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BUREAU OF LAND MANAGEMENT

WASH. D. C.

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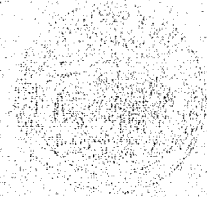
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WASH. D. C.

OFFICE OF THE SECRETARY OF THE INTERIOR

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1961



WASH. D. C.

THE SECRETARY OF THE INTERIOR

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# ANNUAL REPORT OF THE GOVERNOR OF ALASKA

## INTRODUCTION

Economic conditions in Alaska are dependent on the major industries, mining, and fishing. An analysis of the reports for the year ended June 30, 1931, reveals a decline in the total value of the products that were derived from these sources as compared with that of last year. The production of gold increased approximately \$1,500,000, but all other mineral products declined and the total value of the mineral output is some \$3,000,000 below that of the previous year. The quantity of fisheries products compares favorably with the production of other years but the value of these products is much below normal. The decline in the value of these commodities is reflected in the trade statistics. The balance of trade in favor of Alaska for the period ended June 30, 1931, is \$30,980,670, and this is about \$6,000,000 less than for the last fiscal year.

Early in the year prices quoted in the markets for fish and copper caused the producers of these commodities to curtail their output and as a result fewer people were employed in these industries. Many independent fishermen and a number of miners were deprived of their usual work, consequently there are more than the average number of unemployed in nearly every locality.

The report of the Territorial treasurer shows a balance of \$694,894.93 on June 30, 1931. The combined resources of the Territorial and national banks on the same date were: Capital, \$915,000; surplus and net undivided profits, \$826,800; deposits, \$11,275,000, as compared with—capital, \$915,000; surplus and net undivided profits, \$935,300; deposits, \$12,252,300 for the previous year. The total assessed valuation of incorporated towns for 1931 was \$26,745,956, as compared with \$25,512,663 for 1930.

The report from the collector of customs shows that the value of the imports and exports declined \$12,171,081. The decrease in value of exports is accounted for in the lower values of copper, salmon, silver, and fur. The total value of exports is \$56,818,375 and of the imports \$25,837,703, as compared with \$68,999,456 and \$32,084,734, respectively, for last year.

According to statistics prepared by the United States Geological Survey, Alaska, since 1880, has produced minerals, chiefly gold and copper, valued at \$629,313,000. The peak in the production was reached in 1916 when it was reported to be \$48,386,508. Since that time there has been a gradual decline reaching a low point last year when the value of all minerals amounted to \$13,812,000. The significant feature, however, is the increase in the gold production. Early reports from the mining districts are reassuring and indicate that there will be material increase in the gold output for next year.

The total gold output from all sources is estimated to be \$8,476,000 as compared to \$7,761,000 in 1929, and of this amount \$4,837,000, or 57 per cent, was derived from placers.

From the lode mines, \$3,639,000 in gold was derived and of this sum approximately 93 per cent came from the mines in southeastern Alaska. The Alaska Juneau mine, situated near Juneau, is the largest lode gold mine in the Territory. The development of a method for successfully mining and milling the low-grade gold ore on this property is one of the remarkable achievements in modern mining. The company is prospecting adjacent claims and if the results are satisfactory additional milling facilities will be installed. Among other important mines in this district are the Chichagof and Hirst-Chichagof. Renewed activities in the former have resulted in most encouraging developments.

In the Willow Creek district, near Anchorage, an extensive development program is under way. A large force of men have been continuously employed in preparing the mines for active production. The Fairbanks district is unusually active and four mines are on a producing basis. Several properties on the Kenai Peninsula have been operated intermittently. The principal activities were in the vicinity of Nuka Bay and Turnagain Arm. The Nixon Fork property in the Kuskokwim continued its operations of last year. Encouraging reports have been received from the Prince William Sound, Copper River, and Nabesna districts and from the Seward Peninsula.

The largest yield of placer gold came from the Yukon-Tanana region and the next largest from the camps on the Seward Peninsula. For several years the principal productions have been derived from large, well-equipped mines containing low-grade gravels and the individual operator is less of a factor each season. This is more clearly shown by the fact that 81 per cent of the gold recovered from placers in 1930 was mined by dredges. During the year 27 dredges mined approximately 9,906,000 cubic yards of gravel with an average yield of 39½ cents per yard. Fifteen of these dredges were in the Yukon region and 12 in the Seward Peninsula.

Copper minerals are widely distributed in many sections of the Territory, but mining of these ores has been confined to two districts—the Kennecott mines in the Copper River region and the Latouche properties in Prince William Sound. The sharp decline in the price of copper caused a curtailment in operations in both districts. The mines at Latouche were closed and the annual production of the Kennecott mines was materially reduced. The copper recovered from all sources is estimated to be 32,651,000 pounds, valued at \$4,244,600. In 1929 the production of 40,510,000 pounds was valued at \$7,130,000. Unless there is an improvement in market conditions and an increase in the price of copper we may anticipate a further reduction in the output of this metal during the coming year.

Silver is recovered as a by-product in the smelting of the copper ores and in lesser quantities from some of the gold-bearing rocks. None of the ores that are mined in Alaska are valuable solely for their silver content. In 1930, 408,570 ounces of silver, having a value of \$157,300, were recovered from all sources. In 1929 the output of 472,900 ounces was valued at \$252,000. The decline in the quantity is attributable to the reduced copper production.

During 1930, 2,730,000 pounds of lead were recovered from ores mined in the Territory. This is the largest quantity that has been produced in any year since mining began in Alaska. In southeastern Alaska, 2,640,771 pounds were taken from the gold ores in the Alaska Juneau mine. The concentrates obtained from the mechanical reduction of gold ores contain a high percentage of lead and they are shipped to smelters outside of the Territory.

Platinum and its associated minerals are not an important factor in the mineral output. Prior to 1926 one mine on Prince of Wales Island was a source of these metals but since that date all of the platinum has been recovered from placers. The Goodnews Bay district, near the mouth of the Kuskokwim River, and Dime Creek, on the Seward Peninsula, produced about 385 ounces of platinum—this is valued at \$16,900. For several years much interest has been directed to the Goodnews Bay region as a possible source of platinum and further developments may disclose deposits of greater commercial value.

Since the earliest days of placer mining in Alaska stream tin, or cassiterite, has been reported by placer miners in several districts. In some instances, notably in the placer districts of the Yukon region, the gravels contain an appreciable amount of stream tin and it is recovered as a by-product.

In the Port Clarence district the gravels contain sufficient cassiterite to warrant mining operations. Tin minerals have been found in veins and in the mineralized country rock of the York or Port Clarence district. Approximately 21 tons of cassiterite was recovered in 1930 and this is about 24 tons less than the output in 1929.

The mines in the Territory produced 120,100 tons of coal, valued at \$631,000. The output is about 20 per cent greater than that of last year, and with the exception of the 1928 production it is the largest since commercial coal mining began in Alaska. The mines in the Territory are capable of producing more coal than is necessary to meet local demands, but last year 61,000 tons were imported from Washington and British Columbia. Inadequate transportation facilities prevent the mine operators in Alaska from supplying the domestic markets. Practically all of the coal mined during the past year came from three mines, two in the Matanuska Valley and one in the Healy River field near Nenana. The Matanuska mines supply the railroad and local market along the railroad south of the Alaska range and the Healy River mines supply Fairbanks and the region along the railroad in the Tanana Valley. Coal-bearing rocks are widely distributed in the Territory and coal is mined in several localities. In southeastern Alaska, on Admiralty Island, efforts have been made to develop a mine and small shipments have been made to canneries in that vicinity during the past year. If further development discloses minable deposits, the local markets can support at least one mine. For many years the natives have taken coal from the deposits in the vicinity of Wainwright on the Arctic coast. These deposits are so situated that they will not be a factor in commercial production but will continue to supply local demands.

The existence of petroleum seepages in many places in Alaska has been known for more than 30 years. From time to time extensive prospecting and drilling has been carried on in the most promising

areas but, with the exception of the Katalla field, the results of the work have been discouraging. Wells have been drilled in the Cold Bay district on the Alaska Peninsula, Chitina Bay in Cook Inlet, Yakataga Beach, near Yakutat, and in the Katalla field. A few years ago many claims were staked on the Arctic coast east of Point Barrow, but it is not probable that this region will be drilled in the near future because of its isolation.

The only producing wells are in the Katalla field, where a few shallow wells produce limited quantities of paraffin base oils. Gasoline and other products are prepared in the local refinery and distributed to Cordova and other near-by communities. The total production is only a small percentage of the petroleum products that are consumed in the Territory. Under existing conditions it does not seem probable that there will be any activities in the oil fields in Alaska during the ensuing year.

Prospectors, in the course of their search for gold, have discovered many other minerals. In some instances a demand for a particular metal has stimulated the development of some of the better-known prospects, but up to the present time there has not been a sustained production of any of the less important ores except limestone and marble.

