

Editor Herald--Yakima lies in a region where rain cannot be depended upon to produce vegetation. Only through effectual and thorough irrigation can the latent properties of Yakima's soil be brought forth to produce the luxuriant vegetation. It is so situated that an abundant and never failing supply of water could be made to follow through every street. Surrounded as it is by large rivers, few places have its advantages for irrigation.

The soil only needs water and then one would be surprised at what can be grown. The slope of the land is good so that water can flow quite easily. In a dry country land without water is useless and worth nothing. The bring of water upon such land gives it at once a market value and makes it available to produce herbage.

Yakima is in a dry region, without water it will die. Every man who has property or is interested in property here and desires to see it increase in value should take an active interest in the subject of irrigation. We need to have more ditches and the water must be taken from the larger streams, as in case of a very dry season the smaller streams are very liable to fail.

We have enough land here, which if properly irrigated and cultivated would produce all that is needed for home consumption and much for shipment and would prevent all fears of shortage. With plenty of water we can produce an abundance of good and cheap food instead of having to depend upon others at a distance to produce it for us.

~~We~~ we want this town to grow? Do we want to see it become a large and prosperous city in a few years? Then let us increase the number of our ditches and bring all the water possible on the land. I have spent thirty years in an irrigated country; have surveyed and taken contracts for making many ditches and thoroughly understand the subject of irrigation and therefore know what a country with such soil and opportunities for irrigation as this can become.



See what parts of Colorado, through irrigation have been made. Look at Salt Lake valley. At first nothing but a sage brush desert, it now produces nearly all the heart could desire. The Bear river canal in Utah soon to be built will at the least estimate place a value on land of twenty millions, and we have just as good opportunity for making large canals here.

If we cannot at present make them of the size we should like, we can make them smaller and enlarge them as needed. This is a new country and very few of the people understand the subject of irrigation. There is need of some man who understands the subject to oversee the making of canals as very many costly mistakes are made by the unskilled.

Through properly constructed canals all the Wenatchee country and all the district above Moxee could be reclaimed. A canal could be made to irrigate the Wide Hollow district. I have spent considerable time in thoroughly examining this country and as I have gone around have kept my eyes open to see where canals could be made and how the most country could be watered at the least expense.

The late fires at Seattle and Ellensburg warn us to think of water for use in case of fire. We have one of the finest opportunities for water-works of any place I have ever seen. Let us be ready to drown any fire that may occur with a flood of water.

I have been asked by prominent men of this city how water is controlled and trouble saved to the mass of people needing the same and I will say in reply:

We have in Utah a statute to govern irrigation districts. I would recommend the same here, if this territory has no statute to govern such. Organize into irrigation districts and elect a number of trustees and other necessary officers. They have the power to appoint the water-master to control the flow and to see that all get their proper share. That saves trouble and strife -John Bond. Herald July 11, 1889.



## Irrigation

J.D. McIntyre, the chief engineer of the most extensive system of irrigation canals in the northwest, arrived in the city on Monday last and at once placed two full corps of engineers in the field to run lines. The company which will prosecute the work was organized in August and consists of a number of members of the board of directors of the Northern Pacific railroad, Chas. A. Gregory, William J. Bryson and G.A. Young of Chicago and Walter N. Granger, J.D. McIntyre and Albert Kleinschmidt of Helena.

They have entered into a contract and purchased over a million acres of N.P.R.R. land in Washington and Montana and have placed several parties of engineers in the field to lay out the lines of the canals ready for construction. The plans were originated by Chief Engineer J.D. McIntyre, irrigation engineer of Montana, who is also chief engineer of the present company.

The most active field of operation at present will be Yakima in Washington territory and between the West Gallatin and Madison rivers in Montana. In each of these localities the company has bought all the railroad land for a radius of many miles and will build at once a hundred miles of canals in each place.

It is understood that the water and land both will be thrown open to purchase by settlers at low prices as soon as the canals are built.

