

MONTHLY REPORT

Arrowwood Migratory Waterfowl Refuge

November 30, 1937

all 17/17/37

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Burn
Earl W. Craven
Refuge Manager

GENERAL DISCUSSION

Our local weather prophets have been warning us of a long, hard, winter ahead and the weather during November seems to bear out their predictions, if early cold spells mean anything. Temperatures ranged from 17° below zero to 52° above zero through the month and from the 16th to the 21st of the month, each day carried at least one sub-zero reading.

A sad bit of misfortune this month was the final disappearance of Arrowwood Lake. According to reports from old time, local residents, this is the second time in fifty one years that this has occurred. From these reports the lake was evidently dry in 1886, 1904 and again at the present time.

However, looking on the bright side, the moisture in the soil from the fall rains has caused the ground to freeze more solidly than it has for the past few years and this will allow a much better run-off next spring. At present it appears quite possible that we will have more water in the lake next year than we had this year. There is no question that the soil is in better condition for a spring run-off than at any time in the past two years.

Lands within the Refuge that have been used mostly, or entirely for grazing have shown marked improvement in vegetative revival this past summer, but those areas which have been plowed for agricultural purposes have shown practically no return to a natural vegetative growth. If this year's growing season is indicative of a natural recovery, it will be several years before these plowed lands regain their former, reported, luxuriant growth. A stunted crop of Russian Thistle was the general contribution of these plowed areas this year.

Due to the uncertainties of transportation, local work and lack of funds for trucks, fifteen WPA workers were withdrawn from the project during the month. This has necessarily slowed up some of the work, but as we have our better trained and more skilled workers, their loss is not too serious, especially since the WPA funds set up for this project are earmarked and it will only mean that our smaller crew will work over a longer period. Our present WPA force totals twenty eight men.

The hunting season in this vicinity fizzled out without a sputter. Few birds, strong conservation sentiment, poor hunting weather (as a rule) and other factors, all combined to make it a very poor season from the hunters standpoint. A few disgruntled sportsmen remarked about the raising of birds in the north so that the southern hunters could get all the shooting, but as a whole the gunners of this section accepted the situation quite calmly and are looking forward to a return of filled water holes and sloughs and the migration coming through, rather than around us. As a rule we find our people sportsmen, rather than sports.

One of the finest sights of the year, in the writer's opinion, was the observation of seventy five Sharptail Grouse in one flock. These birds were flushed from the edge of a Refuge corn field in the Jim Lake unit. Previous to this, the largest single flock of upland game observed was thirty odd, Hungarian Partridge.

After the opening of the hunting season the upland game population showed some increase. At least they were observed more often than earlier in the year, but closing of the season sees them once more on the decline, inasmuch as coveys of the different species are not seen as often, or in many of the locations where they were formerly observed. Presumably they have once again moved out, or are staying very close to cover and not flushing unless directly approached.

Pheasants are quite scarce on the Refuge from all observations and reports and the writer has personally observed only two Pheasant hens all through the fall.

Our new group of CCC enrollees impress us as a fine, smart, upstanding body of men. They are showing a fine spirit on the different jobs assigned them and while we feel the lack of a sufficiently large staff of supervisory personnel, the spirit of the men themselves helps to offset this to some extent.

A new Junior Engineer from a Forest Service camp was assigned to us late in the month, but an addition of at least two Squad Foremen could be used to advantage on the project. 1?

Our big development jobs are fast reaching a point where we can consider them as well within the possibility of completion at a not too distant date. Probably the two largest pieces of unfinished work are the graveling of the trails and the building of the Recreational area, unless it is found desirable to construct more islands in the large water areas of Arrowwood and Jim lakes. However, there are many small jobs where loose ends need gathering up and this is being done as fast as possible as we go along, in order to avoid too much "tinker" work when the large development work is finished.

The remaining, approximately one and one half miles of trail construction is being held up by the slow acquisition of the Arthur P. Guenther Tract # 5. As soon as this piece has been acquired the trail line can be completed, but unless it comes under title within a very short time it is doubtful that we can complete it this winter because of the frozen ground.