The presence of antimony, arsenic, bismuth, chromium, iron, manganese, mercury, molybdenum, nickel, tungsten, zinc, asbestos, barite, garnet, gypsum, jade, and sulphur is known in various districts but the extent of the deposits never has been determined. Limestone and marble are exported from southeastern Alaska. The Pacific Coast Cement Co. operates a plant for the quarrying of limestone on Dall Island and the Vermont Marble Co. has large quarries on Prince of Wales Island.

Mining is one of Alaska's basic industries and the gradual decline in the quantity and value of the mineral products has been viewed with apprehension. For the past four years the Territory, in cooperation with the Federal Government, has endeavored to stimulate an interest in the mining industry. The Federal Government, through the United States Geological Survey, has surveyed and mapped large areas believed to contain valuable mineral deposits. The Alaska Road Commission, War Department, and the Bureau of Public Roads, Department of Agriculture, have assisted in building trails and roads to the more promising districts.

One of the reasons that has been advanced by those who have sought for an explanation of the condition is the apparent disappearance of the old-time prospector. Inquiry disclosed that many of the prospectors were unable to finance themselves for a season's work and the Territorial legislature has undertaken to meet this situation by providing a fund from which transportation may be paid. Under the Territorial law, bona fide prospectors may be reimbursed, within specified limits, for transportation charges that are incurred on prospecting trips. The prospector in return for this assistance must report the results of his efforts. This plan has been in operation since 1927, and while it is impossible to estimate the ultimate worth of the results, there can be no question but that it has stimulated the search for mineral deposits and made available many promising prospects.

Present conditions are more favorable for mining low-grade ore deposits with a small gold content than for many years. The larger mining companies are spending considerable sums in the investigation of promising prospects. The outlook for an increased production is most encouraging and unless conditions change it is almost certain that many gold prospects that have been abandoned for years will be placed on a production basis in the near future.

The output of the fisheries of Alaska as a whole in 1930 compared favorably with the yearly average for the past 10 years, but there was an unlooked-for fluctuation in several districts. The value of the product was far below normal. A decline of 53 per cent in the output in the western district and 17 per cent in the central district was more than balanced by an increase of 82 per cent in the southeastern section. The failure of the run in Bristol Bay was anticipated from past records, but the small runs at Karluk and other places were wholly unforeseen and inexplicable. In view of the failure in Bristol Bay it is likely that the entire district will be closed to commercial fishing in 1935. The enormous increase, approximately 82 per cent, in southeastern Alaska is most significant because it indicates that the rigid regulations, which were promulgated and strictly enforced by the Bureau of Fisheries, have achieved the desired results in restocking the streams in this area with salmon. When the commissioner of fisheries announced the policy of providing for an adequate escapement in an endeavor to restore the salmon, much opposition was aroused and the failure of the plan was freely predicted. The results amply justify the seemingly harsh measures that were adopted and the most pessimistic of those who opposed the plan now admit its wisdom. Early returns for 1931 justify the prediction that the pack for this year will equal that of 1930, although many canneries are closed and those that are in operation have not made their usual efforts to catch fish.

The total value of the output of the Alaska fisheries in 1930, exclusive of aquatic furs, was \$37,679,049, as compared with \$50,795,819 for the previous year. These figures represent the value of the manufactured product. It is estimated that the value to the fishermen was approximately \$12,285,000, or about \$4,200,000 less than 1929. The round weight of the salmon catch landed by the fishermen was approximately 426,441,857 pounds, and the corresponding figures for herring were about 145,671,895 pounds. Similar figures for 1929 were 442,601,784 and 153,105,752, respectively.

In 1930, 27,568 persons were employed in the commercial fisheries of the Territory, as compared with 29,283 in 1929. Of the total in 1930, 15,451 were whites, 4,962 natives, 771 Chinese, 1,258 Japanese, 4,222 Filipinos, 733 Mexicans, 90 negroes, and 81 unclassified.

On the basis of the number of salmon caught there was an increase of 15 per cent over the take in 1929. This is accounted for entirely by the unexpected increase in the pack of pink salmon in southeastern Alaska. The total number of salmon from all sources was estimated to be 82,741,632 as compared with 71,939,618 in 1929. The take according to species was coho or silver, 3,918,443; chum or keta, 6,620,784; pink or humpback, 60,404,001; king or spring, 892,879; and red or sockeye 10,905,525. Practically the entire catch of salmon is taken by traps, seines, and gill nets. In 1930 the gear con-

sisted of 701 traps, 796 seines, aggregating 116,397 fathoms and 5,100 gill nets aggregating 274,615 fathoms.

The value of the output of canned salmon in 1930 represented about 94 per cent of the total value of all the products of the industry. In 149 canneries, 22,324 persons were employed to produce 5,032,376 cases valued at \$29,694,898 while in 1929, 156 canneries employed 24,271 persons to produce 5,370,159 cases valued at \$40,460,385.

Encouraged by the advance in prices for mild-cured salmon in 1929 the operators planned for an increased output in 1930 but unfavorable market conditions at the beginning of the season caused a curtailment in the output. Twenty mild-cure plants employed 1,150 persons to pack 5,559 tierces valued at \$868,722.

The preparation of salmon for market by methods other than canning, while only a small factor in the industry, is increasing each year. In 1930 more than one million pounds of fresh salmon were exported; 6,614,206 pounds were frozen; 1,593,600 pounds were dried; smaller quantities were dry-salted, kippered, smoked and prepared in other ways for the market.

In recent years efforts have been made to utilize the by-products from the salmon canneries. Plants designed to manufacture fertilizer and oil from the rejected fish and waste have been constructed at some of the larger canneries and in 1930, 2,283,882 pounds of fertilizer and 55,883 gallons of oil were recovered in these by-product plants.

Improved conditions in the herring industry were evident in nearly every section with the exception of the Cook Inlet district. Herring of size suitable for curing appeared in fair numbers in the principal fishing districts. The western district continued to lead in the output of scotch-cured herring. The quantity of herring products for the Territory, meal excepted, was much larger than in 1929, but the value of these products was approximately 30 per cent less. In 1930, 39 plants employed 1,413 persons to produce 8,081,245 pounds of scotch-cured herring, 3,545,422 gallons of oil, and 23,411,023 pounds of meal. For the previous year 30 plants employed 1,175 persons to produce 6,545,125 pounds of scotch-cured herring, 3,341,179 gallons of oil, and 25,499,254 pounds of meal. The total value of the products in 1930 was \$2,133,677 and in 1929, \$2,794,084.

Salmon trollers and halibut fishermen rely on the herring fisheries for bait and each year enormous quantities of herring are caught for this purpose. During 1930 9,298,140 pounds of herring were used as bait. This is an increase of 377,255 over the consumption for 1929.

The production from the halibut fisheries was affected by the condition of the market. A large part of the 1929 production was not sold and as a result the prices were so low that the fishermen could not hope to make a profit on their catch. In an effort to meet the situation the operators agreed to postpone the opening of the fishing season for a period of two weeks. This resulted in somewhat improved market conditions but the prices remained at a low point for the entire season. During the 1930 season, 1,176 persons were employed and the output was 31,557,084 pounds valued at \$2,991,400. In 1929, 1,253 persons were employed to produce 37,456,998 pounds valued at \$4,422,605.



The International Fisheries Commission functioning under the provisions of the convention of March 2, 1923, between the United States and Great Britain, for the preservation of the halibut fisheries of the North Pacific Ocean, continued investigations into the life history of the halibut. A convention between the United States and Canada, effective May 9, 1931, invested the commission with additional powers, and under the authority thus granted the season for halibut fishing has been shortened two weeks. The closing date is advanced from November 15 to November 1.

A decline of approximately 50 per cent in the production and in the number of persons employed in the cod fisheries reduced this industry to the lowest point reached in many years. Forty-one persons were engaged in the production of 322,237 pounds of fish valued at \$16,789 in 1930. During the previous year 61 persons prepared 713,838 pounds valued at \$39,756.

The whaling industry maintained an average production, but the value of the output was approximately 7 per cent less than in 1929. Two whaling stations were operated and a fleet of 7 steam vessels were used in the capture of 355 whales; 206 persons were employed in the manufacture of 816,700 gallons of whale oil valued at \$371,276; 121,150 gallons of sperm oil valued at \$45,431; 1,170 tons of fertilizer valued at \$51,400; 37,000 pounds pickled meat valued at \$1,850; and 5,600 pounds of whale bone valued at \$308. The total value of these products is \$470,265 as compared with \$502,081 in 1929.

In 1930 the clam-packing operations were the only phase of the fishing industry that showed an appreciable increase in quantity and in value of their output. During the season 8 canneries employed 283 persons to prepare 32,802 cases of clams and 100 dozen clams in the shell valued at \$241,890. This is an increase of 21 per cent in quantity and 19 per cent in value over the output in 1929. With the exception of an experimental plant in southeastern Alaska all of the operations were confined to Prince William Sound and Kukak Bay in the central district.

For several years the shrimp industry has been confined to southeastern Alaska and during 1930 two plants were in operation. There was a small increase in the total output; 113 persons were engaged in the preparation of 513,826 pounds of shrimp and the output is valued at \$210,503.