In the Yakima country it is proposed to irrigate all of the lands from the Yakima river at North Yakima to the Columbia and Engineer McIntyre says that employment will be given to hundreds of men and teams. In addition to the work on the east and north sides of the Yakima it is proposed to build a canal from the headwaters of the Natchez to cover the vast stretch of bench lands to the west of North Yakima.

The proprietors of this great enterprise thoroughly understand the situation and needs of this country and Engineer McIntyre and



assistants have been here three times within the past year and during the latter part of July a number of the directors and heaviest stock holders were here and personally viewed the field.

The lines of canals will be staked out at as early a date as possible and the work of construction will be commenced this fall and prosecuted with vigor until the winter interferes.

As an indication of the magnitude of the scheme, it is only necessary to say that the company has purchased all of the railroad company's lands between North Yakima and the Columbia river.

The benefits which will accrue to North Yakima and the Yakima county are estimated to be greater than would be gained by the building of a railroad, as several hundred thousand acres of land will be opened for cultivation and be directly tributary.

During the progress of construction in this country North Yakima will be made the headquarters and supply point. The officers of the NP railroad company have for a long time been endeavoring to secure a company with capital sufficient to undertake this huge enterprise. As on its completion they expect to realize a large increase of traffic and the immediate settlement of a large domain which without these canals would be impossible of settlement owing to their arid character.

It is estimated that one of the results of these canals will be more than double the population of Yakima county within the next year and give to North Yakima the undisputed title of the metropolis of Central Washington--Yakima Herald, September 2, 1889.

Selah:

Irrigation:

William J. Meade, vice president of the Mason Mortgage Loan company has returned from North Yakima where he has been for the past few weeks on business. While in Yakima he spent three days in the Natchez and Selah valleys inspecting the Selah valley ditch and lands owned by the ditch company.

The Selah Valley Ditch company, of which John A. Stone is president, began the construction of an irrigation ditch, says Mr. Meade, in the spring of 1890 for the purpose of watering and bringing under cultivation the arid lands of the Natchez and Selah valleys.

The ditch which is now completed is supplied with water taken from the Natchez river, appropriating therefrom 800 cubic inches of water per second, sufficient to irrigate 50,000 acres of land.

The main ditch is 25 miles in length and sufficient capacity to convey all the water appropriated, if required, but as there is not only about 25,000 acres under the ditch upon which water can be conveyed, you can easily see that the 6000 fortunate owners of the tract of this land will never want for water, and it will become more apparent when you take into consideration the fact that at no point above the source of Mr. Stone's ditch can water be taken from the Natchez river, owing to the natural surface of the ground.

In answer to the question as to the nature of the soil and its productive qualities under water, Mr. Meade says the soil is volcanic ash, from 25 to 100 feet in depth, easily cultivated and entirely free from stone or gravel except along the river bed.

In its natural state the ground is covered with sage brush which is easily cleared from the land and so far as value is concerned,



the land is not worth even the government price, without irrigation. But when watered it is worth from \$30 to \$100 per acre. Mr. Stone intends to subdivide his land into 40-acre tracts and has now at work a force of engineers accomplishing this work, which done he will dispose of the same, having already numerous applications.

The purchaser obtains , in addition to the title of his land, a perpetual right of using sufficient water for irrigation purposes from the ditch.

Along the Natchez river and extending back from one to five miles to the banks of the Selah Valley Ditch company are beautiful farms of 40 to 160 acres; all under cultivation , most of them for the last 12 years and with no apparent loss of soil; in fact one of the farmers asserted that his land produced better crops each succeeding year of cultivation without fertilizing.

I believe that the Natchez and Selah valleys will in the very near future become as famous as the Puyallup, White and Skookumchuck river valleys are, in point of productiveness.

There are no special crops raised but everything outside of tropical fruits, from peanuts to hops, is grown in abundance.

