

UNITED STATES DEPARTMENT OF AGRICULTURE  
BIOLOGICAL SURVEY

PRELIMINARY REPORT

ON

LAKE BOWDOIN

NEAR

MALTA, MONTANA

BY

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## Physical Features of the Area

Lake Bowdoin has a meander line containing 274 $\frac{1}{4}$  Acres and to the east of it, indicated on the map as "Dry Lake Bed" is an area of 850 Acres that is really an arm of the Lake when the Lake is full. Before the Milk River Reclamation Project and the railroad were built, drainage from the surrounding country reached the Lake down several large coulees, the largest of which is known as Black Coulee, entering the lake at its southwest corner.

In extremely high water years, water that overflowed the banks of Beaver Creek reached the Lake by way of the indicated "dry lake bed."

With the construction of the Reclamation Project, the canal indicated on the map around the north edge of the Lake, interrupted this drainage and carried it into the Nelson Reservoir, located to the northeast of the Lake. Since the indicated canal also carries water from the Milk River to the Nelson Reservoir, there are times when the canal capacity is not sufficiently large to hold the additional local drainage that reaches it. When this occurs, the surplus water passes through spillways on the canal and reaches the Lake as it did before the canal was built.

In the normal operation of an irrigation system, there are times when water has to be "wasted." Such occasions arise when the canals are being cleaned, when rains reduce the demands of the irrigators, or when breaks occur in the system. When such occasions arise on this system, the water is wasted into Bowdoin Lake.

The overflow water from Beaver Creek that originally went into the Lake has been interrupted by the building of the Railroad grade, hence the amount of water entering the Lake from this source has also been greatly reduced.

### Land Ownership

When the Reclamation Service was investigating the Milk River Project, Lake Bowdoin was considered as a possible storage site and the surrounding area was withdrawn from the public domain for this purpose.

The area within the solid line on the map is the present extent of this segregation, with the exception of the hatched areas within it. The single hatching being State owned land and the cross hatching being privately owned.

The contour lines are taken from the original contour map prepared by the Reclamation Service and carried over to this map merely for the purpose of giving an idea of the topography of the surrounding country.

Attention is called to the ditch connecting the southeast corner of Lake Bowdoin and the "dry lake bed" and the ditch and dike to the northeast of the town of Bowdoin.

These structures are the reservoirs of a private irrigation scheme that proposed to hold water in the Lake by the indicated dike, and withdraw it for irrigation down the ditch to the northeast.

This project was built, but flooded so much land and Railway grades that a lawsuit resulted and the project was abandoned. After its abandonment, the dike was cut and the "dry lake bed" drained by the farmers who had been flooded out. Now the local sportsmen have had an F.E.R.A. project plug the hole in the dike in order to reflood the area marked "dry lake bed" for a water fowl area, which is protected by a State Game Refuge(dotted line on map).

### Increasing Present Water Supply to Lake

There are two possible ways of obtaining additional water for the restoration of this area.

#### 1. From Beaver Creek

The construction of a dam across Beaver Creek and a canal connecting this dam with the old canal as indicated on the map.

While the old canal was built to divert water from the lake, the fall is so slight that water can be run down it back into the lake.

The construction costs of the dam and canal are estimated at \$17,000, but the available water supply from this source is questionable.

Being in an irrigated country, all the waters of Beaver Creek are appropriated by the ranchers, up and down the creek, for the purpose of irrigating meadows. This means that if any water is taken from this source, some arrangements must be made with the ranchers.

This arrangement can range from an agreement with them to divert the high water which comes periodically to the purchase of all or part of the rights on the creek. The only objection to this is that water rights cost money, as the next paragraph will indicate.

#### 2. Water From Reclamation Service

According to the local project manager under the present supply more water is needed for irrigation than is available and, hence,

## Increasing Present Water Supply to Lake (Con'd.)

### 2. Water From Reclamation Service (Con'd.)

none could be bought for any price.

They are at present working on an additional water supply by the building of what is known as the "Chain of Lakes." The estimated cost of this water is \$15.00 per acre foot and subject to a yearly maintainence charge of about \$1.50 per acre foot. The maintainence charge could probably be cut out on the basis that water would be taken when not needed by the irrigators, and because of the fact that the cash purchase of a large block of water would assure the building of the new unit.