The output of cold-packed crab meat and crabs in the shell was less than that of the previous year. Two plants in Cordova and one in southeastern Alaska employed 37 persons and the total value of the products is estimated to be \$35,397. This is approximately 50 per cent less than in 1929.

The waters adjacent to the coast of Alaska yield a variety of edible fish and each year there is an increased production of trout, sable fish, smelt, flounders, lingcod, and rockfish. The value of the products is not an important factor in the export market but it is significant because it indicates the possibility of developing these industries.

Several years ago the depletion of the fisheries on the Yukon River became so serious that the natives in the interior could not obtain a sufficient supply to provide themselves with necessary food

for winter. To correct this and restore the run to normal, all commercial fishing in the Yukon and its tributaries was prohibited. Recent observations indicate that fish are again plentiful and there appears to be no reason why limited commercial fishing by bona fide residents should not be restored. This will have a twofold result. It will afford the natives and other residents who are almost destitute an opportunity to earn a living. Further, it will permit the utilization of the surplus fish. For a number of years the catch of fur in those districts has been far below normal and there is no other source of income for the people unless they are permitted to take salmon for commercial purposes. This question was carefully considered by the last Alaska Legislature, and they adopted a resolution favoring the plan. It is feasible to restrict the catch so that it will not interfere with the food supply in the interior and at the same time afford much needed relief to the lower river residents.

In 1910 the United States Government assumed control of the seal herds on the Pribilof Islands. Prior to that time the herds were exploited by private companies and were hunted by sealers from many nations. Intensive and destructive hunting had reduced the herd almost to the vanishing point. Under the provisions of the North Pacific Sealing Convention the United States was given exclusive control over the seal herd. When the control passed to the United States Government the herd numbered approximately 132,000 animals and in 1930, 20 years later, there are 1,045,101 seals of all classes on the islands. In addition to the breeding stock thousands of pelts have been taken each year and sold in the world markets. The rehabilitation of the seal herds is an outstanding achievement and demonstrates the results that may be derived under proper methods of control and utilization of the surplus.

In 1930, 42,500 skins were taken from the rookeries on St. Paul and St. George Islands. This is the largest take since the Government assumed control. The proceeds from the sale of these skins are divided between the United States, Great Britain, and Japan, according to the terms of the treaty.

During the year 41,516 skins were sold at public auction for a gross price of \$821,767.

In the season of 1930-31, 889 blue and 26 white foxes were taken on the Pribilof Islands. In the calendar year 1930, 745 blues and 32 whites that were taken in 1929 were sold for a gross price of \$27,717. Thus the total gross returns from the sale of furs taken on the islands are \$849,484.

The administration of the sealing industry is under the Secretary of Commerce. The actual work on the islands is performed by natives under a staff of white employees. Practically all of the natives are wards of the Government and are provided with food, clothing, shelter, medical aid, and educational facilities in return for their services. In addition, they receive cash payments at the rate of 75 cents for each seal skin and \$5 for each fox skin taken. Payments under this schedule amounted to approximately \$36,000 for seal skins in 1930 and fox skins in 1929-30. The native residents were assisted by 35 temporary workmen from the natives of the Aleutian Islands and the mainland.

Statistics compiled by the Bureau of Fisheries disclose that since 1918 more than  $5\frac{1}{2}$  millions of dollars have been deposited in the Treasury of the United States as net revenue derived from the sale of seal skins and fox skins. During this period approximately \$3,000,000 have been expended for administration and improvements. The improvements on the islands consist of concrete dwellings, hospitals, machine shops, warehouses, salt houses, schoolhouses, and roads.

The national forests in Alaska contain approximately 13 per cent of the national forest area of the United States and occupy a narrow strip along the southern coast from Ketchikan to Cook Inlet. The Chugach National Forest contains approximately 4,800,000 acres surrounding and adjacent to Prince William Sound. In that area it is estimated that there are 6,260,000,000 feet b. m. of timber. The Tongass National Forest contains 16,547,000 acres situated in southeastern Alaska and contains approximately 78,500,000,000 feet b. m. consisting principally of western hemlock and Sitka spruce.

The Forest Service of the Department of Agriculture estimates that the forests in Alaska can maintain an annual production of 1,000,000,000 board feet in perpetuity. The present yearly production varies between 40,000,000 and 50,000,000 feet b. m. or less than one-twentieth of the possible output. Small quantities are exported but the principal demand is from local markets for saw timber, piling, and ties. Those familiar with the quantity and quality of available timber have realized for many years that the output can not be increased materially unless the forest products can be utilized in some other manner. Fortunately more than 90 per cent of the timber is most suitable for the manufacture of paper. Years of research by Government engineers and careful investigations by interested parties culminated in the sale of two units of pulp timber aggregating 5,000,000,000 feet b. m. or 1,668,000 cords. This sale was accompanied by the granting of permits for development of hydroelectric power by the Federal Power Commission. Under normal conditions the development of the power and construction of paper manufacturing plants would probably have followed but at the present time the situation is not favorable. The future prosperity of Alaska, and more especially of the coastal regions, is dependent to a large degree on the utilization of the timber resources.

For years a determined effort has been made, by Government officers and private business, to arouse interest in these latent resources and to promote the development of them. Two years ago the negotiations were concluded satisfactorily and it seemed certain that there would be no further delays. Much of the available timber is overmatured and deteriorating. The water power is awaiting development and the domestic market in the United States can absorb the products. Every encouragement should be given to this industry, which will provide a large number of people with year-round employment and increase the permanent population of the Territory.

The value of the timber resources is greatly enhanced by the fact that within the area occupied by the forests there are undeveloped power sites capable of supplying approximately 500,000 horsepower. The capacity of the several sites range from a few hundred up to 32,000 horsepower and in some regions 50,000 to 75,000 horsepower

may be concentrated at one central point. The power is valuable for local industries only because it is not practicable at the present time to transmit it beyond the limits of the Territory. Capable engineers estimate the probable cost of development to be \$65 to \$125 per horsepower. Preliminary investigations have been made and information is available for each of the larger known power sites.

Receipts from the national forests during 1931 were \$51,789 as compared with \$110,320 in 1930. One-fourth of these revenues are paid to the Territorial treasury to be applied to schools and roads.

The long, deeply indented coast line and numerous inland waterways afford access to the natural resources of the southern coastal region. The large rivers with their many navigable tributaries provide access to the vast interior sections of the Territory, but they serve only as trunk systems and must be supplemented by roads and trails. Many of the mining districts and agricultural areas can not be brought into production unless they are made accessible.

The Territorial government cooperates with the Federal Government in the construction of roads and trails. The Alaska Road Commission, War Department, is responsible for the construction of roads and trails outside of the national forests and the Bureau of Public Roads, Department of Agriculture, is charged with similar work in the forest reserves.

The funds expended for road construction in the Territory are derived from direct appropriations by Congress, appropriations by the Territorial legislature, Alaska fund, sales of timber, and from money deposited by individuals, municipalities, or corporations as contributions to cooperative projects. The funds that are controlled by the Territory are allotted to various projects by the Territorial Board of Road Commissioners and expended under cooperative agreements by the Federal agencies. Under existing conditions this plan is advantageous to the Territory because it permits the expenditure of funds and construction of local projects without the necessity for a Territorial road-building organization. For the biennium 1929-1931 the Territory allotted approximately \$408,000 for roads, trails, aviation fields, shelter cabins, and communication systems. For the ensuing biennium, 1931-1933, the expenditures will be somewhat curtailed because of a decrease in Territorial revenues.

The Alaska Road Commission, created by an act of Congress approved January 7, 1905, and amended May 14, 1906, is composed of three officers of the United States Army, reporting to the War Department through the Chief of Engineers. The funds expended by this organization are derived from Federal appropriations and Territorial sources. It was the first organized road-building unit in the Territory, and since its inception has expended \$17,273,794.62. Of this amount \$11,885,558.61 was appropriated by acts of Congress, \$3,769,418.62 was allotted from the Alaska fund and \$1,618,817.39 was contributed from Territorial sources. The Alaska fund is derived from Territorial sources by the Federal Government. During the past year new construction was confined to a few major projects. The principal work for the year consisted in maintenance of the existing system of roads and trails and the improvement of some of the more important routes for the use of motor equipment.

In 1930 new construction consisted of 52 miles of road,  $4\frac{1}{2}$  miles of sled road, 138 miles of trail, 6 airplane landing fields, and 19 shelter cabins. During the same period  $55\frac{1}{4}$  miles of road was reconstructed and  $86\frac{1}{2}$  miles of road surfaced. Maintenance crews performed the necessary work on  $1,387\frac{1}{2}$  miles of road, 87 miles of tramway,  $789\frac{1}{2}$  miles of sled road,  $4,343\frac{3}{4}$  miles of permanent trail, 329 miles temporary flagged trail, 736 miles telephone lines, 30 airplane-landing fields, and 47 shelter cabins. Total expenditures during the fiscal year were \$1,288,273.46.