Among the thrifty farmers in the Natchez valley is Mr. Hugh Sinclair, who has 160 acres under cultivation from which he dug this season potatoes yielding at the rate of 1,000 bushels per acre. He also has a large orchard of apples, pear, peach and plum trees so heavily laden with fruit that it is almost impossible to walk among the trees. From one of these trees I picked apples, a second crop of the Early June variety, nearly ripe and blossoms from the same tree, preparatory for a third crop.



Moxee

Artesian Wells

It is generally understood throughout the Northwest there is more material development now in process in Yakima county than in any other section.

The development is mainly in the construction of vast irrigating canals, the sinking of artesian wells and improvement of lands.

It was left to the enterprise of H.B. Scudder, A.K. Hiscock, H.L. Steinweg and Fred R. Reed to invest their money and make a practical test and meet with success in the artesian wells. These gentlemen banded together under the names of the Yakima Land Co. and the Artesian Well Co. and through purchase from the Northern Pacific Railroad Co. and desert filings have secured over twelve thousand acres of sage-brush land on the Moxee plateau, ordered powerful drilling machinery in the east and upon its arrival set vigorously to work perforating the hard earth with eight inch drills.

On Sunday last The Herald representative paid a visit to the scene in order to more fully inform the readers of this paper as to details.

Leaving North Yakima and crossing the Moxee bridge we pass the Scudder dairy ranch with its cluster of imposing buildings, where the fresh milk of sixty Holstein cows is in fact turned into one end of the result of man's ingenuity and comes out at the other in golden bricks of butter.

Then the Moxee company's settlement is reached, with its handsome residence, its store, hop houses and other buildings, its big ditch, yards of hops, orchard, fields of grain, grasses and tobacco.



This was as far as civilization had progressed until the land and well company stretched out the subuing hand of progress.

From this on the road extends through a beautiful valley, several miles in width and with the exception of an almost imperceptible slope, nearly as level as well kept lawn.

Three miles this side of the wells the clearing of sage brush begins and is marked on one side of the valley by the residence of J H. Bradford, Jr. Mr. Bradford is recently from Boston and has purchased 8- acres of land , beautifully located, from the Yakima Land company and is devoting his time and attention to improvements.

His residence, now under construction and nearly completed, would be a model in older and settled communities. It is a two-story seven room structure with bath room and closets, brick foundation and cellar extending under the entire building. The inside is of hard finish and the outside covered with shingles. Dormer windows project from the roof and a wide veranda is being build.

The house is located on a low projection of the foothill and commands a splendid view of the entire valley. Mr. Bradford will this year plant a yard of forty acres of hops and thirty thousand cedar poles for this purpose have been ordered from the west side.

A further ride of three miles brings the sightseer to Reedville, thirteen miles from North Yakima, the present camp of well borers. , where two splendid flowing wells send out sparkling waters forming a stream that is now percolating through the valley and moistening the fertile lands that are soon to be as productive as any in the state.

Reedville is 200 feet higher than North Yakima and 1260 feet above sea level.

Here Supt. Henderson who has charge of boring operations lived



## *Irrigation - General*

### Irrigation

There was a fair number of those interested in the subject of irrigation that gathered in the Yakima club rooms March 10 in response to a call issued by W.H. Peterson of Ellensburg.

There were delegations from various counties in the arid belt and representatives of the big irrigation companies now operating in central Washington.

The discussions were animated and interesting. At the morning session the following committees were appointed:

On state legislation, A. Mires, John Cleman, J.B. Reavis, James H. Chase and W.A. Stevens.

On National legislation: R.B. Milroy, W.N. Granger, Ed Whitson, H.D. Winchester and James Boyles.

On constitution and bylaws: J.C. MacCrimmon, J.B. Puglley and R. Strobach.

In the evening the committees reported and the Washington State Irrigation association was duly organized with W.H. Peterson president and R. Strobach secretary, to hold annual meetings on the first Monday in October.

