THE UPBUILDING OF A COMMONWEALTH
ON WHAT WAS ONCE ARID DESERT: RE-
SULT OF THE GOVERNMENTAL IRRIGATION
PROJECT: BY C. H. FORBES-LINDSAY

FIFTY years ago, a few small scattering bands of Pah-
Ute Indians were the only human habitants of the
cloudless desert valleys of Nevada. Its grim mountain
peaks, its bold plateaux and towering buttes, looked
down in their repellant nakedness upon barren de-
pressions of sandy waste, mottled with patches of
black sage and rabbit brush. This is the driest portion
of the Great American Desert, but time was when deep lakes filled
some of its great valleys. The waters of this region have no outlet.
They either run into some natural reservoir and rapidly evaporate or
scatter and sink below the surface of the earth. During ages, clouds
bursting upon the rugged heads of the hills have sent silt-laden streams
rushing down the steep slopes to the bottom lands, there to deposit
their burden of potential fertility and disappear as through a sieve.
Thus there has lain for centuries upon the face of the land a thick
covering of rich alluvial soil, needing only the regulating touch of
man to give forth of the fruits of the earth abundantly.

The discovery of gold in California led our people through this
thirsty and inhospitable country and the desert exacted heavy toll
of man and beast. In that mad rush to the new El Dorado, thousands
gave up their lives by the wayside along that dread stretch between
the fair fields of Utah and the snow-capped Sierra Nevada. And
where they lay down to die in the agonies of thirst was water, pure
and sweet, within easy reach, for almost everywhere in the valleys
it may be found at less than twenty feet below the surface. And
the region that the gold seekers spurned in their painful passage
through it, hid beneath its forbidding exterior wealth incalculable,—
vast deposits of precious metals in the bowels of the earth and mar-
velous latent fecundity in the soil.

The quickening and transforming of this scene of desolation is
one of the romances of our history. It is proceeding with a promise
that encourages us to look for a flourishing and populous state within
the life of the present generation. No better illustration of the re-
sourcefulness and enterprise of our people can be found than
that afforded by the birth and upgrowth of this young common-
wealth.
THE fortuitous discovery of the Comstock lode, nearly half a century ago, marked the first step in the transmutation of the desert, although it was long before Nevada awoke to the task of self-improvement. Her vast treasure,—the Comstock yielded three hundred and forty million dollars of bullion in thirty years,—was carried beyond her boundaries as fast as it could be extracted from the ground. Men came for gold but could not conceive of homes in what was described as "a hell of a place,—no water, no feed, no women." During the last forty years of the past century the fortunes of Nevada waxed and waned. Her population rose to seventy thousand and fell to little more than half that number. Mining towns "boomed" and dwindled or relapsed into the desert. The rich territory lacked a stable foundation. The only real residents were a few miners scattered here and there who, disappointed in the quest for gold, had exchanged the pick for the hoe and settling near some spring or stream had mated, maybe, with the daughter of the redskin and turned to tilling the land.

In nineteen hundred the Tonopah field was opened and since then fresh finds have been of frequent occurrence. Permanent towns were established and at enormous expense of labor and money equipped with the conveniences and comforts of modern cities. Bullfrog has a population of ten thousand, an ample water system, luxurious hotels, fine residences, electric light, telephone, and the rest. Goldfield has almost reached an equal advance, while Searchlight and other centers are fast approaching it. Railroads have run into the region from several directions and the population of the state has more than doubled in the past two years.

But Nevada has made no sound economic progress, despite her blatant prosperity. Her wealth still pours eastward in a golden flood. Everything that her people use is brought from outside. For food, clothing, lumber, labor,—for everything, in short, but money—Nevada is dependent upon the outside world. But recently she was awakened with astonishment to the knowledge that her area embraces land as fertile as any in America and capable of the utmost productiveness, that she possesses water power in abundance and that almost all the needs of her people can be supplied from produce or manufacture within her own boundaries. It is in the realization of this possibility that Nevada's permanent prosperity lies, as well as her prospect of becoming one of the richest states in the Union.

The first settlers were, for the most part, stranded miners who took to tillage with more or less reluctance. They found in it, if not
wealth, at least an easy and comfortable livelihood. The responsive desert blossomed under their hands as by a miracle and, when the surveyors of the newly-created Reclamation Service came upon the ground, they found the great waste expanse of Nevada splashed with spots of richest green, affording ready evidence of the wonderful productiveness of the soil.

Forty-mile desert, occupying the bed of ancient Lake Lahontan and, with the exception of Death Valley, the most desolate and arid area on this continent, was selected for the site of the first and most important of the great government irrigation projects. The plan involves the establishment of half a score of reservoirs in the upper foothills of the Sierra to store the floods that sweep down the mountain sides, and also the building of dams in the valleys to hold in check millions of tons of water, to turn rivers back upon themselves until huge artificial lakes are formed, or to divert them into more useful channels. Thus the entire Truckee River is led through an enormous duct, thirty miles in length, to the sink which is the terminal of the Carson; thence the combined waters will be carried out upon the plain in two canals from which hundreds of miles of laterals and ditches will radiate over an area of four hundred thousand acres.

But this will not exhaust the water resources of the “driest state in the Union.” As its population expands and the demand for farmland increases, the underflow of streams will be utilized to add to the irrigable area. Hydrographers who are thoroughly familiar with the conditions believe that a water supply can be developed sufficient for the irrigation of fully one million six hundred thousand acres.