Repeated efforts have been made to obtain the approval of a definite development program, which will assure stipulated allotments for maintenance and improvement of the existing system and new construction to keep pace with the development of the Territory. Recently such a program was prepared and submitted for consideration. The total expenditures for a 10-year period aggregate \$16,547,000, of which \$2,300,000 will be provided from Territorial sources. The adoption of this plan will facilitate administration, encourage development, and reduce operation costs. Approval of the plan is urged.

April 21, 1921, the Chief of Engineers, United States Army, created a separated district embracing Alaska, with headquarters in Juneau, under supervision of the president of the Alaska Road Commission. The district engineer is responsible for all work pertaining to the improvement of rivers, harbors, and the construction and repair of lighthouses or other aids to navigation. During the past season major projects including the dredging of the harbor and construction of a breakwater at Ketchikan and Seward, and removal of rock barrier at Port Alexander were practically completed.

Recommendations for the improvement of Dry Pass have been submitted to Congress. Reports have been prepared on proposed improvements of Gastineau Channel and Sitka Harbor. Surveys are authorized to determine the feasibility of improving the Stikine River Channel, Wrangell Harbor, Petersburg Harbor, and the Salmon River at Hyder. Many of these projects are very necessary to promote efficient and safe exchange of commerce. In some instances, notably at Petersburg, the harbor conditions are such that the larger steamers are unable to approach the docks. This situation militates against the development of the community and should be corrected by adequate harbor improvements.

Appropriations designated for expenditure by the Bureau of Public Roads have been available for projects in the Territory annually since 1917, but prior to March 1, 1927, all of the administrative work was performed in the district office in Portland. On the above date, District No. 11 of the Bureau of Public Roads was organized and headquarters were established in Juneau. All Federal funds and Territorial allotments for roads within the national forests are expended by the district organization. The sum of \$5,945,184 has been made available from Federal appropriations. This has been augmented by allotments from Territorial sources in the sum of \$359,123, making a total of \$6,304,307 to June 30, 1931. A total of 230.174 miles of highway have been constructed and are maintained, 31.106 miles are under construction and will be completed this year.

The completed projects are a part of the program which embraces a definite system that has been approved jointly by the Bureau of Public Roads and the Territorial highway commissioners. The construction of the projects is amply justified by the development that has taken place along the routes served by the roads. In many localities all of the available land adjacent to the highways is occupied by homes, dairies, truck farms, fur farms, and other productive industries. Under conditions in the coastal region of Alaska, road construction must precede settlement and utilization of the suitable land. It is estimated that the value of the improvements that have been placed along the highways in the national forests since construction of the projects is approximately \$4,000,000.

Trails and minor road projects in national forests are financed and constructed by the Forest Service. Approximately \$28,000 is available annually for this purpose. At a cost of about \$408,000, 410 miles of trails have been built.

The Federal mine inspector is required to compile statistics in all matters affecting labor in the Territory. His report indicates that the situation was generally satisfactory during the first six months of the period but some unemployment was reported during the spring of 1931. This unemployment is attributed to the curtailment of operations in the fishing industry, and in a greater degree, to the influx of laborers from outside of the Territory. The unemployment situation was relieved to some extent by additional road projects and the construction of buildings in some of the larger communities. It is not anticipated that the conditions will be serious this winter but it is certain that there will be more than the usual number of unemployed in the Territory, and in certain districts the native people will be in need of some assistance.

During the past year wage schedules remained well stabilized and there were no labor troubles.

The fishing industry affords employment to more than 80 per cent of all labor in the Territory. The mining industry absorbs approximately 15 per cent while the railroads, road-building agencies, and logging concerns account for less than 5 per cent. Fishing is a seasonal industry offering employment for a period of 4 to 8 months, depending on the locality and the nature of the product. During the season for salmon fishing the supply of local labor is not adequate; consequently, a large percentage of the employees must be imported. In southeastern Alaska the local labor comprises 35 to 50 per cent of the total and of this number approximately 10 per cent are natives. In southwestern Alaska only 15 to 20 per cent of the labor is supplied locally, and 50 to 80 per cent of the local employees are natives. Many of the companies have expressed a willingness to employ a larger percentage of local labor if they can be assured that it will be available when the season opens. Approximately 45 per cent of the labor that is imported is engaged under a contract system.

The United States Bureau of Mines functions in the Territory under supervision of the supervising mining engineer for the Geological Survey. The coal mining industry is confined to the region adjacent to the Alaska Railroad and the Bureau of Mines maintains a fully equipped mine rescue car to meet emergencies which may

arise. In addition to the mine rescue car a competent instructor from the Bureau of Mines is engaged in educational work pertaining to mine-safety service and first-aid methods. His assignment requires him to travel through the Territory and give instruction to miners and others who may be interested in approved mine rescue and first-aid methods. In cooperation with the Alaska Agricultural College and School of Mines the Bureau of Mines maintains a laboratory for the determination of the character and value of ore that may be submitted for examination. Prospectors and miners may have samples assayed at cost. A well-equipped laboratory for the analysis of coal is situated in Anchorage in charge of a chemist from the Bureau of Mines. All fuel purchased by the railroad is carefully analyzed and inspected before final settlements are made with the coal company.

Alaska has but one national park, created in 1917 and designated by its most prominent topographic feature, Mount McKinley, 20,300 feet in elevation. The park contains approximately 1,693,800 acres or 2,645 square miles and is exceeded in area by only one other in the United States. This large area was reserved primarily to afford a sanctuary for the wild life within its borders. Caribou and mountain sheep range in great numbers in the low hills surrounding the higher peaks. Moose, bear, fox, wolves, coyotes and smaller fur-bearing animals inhabit portions of the park and may be seen from the road or camps.

The value of the park to the public depends to a large extent on its accessibility. The Alaska Railroad provides transportation to the entrance on the eastern boundary and for many years this will be the only feasible route into the park. A road has been constructed from the railroad station to a point near the Toklat River, and when this project is completed it will traverse the northern part of the park. Excellent accommodations for visitors are provided at the Savage River Camp and from this camp many interesting trips may be made by auto and pack horses.

The present park boundaries are not satisfactory and should be adjusted to conform more nearly to the natural boundaries. The new boundaries should be surveyed and monumented. The road should be completed and adequate hotel accommodations provided at the railroad station. The increase in travel that will follow will be an important factor in the revenue of the Alaska Railroad.

Laws and regulations relating to game and fur-bearing animals are administered by the Alaska Game Commission under the supervision of the Secretary of Agriculture. This commission was created by Congress in 1925. It is composed of five members appointed by the Secretary of Agriculture, one member from each judicial division, and the chief representative of the biological survey in Alaska as executive officer. Annual meetings are held in Juneau and special meetings may be called if necessary. Rules and regulations that are adopted by the commission must receive the approval of the Secretary of Agriculture before they are effective.

The wild game in Alaska is one of its greatest assets and with wise conservation the future supply will be assured. There are districts now almost devoid of wild life which are capable of sustaining a variety of game and fur-bearing animals. The Territorial

Government, in cooperation with the Alaska Game Commission, has undertaken to meet the situation by stocking suitable areas with elk, buffalo, sheep, muskrat, and beaver. Favorable reports have been received from most of these projects. The value of land fur-bearing animals and furs, exclusive of seals, shipped from Alaska in 1930, was \$2,141,289.74, as compared with \$4,513,863.76 in 1929. The sharp decline is accounted for by the low prices received for fur.

The decline in the price of fur and the small catch in many districts are material factors in the welfare of the natives. In many districts the natives are dependent on the fur as a source of revenue, and when they are deprived of these revenues, either by closed seasons or a shortage of fur, they are without means of gaining a living. During the past season there was a shortage of fur in some districts. This condition seems to have prevailed in northern Canada as well; consequently, many of the native communities are confronted with a difficult situation. The only fur bearers that can be taken in the areas most affected are beaver, hence a continuation of the open season seems necessary if destitution among the natives is to be avoided. The present regulations require each trapper to present his fur to an authorized officer for authentication before they can be sold. This seems to be the only feasible method of control and would be entirely satisfactory if the game commission could provide the personnel so that the trapper could dispose of his catch as he returns from the trapping district. With the limited number of wardens there are many delays and much dissatisfaction. The game commission should be provided with additional funds, which will enable them to employ sufficient personnel to meet the demands, otherwise the present regulation which requires sealing all skins must be modified or abandoned.

Coyotes, wolves, and other predatory animals are a constant menace to the wild life in the Territory. Alaska and northern Canada is the summer home and breeding ground for a wide variety of migratory birds, and if they are disturbed during their nesting season the results will be apparent in the migration through Canada and the United States. About four years ago the coyotes became so numerous that the Territorial legislature was requested to provide funds to be used in their extermination. Cooperative agreements were made with the biological survey and experienced hunters were employed. In 1929 a more comprehensive program was adopted and \$30,000 was appropriated by the Territory. This was augmented by an allotment from the Federal appropriation and the personnel was increased. The results were not altogether satisfactory and the reports that were received indicated that for some unknown reason the coyotes had disappeared from many sections. The legislature in 1931 increased the bounty on coyotes and wolves but did not appropriate funds for control work. Although the heavy infestation that was reported in several districts during 1929 now seems to have been somewhat exaggerated, authentic reports from many sections establish the presence of coyotes and wolves in the Yukon Valley and in one or two instances farther west on the reindeer ranges. Conditions are such that it will be almost impossible to eradicate predatory animals if they become plentiful, consequently accurate infor-



mation concerning infestation is necessary if adequate protective measures are to be adopted. The Territory has returned to the bounty system because this seems to be more satisfactory at the present time and much less expensive. The limited funds available from Territorial sources preclude the possibility of effective control without assistance from the Federal Government.