The association resolved in favor of the opening of the Yakima Indian reservation to settlement and asked the aid of Washington's delegation in congress to this end.

The committee on national legislation presented the following resolutions which were adopted:

Resolved that federal aid should be given to develop and reclaim the arid lands of the United States.

Resolved that the most beneficial method for immediate aid in reclamation and development would be for the federal government to grant all arid lands to the states within which they are situated and that we favor such action by the general government and



will use all honorable means to obtain the same--Yakima Herald,  
March 10, 1892.



## Irrigation:

(The great canal of the Northern Pacific, Yakima & Kittitas Irrigation district christened in champagne and formerly opened Saturday, March 26, 1892. California is the pioneer state in irrigation. There this

great factor to prosperity was brought through Moxee from Spain along with the holy cross, by the Mission fathers, in the latter half of the last century.

But for irrigation her fame would be confined to the products of the mines and the fruits and wines from which so much of her prosperity exists, would not be known.

The same undesirable condition has prevailed throughout much of Eastern Washington, only to a greater extent, for we had not even the producing and supporting mines to fall back on.

As late as the sixties all of that portion of Washington east of the Cascades was known under the generic name of the Walla Walla and Yakima countries and was considered of little value except as a cattle range; in fact it has only been within the last few years that Yakima has been considered in the least from an agricultural and horticultural standpoint.

It is true that small patches of land along the streams were utilized for the growing of hay and vegetables, but if anyone had maintained that the higher lands and plains would someday be brought under successful cultivation and that hops, alfalfa, fruit and vegetables were destined to crowd the cattle from the ranges, he would be considered a visionary and a fit subject for public charge; but such has come to be the case, and the former sterile plains are now looked upon as the equal for productiveness of the historic gardens @ watered by the Po and the Nile. This condition has been brought about through the science of practical application of water to arid soil and the investment of capital.



As California is to the other states, so Yakima is to the Northwest, the pioneer of irrigation.

Here the first ditches were constructed for bringing the vivifying waters on the parched earth.

The lines were run by persons who had little knowledge of surveying behind the fact that water under the great laws of nature is bound to run down hill.

As a consequence but small areas were watered by these simple contrivances.

Today all of this has changed. The enterprise and skill of man has reclaimed and is reclaiming the millions of acres of land within the confines of Yakima county and made it possible to build up in the center the thriving city of North Yakima on which is now directed the eyes and admiring attention of tens of thousands of people who are looking for fairer skies.

It is not one irrigation enterprise that we are depending upon for the purpose of making these broad valleys and great plateaus fulfill the prophecy of Isaiah and blossom as the rose, but a number in which aggregated capital has environed the city with great water courses and with their laterals spread out like veins from the main arteries, the trickling fluid permeates every arable section.

The interest in irrigation has received a fresh stimulus through the completion and formal opening of the first 25 mile section of the great canal of the Northern Pacific, Yakima & Kittitas Irrigation company which occurred on Saturday last.

The announcement of the date of the ceremony was very brief but sufficient to attract a large throng of people, who early in the morning could be seen wending their way down the river road by every

means of convenience possible to secure.

Paul Schulze , president of the company, arrived in his special car at 8 o'clock by train from Tacoma, accompanied by a number of distinguished guests, including T.B. Wallace, president of Fidelity bank; Theodore Hosmer, president of the Tacoma Light and Water company; I.W. Anderson, president of the Tacoma Land company; President Strong of Eastman Kodak company and Architect Pickles who were desirous of witnessing the ceremonies and inspecting the great work.

The intake of the canal, where the dams and headgates are located is seven miles from North Yakima and within sight of the Two Buttes, the historic Indian battle grounds.

There a platform had been built and at 10 o'clock Hon R.K. Nichols, as master of ceremonies, called the assembled people to order. His introductory remarks related mainly to the extent of the work and the results of which would accrue therefrom.

