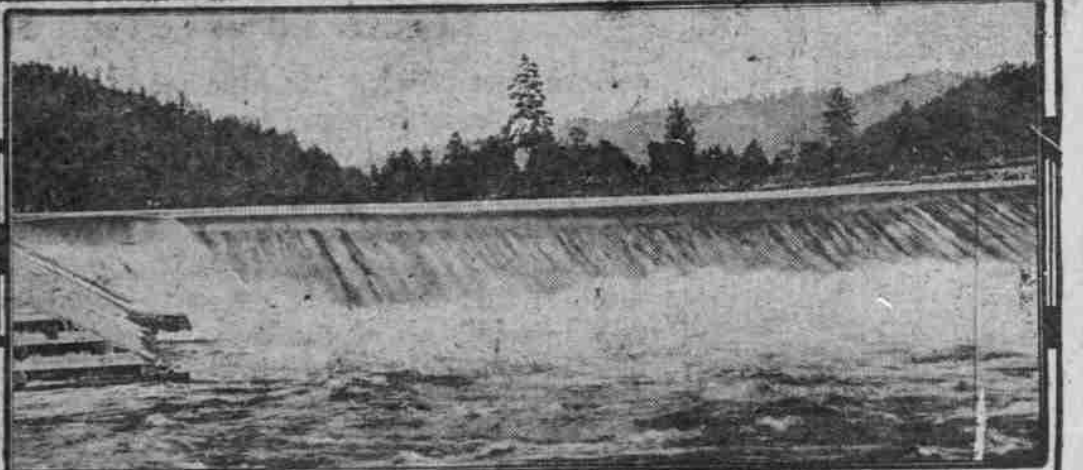
### Waste Power Harnessed.

Every precaution is taken to make the entire system a permanent asset of Josephine County. For the coming season the ditch covering the big flats between Applegate River and Rogue River will be connected at the diversion point at the dam with a 21-inch pipe and the water lifted by a low pressure pump with a capacity of 15,000 gallons a minute. This supply ditch will be 8x12x4 and will reach over 10,000 acres, which includes Jarome Prairie and part of the triangle of Murphy.

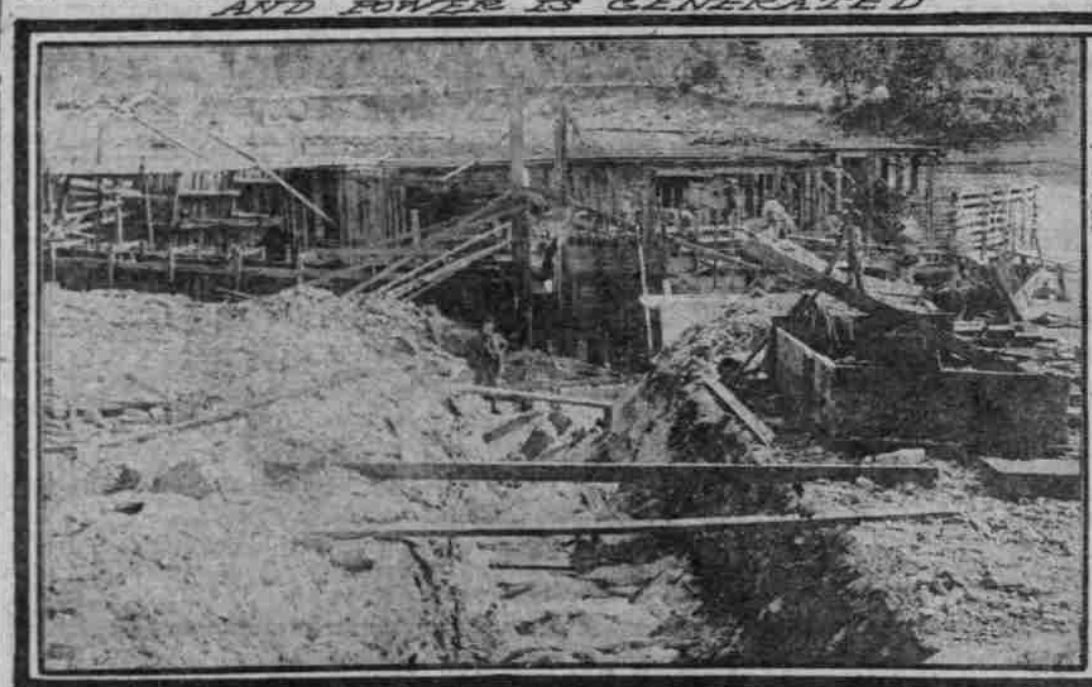
All the power is developed by water running over the dam; in fact, it is waste power waiting to be harnessed. From the waste flow under the spillway enough power can be generated from the turbines to keep the pumps going day and night with little care and watching. Once the system and machinery are installed the main costs have been overcome and the result will be a handsome income on one side and a 100 per cent increase in the wealth and gain to land holders and producers.