The domestication and propagation of fur-bearing animals such as fox, marten, and mink is an important industry in many sections of the Territory. Those who wish to engage in this pursuit must obtain a license from the Alaska Game Commission. These licenses cost \$2 and last year 431 were issued to fur farmers. The Territory employs a veterinarian skilled in the propagation of fur bearers. His assignment requires him to visit all of the fur farms in the Territory and render assistance and give expert advice to the fur farmers. Experience has shown that most of the trouble encountered by the farmers arises from improper diet. In addition to his duties with the fur farms the veterinarian examines all dairy cattle in the Territory.

The Territory and Federal Government cooperate in an effort to provide adequate school facilities for all of the children in Alaska. This presents a difficult problem in any sparsely populated country, but it is rendered more difficult here where great distances separate small communities and transportation facilities are inadequate or entirely lacking. Prior to the organization of the Territory, the Federal Government assumed the responsibility of providing schools for natives and whites, subsequently the Territorial government organized a school system and as a result there exists a dual system. Ultimately the two systems should be combined under an administrative officer, but at present the Territorial revenues are wholly inadequate to finance such a consolidation unless the Federal Government will continue to appropriate ample funds for the support of the native schools. Survey of the last biennium shows 48 cents out of each dollar collected by the Territory was expended for educational purposes. The Territorial schools are supervised by the Territorial commissioner of education with headquarters in Juneau, and financed by funds appropriated by the legislature from the Territorial treasury.

The Office of Indian Affairs, Department of the Interior, has jurisdiction of the schools that are maintained by the Federal Government for the natives and the funds are provided by Congress.

For the biennium 1931-1933 the legislature appropriated \$1,174,520 for the support of Territorial schools and the Alaska Agricultural College and School of Mines. Schools are classified in three divisions; namely, schools in incorporated cities and incorporated school districts, schools outside of incorporated cities but in established school districts, and special or cooperative schools which are maintained in communities where the number of children of school age does not meet the legal requirement for the creation of a school district. These schools are supplemented by schools that are maintained under direction of the governor out of Federal funds derived from taxes and other sources in Alaska. In the interest of efficient administration these last-mentioned schools are placed in charge of the commissioner of education of the Territory. During the past

year 88 elementary schools and 15 high schools were maintained; 259 teachers were employed for 5,304 pupils at a cost of \$595,192.70. The average cost per pupil in incorporated towns and districts was \$124.61. The cost per pupil outside of incorporated towns was \$151.02 and in special schools was \$219.10.

Citizenship night schools are maintained in the larger communities for the benefit of those who have not had an opportunity to acquire an education or who desire to prepare themselves for citizenship. Usually these schools are held in the public-school buildings with a corps of teachers from the regular teaching staff. During the past year 217 students were enrolled in 7 schools. Of this number 39 were foreigners, 129 had declared their intention of becoming citizens, 25 were awaiting examination for final papers, and 24 were citizens.

Two significant changes were made in the administration of the affairs of the native schools and medical service during the year. July 1, 1930, the headquarters, which had been in Seattle for many years, were moved to Juneau and March 16, 1931, the entire service was transferred to the Office of Indian Affairs. The results of these changes have been most satisfactory. The purchase of supplies and equipment is handled through the consolidated purchasing office in Seattle as formerly. The administrative officer in Juneau is in charge of all of the activities of the native affairs in Alaska. He functions through district superintendents with headquarters in six districts. The organization is not altogether satisfactory because it does not permit frequent contact with the field officers. It is believed that better results can be achieved if the offices of the district superintendents are discontinued and they are replaced by inspectors who will work out of the headquarters office.

During the year 98 day schools and three industrial schools employed 210 teachers for 4,206 pupils at a cost of \$614,624.69. Vocational training is offered in the industrial schools at White Mountain, Kanakanak, and Eklutna. A fourth institution is under construction at Wrangell and will be completed this year. These institutions provide practical training for the native children and are an important factor in preparing them to assume the responsibilities incident to earning their own living.

There are many communities in the Territory without school facilities where there are a number of native children. Accurate information concerning these villages has not been available and it was realized that before this condition could be corrected a survey must be made of the situation. This was undertaken during the past year and the data is available. There are 25 villages with a school population of more than 25 children each which are without schools. There are many other communities where 10 or more children reside under similar conditions. It is realized that it is not possible to provide new schools in all of these places in one year, but a definite program should be adopted which will assure the construction of 10 buildings each year until every community has been supplied. Twelve new schools were authorized last year, and to insure uniformity in construction of buildings for Alaskan conditions, an architect was employed to prepare the plans and supervise the work. The results thus far amply justify the additional personnel.

A very large part of the time of the administrative officer is devoted to the medical work and relief of destitution among the native villages. The appointment of a medical director has been urged and the last appropriation provided funds for the purpose. Probably no one factor will contribute more to increased efficiency in the medical service than the appointment of a qualified director, and he should be selected at the earliest practical date.

Safeguarding the health of the native population, scattered as it is from Ketchikan to Point Barrow and along the inland waterways, is not an easy task. Good progress has been made but many problems remain to be solved. During the year ending June 30, 1931, seven hospitals were maintained at strategic points in the Territory. Part-time physicians were employed in 3 districts and village nurses were in attendance at 16 stations. The native and part of the white population along the Yukon River and its tributaries were served by the *Martha Angelina*, a floating hospital fully equipped and in charge of a physician assisted by a dentist and nurse. The report of the doctor in charge of this boat reveals the extent of the service rendered. There were examined and treated 1,493 cases, of this number 234 requiring surgical operations. The dentist performed 4,122 operations. The value of the boat to residents in the interior can not be overestimated. Many of them are so situated that without the medical boat they would never see a doctor because they can not afford to make the long trip that is necessary to reach the nearest point where such service is available. With a large number of the natives the hospital boat is an institution on which they rely and its arrival is anticipated. The present boat is inadequate and should be replaced by a large vessel equipped with modern facilities.

The Government hospital at Tanana is so situated that it is available to the natives in a large area adjacent to the Yukon and Tanana Rivers. Natives affected with certain phases of tuberculosis appear to make excellent recoveries in that climate. Plans have been made which will provide facilities for caring for those who have lost their sight and in time the institution will be equipped to train these unfortunates so they can contribute to their own support. One part of the institution is devoted to the care of small children and it is expected that all infants and younger children will be transferred from other institutions which are not equipped to care for them.

The hospital at Juneau is the largest of its kind in the Territory. Serious cases from all sections of southeastern Alaska are treated here. Last year, an annex with accommodations for 26 tubercular patients was constructed. This supplies a long recognized necessity and relieves an acute situation. The institution is well equipped and in charge of a thoroughly qualified physician assisted by a corps of competent nurses. It is a credit to the service.

The relief of destitution among the natives is a serious problem in normal times. During the past year unusual conditions have prevailed in many sections and during the coming winter there will be distress and destitution far in excess of that of the last two or three years. In the Bristol Bay region there has been an epidemic of scarlet fever and many of the natives have been deprived of the opportunity to provide a winter supply of fish. In other sections the

shortage of fur-bearing animals and the low prices received for the fur has reduced many of the trappers to poverty. There will be demands for relief that can not be met because of a lack of funds. Last year in several districts it was necessary to provide hot noon-day lunches for the children and doubtless there will be further demands of a similar nature this winter. The funds that are allotted for this phase of the work are inadequate and should be materially increased.

The Alaska Agricultural College and School of Mines, situated near Fairbanks, is the only institution in the Territory which offers advanced courses to students who have completed their high-school work. May 25, 1931, the college completed its ninth year with a graduating class of nine. Each year since its organization there has been a gratifying increase in enrollment. The institution is situated in one of the most extensive mining districts of the Territory, thus affording students in mining engineering and kindred subjects an unusual opportunity for practical field work. The college is easily accessible from all of the region tributary to the Alaska Railroad and in this area agriculture has been developed to a greater degree than elsewhere in the Territory, consequently it is to be expected that the courses in agriculture and mining will attract the greater number of students. During the coming year students from many States have enrolled. The dormitories are filled to capacity. Short courses in mining and geology are given each year and these are attended by many prospectors and miners who wish to supplement their practical training with scientific knowledge. Extension courses in agriculture and home economics are offered under the provisions of the Smith-Lever Act and experimental work in agriculture is authorized under the Hatch Act. The agricultural experiment station of the Department of Agriculture, which is adjacent to the college, was placed under control of the institution last year. This is one of the largest and best equipped stations in the Territory and is a valuable addition to the institution. The college has made excellent progress and it is destined to be an important factor in the development of the Territory.