To show the importance of the canal he made some calculating, taking as a basis the 75,000 acres to be watered by this means and the maximum amount of land which would be cultivated to the crops for which this land is especially adapted at 40 acres to the farm.

From these figures he found that there would be 1,875 farms supporting something like 20,000 producers and non-producers and adding fifteen millions of dollars to the taxable wealth of Yakima county. Mr. Nichols words were interpolated with the applause of his audience and he closed with the tribute to those who were carrying on this great work and with introducing the next speaker , Hon Edward Whitson.--Yakima Herald March 21, 1892.



## Irrigation

### Canal Dedication. Sunnyside

Address of Hon H.H. Reavis

Nearly nine years ago Senator John B. Allen, Judges John P. Hoyt and R.O. Dunbar, now of the supreme court, Hon. Edward Whitson and myself, each applied to Uncle Sam for 640 acres of desert land in the Sunnyside.

Shortly afterwards came my first interview with the new president of the Northern Pacific Yakima & Kittitas Irrigation district.

I was supremely enthusiastic in my description of the possibilities and endeavored to spread out the prospective of the grand future of this fruitful valley when watered. We had then some surveys and estimates of the expense of the reclamation of our claims. All this I mentioned. I was encouraged in my estimates of the cost of irrigation which met a merry twinkle of the eye. We did not succeed.

Uncle Sam perhaps not trusting the sincerity of our intentions, got weary of waiting for our reclamation and canceled our entries.

We all with one exception applied to the people of the state for different lines of business; but owing to some slight misunderstanding and differences of opinion among the people, the other gentlemen were engaged and your speaker was relegated to his efforts in desert land reclamation. I have seen that same twinkle in the eye of the president of the canal company today, but it is one of deserved triumph. --Yakima Herald, March 31, 1892.

Irrigation

Canal dedication

At the close of Judge Reavis' address, which like that of the preceding speaker was frequently interrupted by applause, Hon. Gardner G. Hubbard of Washington, D.C. was called to the platform. His remarks were of brief character. He praised Paul Schulze through whose efforts the building of the canal ~~was~~ was made possible.

Mrs. Schulze spoke of the confidence that Mr. Villard and Mr. Oakes and other directors of the Northern Pacific had in the producing wealth and the assured wealth and prosperity of Yakima. He spoke of Mr. William A. Her and Mr. Gardner G. Hubbard as the pioneer irrigators of the Yakima country.

With the close of the remarks the master of ceremonies announced there would be music from the band and that Miss Dora Allen had consented to break a bottle of champagne over the headgates, which would be the signal for turning the waters of the Yakima into the canal. At this the people moved closer to the banks of the river, and with the lines, "Flow on thy liquid saviour of our land, and blessings on you,"

Miss Allen baptized the great work in a spray of champagne and as the great headgates rolled up and the huge volume of water entered the thirsty canal, the band struck up an appropriate air, the spectators showed their joy in lusty cheers and the anvils gave notice to settlers far and near that the battle was won and the beautiful Sunnyside country conquered and ready to submit to the bidhest of the husbandman.

.....Companies were formed and efforts made to build a conduit to carry the waters of the Yakima upon the lands; but the surveys demonstrated the impracticability of the scheme for organizations controlling only limited capital.



Finally the Kennewock Ditch company was organized by the settlers of Konnewock or Piety Flat. Their plans were not of extensive character and as they were poor men, they were their own contractors and builders.

Among the projectors of this ditch were I.N. Lord, Joseph Bartholet, Sr. C.V. Fowler, Matt Bartholet and Robert Dunn. They endured great hardships, but it was their salvation and they persevered under the most trying circumstances.

Captain Dunn relates how they worked on the ditch in the dead of winter with no covering for his hands, through being too poor to buy glove and subsisting almost entirely on potatoes and salt.

This is a sample of what these pioneers endured and some of them had to ride miles to and from work. But when they obtained water they felt well repaid for the lands yielded most bountifully.