Much riprap work on the fills of the trail line has been finished this month. At present we are working on the fills farthest from camp and saving those closer in for times when the weather will prevent the crews from going too far afield.

However, the riprap on the fill across Pelican Point coulee is being rushed through now in order that it be complete in all details without fail, as a heavy spring run-off might ruin two weeks of hard work and cause the expenditure of many dollars in replacing it.

Island and Channel work in the DePuy Marsh and at the upper end of Jim Lake will be completed within a few days, weather permitting. The whole outfit is holding its breath and keeping their fingers crossed to avoid doing anything that might prevent our completing the work before winter forces us off the job.

The weather favored our WPA carpenter crew in the pouring of the concrete foundation for the Headquarters bunkhouse. They managed to complete this part of the work before the temperature dropped too low for cement work. The construction of the rock chimney will be a bit more difficult, but since they have the rough siding and roof on the building they will be able to protect the job to some extent.

Approximately three miles of the trail, north from the CCC camp, was gravelled during the month. This was a short haul job and was undertaken at this time because of the small number of dump trucks available for this work. As soon as a sufficient number of the dumps were available the crews started the gravelling of the rock and gravel island in Jim lake and will finish the water line gravelling of all the Jim Lake islands before moving out.

We hope to finish all gravel work in the DePuy Marsh, on the island tips and along the Pingree roadway, this fall, as well as the Jim Lake work. The Mud Lake islands are being held over for mid-winter work as it is quite probable we will be able to get in there regardless of the weather.

A camp crew has spent some little time constructing and placing portable snow fences at strategic points on the Refuge and along the roads leading to Kensal and Edmunds. Points where drifts filled in the road last year were spotted then and are protected by lines of snow fence this year, which should save us much time and wear and tear on equipment at such times as it is necessary to get into town.

A crew from camp excavated lines for the sewer and water lines to the Headquarters bunkhouse and all piping and tile work has been completed except for the installation of one valve in the water line which was not received with the other materials for this work. The company has been notified and we are expecting the missing piece any day, at which time the job will be finished. Some rather severe weather hampered the work on the manhole as it was hard to keep the cement from freezing, but did not delay the job too greatly.

Since we were unable to salvage enough useable material of the right kind from the Bower buildings, we found it necessary to raze the Wid Hyland, Tract # 61, buildings. These old and dilapidated structures were located on the site of the proposed Recreational Area and we had been reserving them for winter work. However, the need for some of the material in the construction of the bunkhouse caused this work to be set ahead and the razing was accomplished early in the month.

In addition to the above salvage work, approximately six miles of old fence was removed on the Travellers Insurance Tract # 66 and the Federal Land Bank Tract # 4b. Most of this material has no pecuniary value, but can be used very profitably by our crews engaged in the construction of upland game shelters. Both posts and wire have been stock piled in the field where they are easily accessible for shelter work.

Two more of the log and corn shock, lean-to shelters were constructed this month, in locations not easily accessible when snow is on the ground. They are of the same general construction as those built last month, except for a five foot ceiling at the head of the shelter. ✓ gwc

Ten tepee type shelters, built with cornstalks over a triangular post framework, were also constructed this month, in an area of poor feeding grounds and so located as to serve a large area of potential upland game bird concentration. To date, a few Pheasants and two Prairie Chicken have been observed in them. ✓ gwc

Our vegetative type mapping survey was again undertaken under the direction of Mr. John Steenis, this month. Mr. Steenis spent a few days with us, explaining and supervising the work, before turning the project over to our Junior Assistant to Technician. Three and one half sections have been covered up to this time and the work will continue as long as the weather permits. Every care is shown to have this valuable work as accurate as is possible.

Another small, coulee, check dam was constructed and will serve a double purpose in its location. Besides creating another small water area of approximately one half acre and saving such water as has been running into a gravel sink pot farther down the stream, it protects our trail line that crosses the old stream bed. The contour of the ground would not permit the trail fill serving as a dam and consequently it was necessary to make this small fill, using the excavation from which the dirt was taken as a spillway and diversion ditch.