The present project will cost nine million dollars, but the land reclaimed by it will be worth at least thirty million dollars. It would be a splendid investment at that price, for when fully cultivated this area will yield annually a crop worth considerably more than the cost of the project. Nor is this an unusual result of irrigation. The two principal canals in the Punjab, India, cost about eleven million dollars and the yearly crop from the land watered by them is valued at fifteen million dollars. But Uncle Sam’s thirty-million-dollar farm is not for sale. It is to be parcelled out in forty and eighty-acre tracts which are open to all citizens of the United States who have not exhausted their homestead right.

The first unit, covering fifty thousand acres, was opened in June, nineteen hundred and five, three years after the commencement of the work. Three hundred families are now cultivating the land irrigated by it and the surrounding desert is dotted
A STRETCH OF IRRIGABLE LANDS THAT HAS BEEN FILED ON AND HOMESTEADED.

MAIN STREET, FALLON, NEV. A TOWN CREATED BY IRRIGATION.
FARM LANDS SURROUNDING WADSWORTH, UNDER IRRIGATION.

A SHADEd ROAD IN THE IRRIGATED DISTRICT.
HEAD OF THE MAIN TRUCKEE CANAL ON THE TRUCKEE RIVER.

RAISING AND LOWERING GATES OF THE DIVERSION DAM OF THE TRUCKEE CANAL.
SHOWING COMPLETED PORTION OF CEMENT LINED CANAL BASIN.

TUNNEL ON MAIN CANAL OF THE TRUCKEE-CARSON PROJECT.
with the dwellings of prospective settlers, awaiting the opportunity to make entry. Railroads have thrown spurs into this region of promise and along their lines hamlets are constantly springing into existence, while the earlier settlements are assuming the character of prosperous towns. Fallon, in the center of the district covered by the project, contained sixteen souls three years ago. It has now more than one thousand inhabitants, an excellent school system, churches, stores, newspapers, a bank, three hotels, telegraph and telephone connections, and most of the utilities enjoyed by large urban centers. This, be it understood, is not a mining town but distinctly an agricultural settlement, around which others of similar character are growing up.

The works are now completed for the irrigation of two hundred thousand acres and the land is open for occupation. For the first time in the history of the country, the government is actually restricting the opportunity for securing public land to bona fide homeseekers. The provisions of the Reclamation Act effectually exclude the speculator. The entry-man must come to stay. He may not commute his entry, as under the Homestead Act, after living for a few months on the land. He must dig his irrigation ditches and cultivate the soil, paying the annual water assessment of two dollars and sixty cents per acre for ten years before title to the holding will pass to him. But that is all he need do to secure land which will be worth one hundred dollars an acre as soon as he clears it and three or four times as much when it passes to his children.

Contrary to the prevalent idea, the climate is healthful and not unpleasant, the extreme dryness of the air causing a great difference between the actual and the sensible temperature. The sun shines all the year round and, while the winter days are quite supportable without an overcoat, a blanket is necessary to comfort in the summer nights.

The landscape of the Carson Sink Valley is becoming rapidly transformed. Where water has already been applied to the earth, fields of full crops appear and orchards of fine fruit. Trees line the watercourses and convert the roads into shaded avenues. The Forest Service is lending its aid by setting out thousands of shade and timber trees. Stone is plentiful and may be had free from the government quarries, so that, with the increase of transportation facilities, it will be the chief building material. The Truckee River falls two thousand three hundred feet in a course of one hundred miles and it will
be utilized to furnish power to this section and to transmit it to more distant points. Before the Truckee-Carson project is completed we may look to see an electric railway traversing the valley and carrying the farmers’ produce to the neighboring railroad depots.

Every plant that is indigenous to the northern temperate zone flourishes here. The settlers have had remarkable success in growing alfalfa, grain, potatoes, vegetables and small fruits. Three crops of alfalfa, yielding from five to seven tons per acre, are cut in the year, after which stock is pastured in the fields for two or three months. The ordinary yield of grains to the acre is: wheat, thirty-five bushels, barley, fifty bushels, and oats, seventy-five. Experiments with beets and hops promise exceptionally good returns from their cultivation. Stock raising, in which pursuit some of the earlier settlers have become wealthy, is a sure source of profit.

Close at hand the farmers have an eager and inexhaustible market. Everything that can be produced in Carson Sink Valley for some years to come may be sold at good figures in the mining towns. Up to the present the home supply has been insignificant. One packing house in Reno kills a thousand hogs each month and is forced to import eighty per cent. of them. Poultry comes in by carloads and passes through from the eastern states to California. Chickens sell for fifty cents apiece and the usual price of eggs is forty cents a dozen. The price of hay is eighty dollars a ton in bulk and of grain five dollars per sack of seventy-five pounds. Fruits, vegetables and dairy produce fetch similarly high figures.

Business opportunities will arise as a natural sequence of the agricultural development. The cultivation of four hundred thousand acres of land en masse, with a family upon every eighty-acre tract, will necessitate the establishment of a number of new towns with stores and factories. There is already talk of a creamery, a flour mill, condensed milk factory, packing house, ice plant and brick yards. As the settlement progresses it will doubtless support sugar and starch factories, breweries and distilleries, canneries, woolen mills, power plants and machine shops.

The settlers in the Carson Sink Valley are mostly native-born Americans drawn from every state in the Union. The valley is their home and the heritage of their children. Pride and self-interest prompt them to effort in its upbuilding. Here, then, shall Nevada find the leaven which will permeate her population with the spirit of local patriotism and the desire for permanent improvement.