With present data, I estimate it would take at least 3000 acre feet of additional water annually to keep up the Lake and the Marsh area. Hence, the cost from this source for water would be at least \$45,000 for a supply that may not even materialize. In short, the prospects for additional water supply is far from good.

### Suggested Procedure

While the prospects for additional water supply for this area are poor and expensive, it does not follow that nothing can be done to improve the area.

I am certain that, even under present conditions of water supply, sufficient water will always reach the Lake to keep it alive.

## Suggested Procedure (Con'd.)

In the south one-half of the Lakes are numerous tule islands and around the shore is Marsh area, the ditch leading from the Lake to the northeast and the area into which said ditch empties are full of marsh and tule growth even though dry this year. That is, the roots are still there, the tops are eaten to the ground by cattle and horses that are grazed on this area by virtue of grazing leases from the Reclamation Service.

While the State Game Preserve is posted against shooting, it is not posted against cattle and they roam through this area, eating anything that shows above the ground, just the same as on the other areas.

The grazing leases are issued for five-year periods, but carry a three-month cancellation clause.

On the map you will note location of "Present Gun Club", the only one on the Lake and the only buildings of any kind on the area with the exception of a shack, in the southwest corner of the State-owned Sec. 36, lived in by a tenant farmer.

The local sentiment is very strongly against complete closing of the area to shooting and to meet this objection, I have outlined by a dot-and-dash line, a suggested boundary. This boundary includes all of the area that has any merit for nesting and feeding grounds. The boundary across the Lake is more or less arbitrary, being selected as the north line of Sections 33, 34, and 35 for convenience. This line divides a water area to the north of 1114 Acres and to the south of 1630 Acres, and leaves some open ground in Sec. 26 for pass shooting. In the final location of this line, it should be borne in mind that the best nesting and feeding area is south of the designated boundary on the map, and not north of it.

## Suggested Procedure (Con'd.)

As to including Sec. 36, the State-owned land, in the boundaries, I believe it should be obtained, if possible, for the following reasons: The east  $\frac{1}{2}$  of the section includes the first part of the area to be flooded by overflow from the Lake through the ditch. And, if the west  $\frac{1}{2}$  is left open, it fails to protect the southeast arm of the Lake from the east.

In order to answer the question, if asked, "To where can the Gun Club move?", I have indicated a tentative site on the map in the southwest corner of Sec. 23. In this locality are several draws, behind hills, that will give some seclusion from the highway and is near to the well next the Service Station in Sec. 22 for a source of culinary water. - *Self Will*

To Summarize *Done*

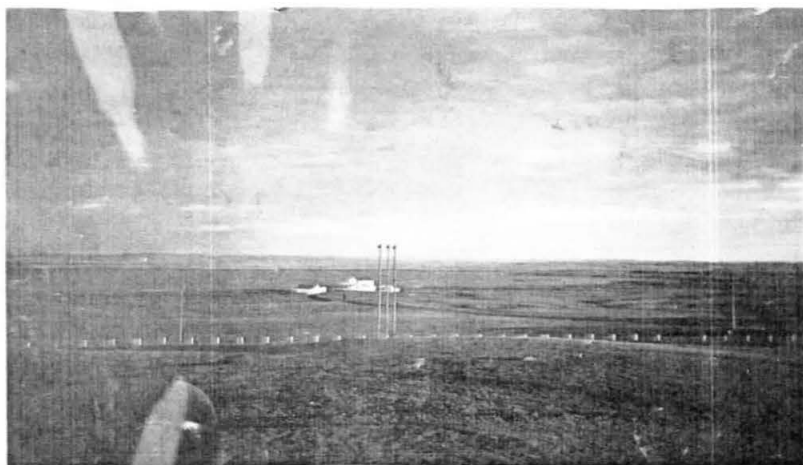
The Lake Bowdoin area can be greatly improved, regardless of present water supply, by closing area suggested to grazing and shooting. All of the area, with the exception of Sec. 36, which is State-owned, being controlled by the Reclamation Service, confines the acquisition problem to dealings with but two parties.

## Pictures

- # 1 Taken from a point on canal bank at bend in canal east of Club house, shows Gun Club buildings and general view of Lake toward the northeast.
- # 2 A close-up of the Lake shore, showing tule islands, taken from a point south and west of the Club house and looking east.
- # 3 Looking southwest from hilltop near center of Sec. 33. In foreground, dike and in background, town of Bowdoin.

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