Nearly one hundred and fifty, tiny, rock, erosion, check dams, or spills, were constructed along the trail where water flowing down the steep slopes of the coulees might seriously damage the road. These checks will prevent the water from cutting ditches until such time as the vegetation will have taken root and formed a protecting cover. Small rock, the size of a double hand and smaller, excavated from the trail line, or screened from gravel used in cement work, are used for the job.

Our population of Migratory Waterfowl was at a very low point at the time when Arrowwood Lake went dry early in the month. There were approximately fifteen hundred birds working in and out of the mud holes in the lake bed, but the freezeup that helped finish the lake drove them all out. The small population in at the finish, were practically all Mallards, which species have been highly predominant all fall. One small flock of Mallards were observed on the 24th, flying north, over the lake bed and this has been our last observation of ducks since the lake "folded up".

TRAIL CONSTRUCTION

Nearly two miles of truck trail have been completed this month, to join up with the trail started this past spring at the Bredahl dam and just to keep the job interesting, the king of all rock outcrops was encountered and overcome, in the last long mile.

The hill just south of the dam required a great deal of cutting and shaping to bring it into trim, but was finally shaped up and it is now possible to travel all the way around the Refuge on the trail road, except for the earlier mentioned mile in the Mud Lake unit.

In connection with the trail construction, but in addition to it, we have five small coulee dams formed by the trail fills and impounding from one to three acres of water with an average depth of approximately four feet.

TRAIL FILL RIPRAP

Around fifteen hundred square yards of Class A riprap have been placed on the trail fills that also serve as dams. The two most important riprap jobs are on the Pelican Point coulee and a Jim Lake coulee across from the Secondary Headquarters and it is on these two jobs that most of the riprapping has been done to date.

A CCC crew is at present engaged in laying a spillway across the Jim Lake coulee fill, using rock of approximately two cubic feet and fitting them to form a cobblestone paving in the bed of the spillway. This spill is approximately two feet deep with ten to one slopes.

The Pelican Point coulee spillway will be more of a regulation spillway pattern, but will also have a cobblestone paving where it crosses the trail.

Due to reports of the large amount of water carried by the above mentioned coulees it was decided that regular spillways would be more satisfactory than the pipe overflow type which have been used in locations where there was no possibility of flood conditions.

BUNKHOUSE CONSTRUCTION

The concrete foundation for the building has been poured, the rough flooring and sidewalls are in and the roofing completed over all the building except the shower room.

The crew is now ready to nail the finished siding in place and will start work on the rock chimney immediately we are able to get some heat in the place.

Barring unforeseen developments, practically all outside work will be completed on the building before the end of the next WPA time period.

ISLAND & CHANNEL CONSTRUCTION

A cut of approximately forty yards and the subsequent blading of the spoil bank, approximately one hundred yards long, will finish the DePuy Marsh Development, at least for this year. Frozen ground has seriously reduced our rate of progress in the marsh this month but all details of blading, trimming high spots and other such work are practically completed.

We are ready for the water and are very hopeful of a fine increase of nesting waterfowl as the results of our efforts in this marsh.

A cut of approximately three quarter miles has been made at the head of Jim lake, above the Riden channel plug. This cut, across the top of a 'V' made by the bend of the river channel creates an island of around twenty acres. *✓ see*

An old channel of the river was excavated down to an elevation of approximately 1427 feet and cut into the present channel. The deepest cut was around five and one half feet and it graded down from this to a three foot cut at the deepest point in the old river bed.

Work yet to be done on this cut consists of blading the in slopes to a flat slope, trimming off some high spots and blading down the spoil banks. The depth the frost has penetrated into the ground will determine the date of completion to a great extent, but we hope to have it finished in the very near future.

ISLAND & TRAIL GRAVEL PROJECT

2156 cubic yards of gravel has been hauled and dumped on trails and islands during the month. Of this amount 784 cubic yards has been spread over the islands in Jim Lake. These islands are graveled to a depth of from six to ten inches and except for the one rock and gravel island which is entirely covered with this material, will be covered from the lake bed to approximately six feet back from the waters edge.

On the rock and gravel island, the rocks are placed on a gravel bed in as natural positions as possible, with many crevices, nooks and crannies in the piles and gravel shovelled around and in between them.