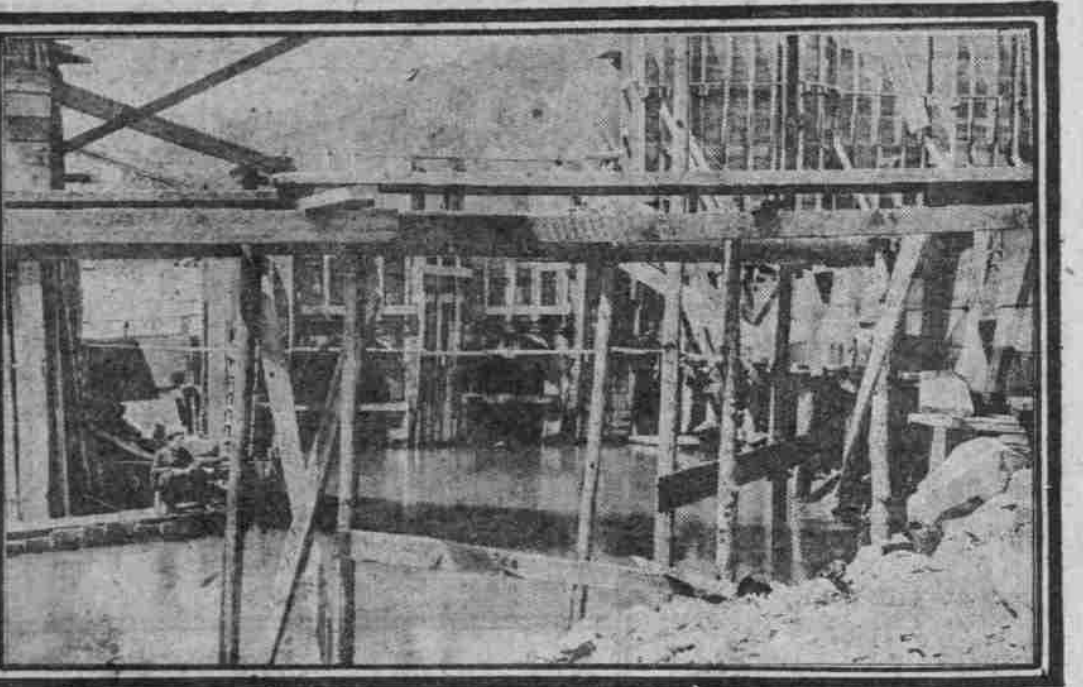
IN THE SHADOW OF THE MOUNTAIN, LIFE AND POWER IS GENERATED



SPILLWAY, OVER DAM, 420 FEET LONG



OPENING THE MAIN LATERAL, DITCH THROUGH 1000 FEET OF SOLID GRANITE



INSTALLING MACHINERY AND CONCRETE

and, milled, three cars of eggs and butter, 8 cars of fruit, 35 cars of vegetables and 12 cars of canned goods, making a total of 847 cars during the year closing June 30. These figures represent an enormous amount of money, and no end of freight rates, commissions and profits.

### Flood Destroys Work.

In 1909 several miles of ditches were built by the farmers, and the opening season's outcome was looked upon with much pride. Mass meetings were held, and water flowed everywhere in copious quantities to illustrate the usefulness of irrigation to small tracts. It was in these gushing times that many gardeners and truck-raisers around town took advantage of the act and paid \$5 an acre just to watch things grow, and reap the extra income. The season had been propitious, and the following year was to be along broadened. Ditches would be extended and general improvements would be made along the supply poles. But in January an unforeseen event crushed the life out of plans, the big dam weakened under a heavy flood, and as a result a large portion of it went to ruin. The big pumps that had done duty in fighting the dry lands, went down in the rush, and have never been recovered, although divers have been employed to ferret them out.



MEN AND APPLIANCES AT HEAD WORKS

The Golden Drift Company was not in shape to rebuild the dam, and the farmers' organization was not strong enough, as its funds had been exhausted in building ditches and in contracting with the Golden Drift Company for the works and dam site, which fell through when the disastrous flood came. The situation was serious, and could not be coped with immediately, and as a sequence of mishaps the entire plant stood open to capital that would take hold of it and bring about restoration. Too much money had already been spent in letting the valuable rights degenerate, yet the farmers' organization could not touch it, owing to financial conditions, and besides the ditches and franchises were

all they could manage safely. As a consequence the patrons that had been served had to go back to dry farming and berry raising in the season of 1910. It was a gloomy period, water had been the life of the community, and to step backward galled the community, besides it greatly lessened the income of hundreds of families that were dependent on the soil for a living.

A few of the stockholders in the old organization started anew to furnish valley residents with water. The minority stockholders were not long active until the case came into court

and the population will increase with an enduring satisfaction. The first season's growth of alfalfa and clover will pay a net return to the producer of twice what it cost to get the water for that year. Rogue River Valley ships to outside points 500 cars of apples, pears and peaches. In return the consumption by man and beast requires shipment of 847 cars of products into the valley. Is it any wonder the business communities are readily supporting irrigation projects? Common sense teaches them it's for their best interest and advancement.