The report of the general manager of the Alaska Railroad discloses important changes in past policies and methods of operation. The outstanding features in the year's operations are an increase of 1.6 per cent in freight revenues, a decrease of 4.5 per cent in passenger revenues, and a total deficit of \$584,487.20, exclusive of charges to capital account. This is the lowest deficit for any year since the project was undertaken and is \$647,510.94 less than for the previous year.

In August, 1930, a special committee from the United States Senate investigated the Alaska Railroad. Subsequently a report of their findings and recommendations was submitted to Congress. In compliance with the recommendations of the committee all rates were advanced in March, 1931. Passenger fares were increased 66 per cent while freight rates were increased to produce approximately 50 per cent increase in revenues based on the tonnage transported last year. It is not possible to predict the ultimate result of this increase in rates in its effect on the development of the Territory.

That it will discourage exploration of low-grade gravel deposits and small lode properties is apparent.

In August, 1930, the narrow-gage line between Fairbanks and Chatanika, a distance of 39.2 miles, was discontinued. This was one of the first railroads in Alaska and was purchased by the Government. The district that it traversed is served by auto stages and truck lines operating on excellent roads, consequently the railroad was unnecessary.

The Tanana and Yukon Rivers were served by steamboats operated in conjunction with the railroad as heretofore. These boats were operated at a loss of \$10,544.11 as compared with a deficit of \$15,753.31 in the previous year.

Desiring to stimulate, if possible, the development of the mineral resources in the railroad belt, Congress appropriated \$250,000 to be expended in the investigation of mineral and other resources of Alaska, which will supply tonnage for the Alaska Railroad. The United States Geological Survey is engaged in the field examination of known mineral-bearing districts tributary to the railroad. Well-equipped parties in charge of selected geologists and engineers are working in the Matanuska, Susitna, and Tanana Valleys. The results of their work will not be known until this winter.

The United States Public Health Service maintains medical relief stations for sick and disabled merchant seamen and other legal beneficiaries in nine ports in the Territory. In addition to the regular stations the medical and dental officers on the United States Coast Guard boats are detailed from the Public Health Service. These officers render valuable aid to the natives in isolated places and they are frequently requested to render assistance in suppressing epidemics among the native population.

There was a sharp decline in the number of people traveling to Alaska during the past year. The statistics show a decrease of approximately 27 per cent. This condition no doubt is the direct result of unfavorable economic conditions and is only temporary. Alaska offers unusual opportunities to tourists and as its attractions become more widely known the number of visitors will increase each year.

One notable feature of the travel was the increase in the number of yachts and privately owned boats in the waters of southeastern Alaska. Many of the travelers assert that the sheltered waters along the southern coast of the Territory can not be surpassed for summer cruising. Next year an effort will be made to encourage travel and devise some plan whereby local pilots will be available for service in the more intricate passages.

The Signal Corps of the United States Army maintains and operates a comprehensive system of communications in the Territory. For many years communication with Seattle has been by cable and a few years ago a new cable was laid. The progress that has been made in the development of radiocommunications justifies the replacement of the cable by modern radio stations and in all probability the cable will be abandoned in the near future. The change will reduce the cost of operation very materially. The network of radiocommunications reaches all of the important communities in Alaska, but there are many small villages, having a population of from 100

to 300 residents, that are without communication of any kind. The Territory, in cooperation with the Signal Corps, is installing a wireless telephone between Marshal, on the lower Yukon, and St. Michael, on Norton Sound. If this proves to be successful and the cost is not too great it will provide a means whereby every community can establish contact with the existing system of communications.

The Signal Corps renders an important service to aviation in the Territory. Weather reports are transmitted from all stations at frequent intervals and without this data the aviators would be unable to reach many sections of Alaska.

The Coast and Geodetic Survey continued operations in the vicinity of Kodiak Island and the southern shore of the Kenai Peninsula. Two vessels were in Alaska during the season. There are many sections of the coast which have not been charted in sufficient detail and this work should be extended as rapidly as possible.

The southern coast of Alaska is recognized as one of the available regions for summer cruises and each year there are many yachts in these waters. Many of the bays and inlets are avoided by these pleasure craft because they have not been wire dragged. Glacier Bay is one of the largest of these and it contains features that surpass those of any similar accessible area in the Territory. The bay and surrounding region are within Glacier Bay National Monument. It is proposed to create a national park and encourage travel, but before this can be done it is necessary to have a new chart. The idea prevails among many local mariners that there are unknown rocks in certain parts of the bay and only a few will venture to make the trip. Without doubt a resurvey and new chart will stimulate travel to this area.

The long coast line of Alaska, with its many indentations and narrow, intricate passages, would present a serious problem to mariners if it were not for the many aids to navigation that have been installed by the Lighthouse Service of the Department of Commerce. District headquarters and a supply and buoy depot are maintained at Ketchikan. Two lighthouse tenders especially adapted for work in the Territory are operated throughout the year. During the past year construction continued on a lighthouse and fog signals on the southern extremity of Kuiu Island. Work was commenced on a new building at Cape Hinchinbrook. Radio beacons were installed at Scotch Cap on Unimak Pass and Mary Island near Ketchikan. Another beacon has been authorized for the southern end of Stephens Passage and this will be completed this year. Seven new automatic lights and a number of unlighted markers were placed at strategic points during the year.

The Navy Department maintains a radio communication system with stations at Cordova, Dutch Harbor, and St. Paul Island, but these stations do not send or receive commercial messages. Prior to last year the Navy maintained several other stations and accepted commercial messages but this was a duplication of the Signal Corps system and was unnecessary. Several smaller stations were abandoned and the cost of maintenance reduced thereby. Compass stations are maintained at Soapstone Point in Cross Sound and Cape Hinchinbrook in Prince William Sound. These stations are indis-

pensable to ships plying these waters, especially during the winter season.

The legally adjudged insane from the Territory are cared for at Morningside Hospital, under contract. This system has been in operation for more than 27 years. A physician, assigned by the United States Public Health Service, is in attendance and supervises the care of the patients. During the past year 61 patients were committed and the total enrollment on June 30, 1931, is 257.

The transportation of mails in Alaska is directed by the superintendent of the thirteenth division railway mail service in Seattle, Wash. Mail is transported by vessel, railroad, auto, dog team, and airplane. There are no regular air mail routes but under certain conditions mail is dispatched in these carriers. The contractors on certain routes expect to use this mode of transportation during the coming winter. Transportation of mail, express and passengers by airplane in the Territory is entirely feasible. The aviation companies have demonstrated their ability to perform the necessary service. Air mail service on the longer and more important routes should be authorized.

Reindeer were introduced into Alaska about 40 years ago as a relief measure to provide food and clothing for the native people. The original herds contained less than 1,500 deer. From this small herd the entire western part of Alaska has been supplied and it is estimated that there are several hundred thousand animals in the herds that are distributed from Point Barrow to Atka Island and in the Yukon Valley. There are a few places where the natives are not supplied with deer, but the Government owns between ten and twelve thousand animals and these will be used to supply new herds as rapidly as possible.

For many years the surplus deer were utilized by the natives for food and clothing, but the increase has been so great that the demands for these purposes consume only a small fraction of each year's surplus, consequently the industry can supply large quantities for commercial purposes. While the herds were small and ranged in the vicinity of the villages the administrative problems were comparatively simple, but larger herds required greater ranges. Herding became difficult and the distribution of the deer among many individuals injected new factors which have been the cause of many controversies. Prior to last year the office of education combined the administration of the reindeer with education and medical care of the natives. The teachers supervised the management of the herds in addition to their other duties and under the circumstances they achieved excellent results until the herds became so large that they could no longer devote the required time to the work and it became necessary to create a separate organization for this purpose.

In November, 1930, the administration of the reindeer service in Alaska was transferred from the office of education to the governor's office. In March, 1931, the Secretary of the Interior appointed a committee to consider questions involved in the organization of the industry and to make recommendations for its future administration. This committee met in Washington for several weeks, examined witnesses and considered records that were submitted by those interested in the inquiry. At the conclusion of the hearings

the committee submitted its findings with recommendations to the Secretary of the Interior, and they were transmitted to the governor with instructions to carry out the recommendations. The report suggested the creation of a council of six members as the administrative body in charge of the reindeer industry. This council was directed to submit a plan of organization which will provide for an efficient control of the reindeer herds. Pursuant to the instructions from the Secretary of the Interior, the council was assembled in Nome, Alaska, June 18, 1931. The representatives chosen by the natives in the Teller district were present but those from Kotzebue Sound did not arrive. The meetings of the council extended over a period of nine days. A comprehensive set of range rules were adopted and a plan for organization of the reindeer service was prepared. Some conception of the problems may be had from the following estimates which are based on the best information available: Approximately 13,000 natives are largely dependent on the reindeer industry, of this number 2,500 own deer. Fifty-nine herds, varying in size from a few hundred to 30,000, are owned by natives and 19 herds are owned by other than natives. Under the plan that has been prepared by the reindeer council, the territory that is occupied by the herds has been divided into administrative units of a size that can be properly supervised by a field manager. These units will be in charge of a competent officer skilled in animal husbandry and administration. He will be in control of the herds in his unit under the direction of the general reindeer supervisor, who is a member of the reindeer council. When the proposed organization is complete the teachers in the Office of Indian Affairs schools will be relieved of their duties as reindeer supervisors, but until that time they must continue to function as in the past. The personnel in the reindeer service at present consists of five regular employees and increased appropriations are necessary to carry out the plan that has been suggested.