The snow on the islands hinders progress to some extent, but the crew is making good headway nevertheless.

WATER & SEWER LINE EXCAVATION

Nearly two hundred and fifty feet of ditch was excavated on this project and six inch tile laid for the sewer line. Salvaged bricks were used in the construction of the nine foot manhole.

All piping for the one and one quarter inch water line has been laid and the whole job will be completed immediately the street valve has been received and installed. Most of the back fill of the sewer line has been done and the rest can be completed in a short time.

SNOW FENCE CONSTRUCTION

Some 1200 feet of portable snow fence has been constructed by the enrollees and this fence is now in place along the road between Headquarters and the camp and along the township road out to Highways # 281 and # 9. *True*

These fences are constructed of lath, splintered boards, or other such material, laced together with salvaged barb wire. Salvaged steel posts from old fence lines are used as brace posts and these in turn are braced with the salvaged barb wire fastened to ground stakes.

RAZING OF UNDESIRABLE STRUCTURES

The Hyland buildings consisting of a house, barn, hoghouse, shed and pavilion were razed and such of the material as was needed was hauled to the Headquarter site for use in the construction of the bunkhouse. The balance was stock piled in the camp lumber yard.

The maple flooring of the pavilion will be used for flooring the bunkhouse, but due to long, hard, wear will require a great deal of work to put it in shape.

These buildings were in poor shape in the main and consequently their salvage value is low.

FENCE REMOVAL

Approximately forty eight hundred rods of barb wire and eighty rods of woven wire was salvaged from old fence lines. In addition to this we stock piled some nine hundred old wooden posts, most of which were rotted and broken. However, their value for shelter construction in an area short of timber, increases their worth in our eyes.

DAM CONSTRUCTION

Around three hundred cubic yards of dirt was moved in constructing a coulee dam in Section 36, just south of the dyke across the road from the Headquarters entrance.

The five yard wagon scraper was used for this work and completed the job of the fill in less than two days. A few more days were spent on ditch and diversion work in connection with this job as it was necessary to protect the trail by a ditch which would carry water down in front of the dyke. The ditch as constructed has a very flat fall and flat slopes where the water will flow along the trail.

MAMMAL OBSERVATIONS

Three coyotes were sighted on the Refuge, one of which may just possibly be crossed with a dog. We have not been able to get a clear enough, or any extended view of this animal, but hope to take it before long.

A few weasels and skunks were observed and of course the rabbits, but not in very large numbers.

*Mammals
Cared - Burn*

EROSION DAMS

The type of dam constructed this month, contains approximately one half cubic yard of small rock in each and as many of them are placed in the ditches of the steep slopes as the fall of the slopes dictate. They are constructed much in the manner of terraces and the velocity of water flowing down the ditches will be greatly reduced as it flows out on the flat aprons from one dam to another.

One man can construct from twenty to twenty five of these dams in a day and their protection of the trail slopes will make them well worth the time spent in their construction.

FIRE LINE ROCK REMOVAL

Five and one half miles of the fire line constructed this fall was cleared of rocks of the sizes that could be handled by man power. These rocks were neatly piled at spaced intervals along the fire line and many of them will eventually be used for riprap and other rock work.

At the same time and in connection with this work, a two man crew cleared thistles from the fence line to avoid breakage from drifting snow.

FENCING OPERATIONS



Salvaging old fence and saving the new by
removing thistle from the fence line.



ISLAND CONSTRUCTION



Graveling the rock and gravel island in
Jim Lake.

EROSION CONTROL



Preventing Erosion along the trail while
the vegetation takes root.

BUNKHOUSE CONSTRUCTION



Shingling the roof of the building for which
the sewer line has been excavated.



TRAIL CONSTRUCTION



Digging out the rock and graveling in the
Arrowwood Lake unit.



TRAIL FILL DAM CONSTRUCTION



Riprapping two fills on the west side of
Arrowwood Lake. The fill in the lower view
has a pipe overflow spillway.



TRAIL FILL DAM CONSTRUCTION



Riprapped fill across the lake from the Secondary Headquarters with a close-up view of the paving of the spillway.

