Fifteen hundred farmers form the nucleus of a small army of WPA workers in western central Minnesota who are throwing up bulwarks of concrete and masonry across streams and lake outlets as an offensive measure against drouth which burned up their crops this year.

Never has an army attacked the enemy with more determination than have these farmers in their fight to conserve precious water. Their numbers are growing daily as record-breaking temperatures and hot summer winds make new inroads into a usually fertile territory.

The Works Progress Administration, together with the State Department of Conservation and local units of government, are cooperating in the long-range program designed to prevent in the future recurrences of the present devastation.

The extensive plans of the State Conservation Department are not new. But lacking funds, the department was helpless to make any real headway with its program until Federal work-relief funds make possible the employment of the thousands of men with teams and shovels. State appropriations, for the most part, are limited to the purchase of affected lands.

The "Minnesota Plan" is not to confine its conservation activities to any one part of the state or to a few major operations but to sprinkle the "Land of 10,000 Lakes" with scores of small, sturdy, concrete and stone masonry dams that give promise of defying the elements for many years to come.

Plans have been drafted for more than 250 control structures ranging in size from the $2,500,000 Lac qui Parle flood control project, in the heart of the present drouth territory, to small dams at the outlets of lakes which can be built for as little as $1,000. WPA crews are now working on 50 of the small--Type "C"--dams.

All of this is in sharp contrast to the picture of state less than a generation ago when, far from conserving top soil moisture, hundreds of thousands of
dollars were actually spent in draining whole sections of the lake country in northern Minnesota. A law passed by the state legislature actually obligated counties to dig drainage ditches at the request of only a handful of petitioning land owners. Incidentally, the law came near to bankrupting certain counties.

Farmers who only four years ago looked askance at the program which would move up lake levels from one to three feet, submerging a few acres of their land under water, today are enthusiastic over the prospects of dams proposed for their immediate neighborhoods. Typical of the attitude is a letter to the state conservation department in which a farmer who owned a "corner" on a lake that had proved profitable in years gone by, but a definite loss in recent times, stated, "We were dubious then, but you couldn't buy it (the dam) back now for $5,000." The dam cost about $1,000.

The conservation department has the engineers which put the projects into shape in cooperation with the federal agencies which besides WPA include the civilian conservation corps, the emergency relief administration, the soil conservation service, the forest conservation groups, the national park service, and the U. S. army engineers. The majority of jobs are small ones, for the construction of dams controlling the lake levels, in most cases raising them one to three feet, in every case restoring them to normal. However, in the western part of the state, in the Red River valley in the north and the Minnesota River valley in the south, three major undertakings are underway.

Near completion, the diversion channel connecting the Whetstone river and Big Stone lake is the realization of a 50-year-old dream of western Minnesota and eastern South Dakota residents. The $500,000 project means that the old threat of floods each spring is permanently averted. Originating in the South Dakota hills near the northeastern border of that state, the Whetstone river in its natural course, empties into the Minnesota river just across the state border near Ortonville. It has a rapid fall of over 1,000 feet and during wet seasons quickly assumes flood proportions. Water overflows its banks and much damage is done to adjoining property. When rains cease the river subsides just as quickly, leaving its bed dry with little benefit to local vegetation. A diversion channel, varying along its course from 300 feet at the widest to 180 feet at the most narrow point, backed by an earthen dike, is the key to the project. The channel cuts into the natural bed of the Whetstone river about two and one-half miles
southwest of Ortonville in South Dakota and follows a northerly course to join Big Stone lake near the source of the Minnesota river. A second dike, which spans the foot of Big Stone lake, crosses the diversion channel at right angles and forms the base for the concrete control works for waters in and out of the lake.

The project will provide water conservation and flood control, improve the scenic aspects of a considerable area of bottom lands, previously inaccessible for any orderly improvement; and provide a new, safer, shorter, more interesting route for a portion of a federal highway across the foot of a beautiful 35-mile lake.

It is these projects in western Minnesota which, in addition to the long-time benefits to agriculture are currently serving "human needs" of hundreds of drought-hit farmers. From the nine counties of Douglas, Grant, Traverse, Big Stone, Pope, Stevens, Swift, Wilkin and Yellow Medicine, hundreds of them have given up work in sun-baked fields and gone to work with their teams on the conservation work which will go far in insuring their farms against future damage by drought.

Among the most important of these projects is the Lac qui Parle undertaking where dams and diversion channels will impound the water of Big Stone lake for release in carefully estimated quantities. Then there are the Red Lake, Roseau, Boise de Sioux and Bronson projects among the major jobs.

Bronson's and Hallock's problems, two of the larger communities of Kittson county in the extreme northwest corner of the state, furnish another type of problem. Here a $180,000 dam is under construction to provide the community with a pure water supply. The work also includes a second smaller dam on Two Rivers river where the waters will be backed up to create a lake four miles long. Situated on a salt bed, Hallock has been without a central supply of drinking water since its wells were condemned by the state board of health. Serious skin infections from bathing in the water and at least two cases of typhoid fever are directly attributable to the impurities of water, resulting in the plea of Hallock and Bronson residents for a project to correct the situation. Wells drilled to a depth of 1,200 feet failed to bring relief when it was found that salt was produced at that depth. In addition to relief of the towns' problem of drinking water, the dams also are an important phase of the water conservation program of the Red River valley of the north.
The whole program is costing the federal government more than $4,000,000
and the state is contributing $750,000 chiefly for purchase of lands affected
by the larger operations.

Construction on the scale now assured had been dreamed of for years by E.
V. Willard, state conservation chief, who recently stated, "with the work which
WPA has done and expects to do in the coming year, we will have a great demon­
stration of the practical worth of our broad, long-time program of water conserv­
vation. Without the aid of the federal government such a vast undertaking would
scarcely have been possible for many years to come and then, perhaps, it would
be too late to keep the lakes which are fast becoming one of the state's greatest
assets and its best insurance against drought as it is known today in the Great
Plains states to the west of us."