One of the principal problems that must be solved is the marketing of the surplus deer. The native owners are losing interest in their herds because they are unable to dispose of the animals. Present market conditions are not favorable, consequently only a limited quantity of meat will be shipped this season. Reindeer properly prepared is an excellent food and can be a factor in supplying the demand for meat.

Substantial progress has been made in the investigation of applications for grazing allotments. Agents of the General Land Office have been engaged in examining the areas that have been applied for and it is expected that reports will be submitted at the close of the field season.

The eradication of the warble fly and other parasites that infest the reindeer will add to the value of the herds. The Territory and the Biological Survey, Department of Agriculture, are cooperating in an effort to find some practical method of destroying these parasites. Experiments have been carried on for several years, but as yet a satisfactory solution of the problem has not been found.

Alaska makes liberal provisions for the aged and for those who are in distress or unable to provide themselves with the necessities of life. Mothers with dependent children may be allotted \$15 per



month for the first child and \$10 per month for each additional child under 16 years of age. Aged persons who are eligible under the law may be granted an allowance of not to exceed \$35 per month for men and \$45 per month for women. A home is maintained at Sitka, where pioneers who are no longer able to care for themselves may find a haven in their declining years. The board of children's guardians cares for unfortunate children who may be committed in its charge. Destitute persons are afforded relief from funds disbursed by the governor and the district judges. The total appropriations for eleemosynary purposes in 1931-32 is \$480,400.

The Federal and Territorial Building was completed early in 1931 and all of the administrative offices are in the new quarters. This building also houses the legislative chambers and the library and museum.

The Territorial commissioner of health reports that with few exceptions conditions throughout the Territory have been satisfactory during the year. A serious epidemic, diagnosed as diphtheria by the local physician, was reported from Point Barrow in February, 1931. Approximately 300 cases were reported in the 2-month duration but no deaths occurred. Antitoxin was dispatched to the several communities by airplane from Fairbanks. Recent reports from Bristol Bay indicate the prevalence of scarlet fever in that district. The natives have been exposed and many of them have been ill during the fishing season. A doctor and nurse with medicines have been sent to several villages, but it is exceedingly difficult to prevent the natives from visiting the afflicted communities and much sickness and distress may occur in that region this winter.

Aviation in Alaska has emerged from the experimental stage and taken its place among the recognized transportation facilities in the Territory. Less than a decade has elapsed since the first mail was transported by air between Fairbanks and McGrath. The first attempts in commercial aviation were in the nature of experiments to determine whether or not the airplane could be used in these latitudes and under the adverse conditions that were assumed to exist. The results of these experiments demonstrated that transportation by air is practicable, and within a short time several companies were organized as commercial enterprises. The Territorial government recognized the importance of rapid transportation in the development of the more remote sections of the Territory and adopted a comprehensive program for the construction of landing fields and hydroplane ports. The residents of many communities have contributed generously to these projects, and at present there are 68 landing fields in strategic places in Alaska. Practically every community in the interior may be served by air transportation. Anchorage, Fairbanks, and Nome have large, well-equipped fields and are headquarters for companies that are operating in the interior of the Territory. Cordova, Juneau, and Ketchikan are home ports for planes that serve the coastal regions.

The rules and regulations of the Department of Commerce have been adopted by the Territory and are in force. Pilots and planes, if engaged in commercial flying, must be registered with the Territorial treasurer. An inspector from the Aeronautics Branch, Department of Commerce, visits the Territory once each year to inspect

equipment and examine pilots. Annual inspections were satisfactory when there were a few planes in operation, but within the past year many new planes have been purchased and the personnel has been increased, consequently, there is urgent need of more frequent inspection.

Alaska occupies a strategic position on the only feasible air route to Asia. Each year a greater number of aircraft pass through the Territory along this route and improved facilities are desirable. Up to the present time the Federal Government has taken but little interest in promoting aviation in Alaska. The Army Air Corps should station planes in the Territory, if for no other reason than to train their pilots in flying under conditions as they exist in these latitudes. These planes would serve a most useful purpose in transporting Government doctors and nurses to their stations. Large sections of the Territory are unsurveyed and aerial photographs could be used in the preparation of topographic maps. Government agencies in Alaska spend thousands of dollars each for the hire of airplanes in fish patrols, forest patrols, and necessary travel, all of which could be diverted to reimburse the air corps if they would furnish the service.

There are at the present time in Alaska 22 planes. Incomplete data show that 7,947 passengers were carried for a total of 947,695 passenger miles without the loss of life or cargo; 161,718 pounds of freight, express, and mail were transported.

The aviation companies have demonstrated their ability to transport mail on many of the more important routes and the laws authorizing these contracts should be extended to Alaska.

The public land laws, as applicable to Alaska, are liberal and with few exceptions satisfactory for existing conditions. Homesteads may be entered by citizens and an entry elsewhere is not a bar to a second entry in Alaska. Lands used for purposes of trade, manufacturing, or other productive industry may be acquired in tracts not exceeding 80 acres in area. Lots not exceeding 5 acres in extent may be acquired as home sites under certain conditions. Lode mining claims may be staked as in other parts of the public domain. The location of placer claims is restricted by the act of August 1, 1912, as amended March 3, 1925. Under the provisions of these acts a placer mining claim can not exceed 20 acres for an individual nor 40 acres for an association. Moreover, an individual may locate only two claims for himself and under power of attorney two claims for each of two principals in any calendar month. The restrictions in this law, while they may have served a useful purpose when rich placers were discovered, militate against the exploration of low-grade placer deposits. The installation of modern dredging equipment requires the expenditure of large sums of money, and unless sufficient acreage can be located to justify the investment the development will be impossible. Practically all of the chambers of commerce in Alaska and the Territorial legislature have requested the repeal of the present law.

Encouraging reports have been received from the agricultural districts adjacent to the Alaska Railroad. The industrial agent for the railroad has devoted considerable time and effort in presenting the agricultural possibilities to farmers in the Western States,

and the results, although somewhat discouraging for a time, are becoming more apparent. Recently arrived settlers are developing new homesteads and established homesteaders are clearing more land. This development is most apparent in the Matanuska Valley. Discretion in selecting prospective settlers is essential to the success of the project, because they must have sufficient funds to provide themselves with supplies for not less than two years. Opportunities for employment are almost negligible, and it is impossible to clear land and grow crops the first season.

Federal agencies have cooperated with the farmers in the solution of their problems. The Alaska Railroad assists in the clearing of land by providing machinery at a nominal cost. The railroad hotel at Curry operates a small creamery and purchases milk from dairy herds. Through the combined efforts of the railroad and the agricultural experiment stations local farm products were distributed in the railroad belt. The supply of these products was consumed in the district.

The Fairbanks experimental station was transferred to the Alaska College, and the Kodiak station was abandoned. Experiments designed to devise methods for curing hay are showing good progress. Experience has shown that small fruits such as raspberries, gooseberries, strawberries, and currants can be grown successfully, but only the most hardy fruit trees survive.

The dairy herds in the Territory are maintained on a high standard. The Territorial veterinarian visits all of the larger herds at least once each year and tests the stock, thus safeguarding the health of the animals and the quality of the milk.

The Territorial library and museum was moved to new quarters in the Federal and Territorial Building. Increased floor space and improved equipment permit an advantageous display of the valuable collection. The library and museum afford an excellent opportunity for the study of history, ethnology, and related subjects. More than 7,500 visitors registered during the year.

The consolidation of disbursing offices for the various bureaus of the Interior Department, except the Alaska Railroad, is one of the most important administrative changes effected during the year. Heretofore each organization maintained its own disbursing office, and there was a duplication of effort. Under the new plan the disbursing is done in the office of the secretary of the Territory under a simplified system devised in the office of the Comptroller General. The plan is most satisfactory.

Hunting seasons for migratory birds are governed by the migratory-bird treaty between the United States and Canada. The provisions in the treaty which fix the dates on which hunting may begin are not in accordance with conditions in northern Alaska. Practically all of the waterfowl have matured and departed from the Yukon and Tanana Valleys prior to the opening date, and the residents of those sections are deprived of the opportunity to take these birds. In many of the more remote sections of these regions the residents must rely on game animals and birds as a source of fresh meat, and they do not waste nor destroy what they kill. Alaska should be divided into two zones with open seasons which more nearly meet the local conditions. The Alaska Game Commission is

in possession of data which may be used as a basis in determining the dividing line between the zones and in fixing appropriate dates for open seasons. The total number of birds that are killed in Alaska is negligible when compared with the toll that is taken on their winter feeding grounds. The restrictions that are placed on shooting in Alaska should not be more strict than those imposed in British Columbia or Yukon territory.