A still better time was coming for a powerful corporation was being organized that realized the rich returns to be made on the investment by irrigating the Sunnyside country and for this purpose the rights of the Konnewock company must be secured. Terms satisfactory and advantageous to the owners of the ditch stock were agreed upon and the transfer of the property was made to the Northern Pacific, Yakima & Kittitas Irrigation company.

This company had spent a year of time and over \$40,000 in surveys and knew exactly the nature of the undertaking.

The first surveys under J.D. McIntyre had proven unsatisfactory but with the engagement of C.R. Rockwood, as chief engineer and William Hammond Hall, state irrigation engineer of California as consulting engineer, the work has progressed rapidly and on scientific principles.

...In Yakima county two main lines of canals were projected, known



as the upper and lower.

It is the first section of the lower one that has just been completed. This canal begins at a point two miles below Union Gap where a great dam, 360 feet long extends across the river and seven feet above the natural water mark.

The dam has a concrete foundation two feet in depth laid on the rock forming the bed of the river and a massive wooden superstructure is fastened to this concrete foundation by huge steel hinges.

The superstructure will be raised only during the irrigating season and is so arranged that salmon and other fish will not be hindered in reaching the spawning ground.

Here on the north bank of the river are the headgates or intake which is also a work of engineering skill.

The dimensions of the canal are 30 feet wide on the bottom, 62 feet wide on top and will carry 36,000 cubic feet of water a minute, sufficient to float a good sized ship. When completed it will be 65 miles long.

Engineer Rockwood estimates that the lands reclaimed, with a population no greater than on similarly favored lands in California, will support 50,000 people. Some of the work is extremely heavy as can be seen by the cut taken from a photographic view presented on the title page of the Herald. Here, in a distance of 600 feet, over 25,000 cubic yards of earth were removed.

The intake of the upper line or main canal will be at the wagon road bridge across the Natchez River and near the present head of the Hubbard ditch. The lands to be covered are the upper lands of the Sunnyside, 75,000 acres; the irrigable lands on the Columbia slope of the Rattlesnake mountains, 70,000 acres; the irrigable lands of the Yakima reservation and those on the



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west side of the Yakima river in the vicinity of Prosser, altogether about 330,550 acres.

The canal from the Natchees to Union Gap, a distance of 14 miles, will be an immense affair, carrying five times as much water as the lower canal or 165,000 cubic feet a minute.

At Union Gap the waters will be separated, one branch being carried across the river by pipe line at an elevation of 200 feet, thence along the upper Sunnyside and finally through a gap in the Rattle snake to the Columbia slope, a distance of 115 miles.

The second branch will follow around the hills at Union Gap and out upon the reservation lands and thence along the base of the hills to below Prosser, a distance of 70 miles.

To appreciate the extent of the project which the company intends to carry out it must be understood that a great volume of water will be required and in order to secure this and provide against any shortage in seasons that are especially dry, it was deemed necessary to provide vast storage reservoirs in the mountains so as to hoard up the water at that season when not needed for irrigation purposes and when it would otherwise go to waste and turn it into the natural channels when most required.

With this in view the company appropriated and improved by means of dykes and dams Lake Cle-Elum, Kitchenas and Katcheez at the headwaters of the Yakima and Bumping or Tanum lake at the head of the Natcheez. Among the illustrations is that at Lake Katcheez. That the extent of the work done can be partially comprehended it is only necessary to say that what appears to be a dam of modest proportions is really 20 feet in height while that at Bumping lake is 40 feet and that if the waters from the storage reservoirs

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were turned loose they would flood the country pretty generally.

The laterals , which are also to be built, will have an aggregate length of between 600 and 700 miles. The company owns all of the odd numbered sections along the line of the canal, having acquired them through purchase from the Northern Pacific Railroad company and it is only through these holdings that so great an enterprise was made possible as the system outlined is the most extensive in the United States, if not in the world--Yakima Herald, March 31, 1892.