### RECOMMENDATIONS

In previous reports recommendations have been made for an investigation of the halibut fisheries in Bering Sea, a revenue cutter to serve western Alaska during the winter season, authorization of air mail service on established routes and construction of much needed Federal buildings. Attention is respectfully invited to the above and to the following:

1. A survey of the native communities in the Territory by the Office of Indian Affairs disclosed that there are 25 villages with a school population of more than 25 children where there are no school facilities. There are a far greater number of small communities which have a school population of 10 or more children who are denied the privilege of attending school. This is an unfortunate situation and should be corrected. The construction of not less than 10 schools each year until every community is equipped with adequate facilities is recommended.

2. Safeguarding the health of the native people is one of the most important functions of the Office of Indian Affairs. A large staff of nurses and doctors are employed in this work. The appointment of a medical director will promote efficiency and place the service on a better operating basis. Funds are available for the necessary personnel, and the early appointment of a qualified officer is respectfully urged.

3. There are sections of the Territory, larger than some of the smaller States, which are without hospitals or medical service of any kind. Practically all of the population in these sections are native people. The Bureau of Indian Affairs have information on nearly all of the districts and can prepare a statement which will show the number of hospitals required and the order of their importance. A 5-year program, which will provide adequate facilities in every section should be prepared and approved. The hospital boat on the Yukon River should be replaced with a new vessel completely equipped for the service.

4. Relief of destitution among the natives is a serious problem in normal times. Always there are a number of the aged people who must be cared for, and in the past appropriations for this purpose have been inadequate. This year there has been more illness than usual in many sections. Low prices and scarcity of fur have deprived many natives of their only source of income. Curtailed activities in fishing have resulted in unemployment. All of these factors have contributed to an abnormal condition, and during the coming winter the appeals for assistance will be far greater than ever before. More funds will be needed for relief of destitution. Wherever there are government schools or hospitals it is feasible to provide work for a limited number of natives. The school

grounds can be improved and the buildings repaired, but in many instances supplies must be purchased and distributed. An emergency appropriation to meet these demands is recommended.

5. For administrative purposes, under the Office of Indian Affairs, the Territory is divided into districts. Each district is provided with a headquarters office in charge of a local superintendent. This system requires a duplication of records and unnecessary correspondence. The discontinuance of the district offices and the appointment of inspectors under the general superintendent would promote efficiency and permit better coordination of the work. This change is recommended.

6. The reindeer council has prepared a plan for an organization to supervise the reindeer industry. The program was suggested by a committee appointed by the Secretary of the Interior. Estimates covering the cost of the proposed organization have been submitted. Approval of the plan and increased appropriations are requested.

7. The Yukon River has been closed to commercial fishing for several years and reports indicate that the runs are again normal. The closing of the river deprived the natives and other residents of the lower Yukon of one source of income and they are sorely in need of assistance now. Limited commercial fishing by bona fide residents should be permitted if investigations by the Bureau of Fisheries disclose that such action can be taken without jeopardizing the future supply or depriving the residents along the upper reaches of the river of their food.

8. The Alaska Road Commission has prepared and submitted a tentative 10-year program for maintenance and improvement of the existing road system outside of the national forest in the Territory. The proposed program will enable the commission to coordinate the work on its various projects and reduce maintenance and construction costs. The approval of the program is urged.

9. Recommendations for the improvement of Dry Pass are before Congress. Reports on proposed improvements of Gastineau Channel and Sitka Harbor have been submitted to the Chief of Engineers, United States Army. Surveys are authorized to determine the feasibility of improving the Stikine River Channel, Wrangell Harbor, Petersburg Harbor and Salmon River. These projects are essential in the interest of future development of the Territory and its industries and should be authorized. If the work can be undertaken next season it will relieve the local unemployment situation.

10. The repeal of existing restrictions which limit the locations of placer claims is urged by commercial organizations and the Alaska legislature. The present law discourages the exploitation of low grade placer deposits and should be amended to conform to the mining laws of the public-land States.

11. Glacier Bay and many of the other larger inlets have not been charted in sufficient detail. These waters should be wire dragged and the charts brought up to date. Each year there is an increasing number of pleasure craft in the Territory and every effort should be made to encourage this travel.

12. The present boundaries of Mount McKinley National Park are not satisfactory and should be changed to conform more closely

to the natural boundaries. Some of the lands now within the park should be excluded and other desirable areas should be within the reserve. Appropriation legislation is recommended.

13. In many sections of the Territory the native people rely on the fur-bearing animals as their principal source of income. Last year there was a scarcity of fur and low prices prevailed. As a result, the trappers are confronted with a serious situation and unless some relief is afforded there may be much distress. An open season on all small fur bearers is recommended in all sections where this is possible without endangering the future supply.

### COMMERCE OF ALASKA

A summary of the commerce of Alaska with the United States, and vessel statistics, covering the fiscal year ended June 30, 1931, reflects the current world-wide depression which has not excepted Alaska from its operation.

It must be borne in mind, however, that the statistics shown represent the values of the different commodities and not quantities. The net decrease in value of shipments from Alaska to the United States of \$12,181,081 represents, to a very large extent, the decreased price of the commodity and not a decreased production, except in the salmon industry where there was a sharp decline in the red salmon pack in the Bristol Bay district.

This decrease in value is particularly true with respect to copper ores. During the fiscal year 1931 there were shipped 32,211,656 pounds as compared with 39,225,095 pounds during the fiscal year 1930. While the amount shipped during 1931 equaled 82 per cent of that shipped during 1930, yet the value of the shipments during 1931 were only 48 per cent of the 1930 values. Based on quantities and values shown, the price of copper averaged over 18 cents per pound during the 1930 year while it was approximately 11 cents per pound during 1931. There has been a sharp falling off in copper shipments during the last half of the fiscal year 1931 due, no doubt, to the very low world price of copper which has existed during recent months.

There has been a gratifying increase in the value of gold shipped, the increase being over a million and a half dollars. A greater part of this increase came from the dredging operations in the Fairbanks district. As the price of gold is fixed, this increase represents solely increased production.

The decrease in the value of silver shipments is sympathetic with the decrease in copper, all the silver shipped being a by-product of other mining in the Territory.

Shipments from the United States to Alaska showed a decline of over \$6,000,000, leaving a balance of trade in favor of Alaska of \$30,980,672. This is nearly \$6,000,000 less than last year's balance of trade, but considered on a percentage of the total commerce, the balance of trade during the fiscal year 1931 was 37 per cent of the total, while in 1930 it was 36 per cent of the total.

With respect to vessel statistics, there was a decrease in both entrances and clearances of vessels to and from Alaska and the United States and Canada. The tonnage, however, of the vessels entering and clearing exceeded the 1930 tonnage due to more trips made by the larger tonnage vessels.

With respect to documented vessels over 5 tons, the situation is reversed; there has been an increase of 54 vessels documented in Alaska, but a small decrease in the tonnage of said vessels.

Undocumented vessels under 5 tons show a decrease of 104 from the last fiscal year. This is due primarily to the fact that during the past fiscal year over 2,000 letters of inquiry regarding these boats were sent out, with the result that a great many were found abandoned and unfit for further use and therefore were stricken from the customhouse records.

As stated above, the reduction in commerce is solely due to present economic conditions and in no way reflects either on the stability or productivity of the Territory of Alaska which is in a sound condition from every viewpoint.

*Commerce of Alaska for fiscal year ended June 30, 1931 with comparative statement for preceding fiscal year*

Shipments, Alaska to United States	Fiscal year ended June 30		1931 per cent of total	Increase	Decrease
	1930	1931			
Canned salmon.....	\$38,021,584	\$30,815,567	53.4	-----	\$8,006,017
All other fish and fish products.....	7,501,420	6,800,897	12.1	-----	700,522
Total fish.....	46,483,013	37,176,464	65.5	-----	9,306,549
Copper ore.....	7,352,661	3,675,420	6.3	-----	3,777,241
Fur skins, including mail shipments.....	4,590,053	3,179,557	5.0	-----	1,411,396
Gold.....	7,241,800	8,761,211	15.4	\$1,519,321	-----
Silver.....	236,039	132,301	.2	-----	103,738
All other products.....	3,094,900	3,903,422	7.0	808,522	-----
Grand total.....	68,990,456	59,818,375	100.0	-----	12,181,081
Shipments, United States to Alaska.....	32,094,734	25,887,703	-----	-----	-----
Balance of trade, favor of Alaska.....	36,914,722	30,980,672	-----	-----	-----

Vessel statistics	1930		1931		Increase		Decrease	
	Number	Tonnage	Number	Tonnage	Number	Tonnage	Number	Tonnage
Entered from United States and Canada.....	3,000	1,000,110	3,233	1,013,658	-----	13,539	427	-----
Cleared from United States and Canada.....	3,312	934,387	3,038	908,194	-----	63,807	244	-----
Documented vessels over 5 tons.....	1,682	77,691	1,710	75,793	54	-----	-----	1,928
Undocumented vessels under 5 tons.....	4,020	-----	3,925	-----	-----	-----	104	-----

### THE ALASKA RAILROAD

The program of improvements to bridges, buildings, and other structures of the railroad was continued during the year, and additional equipment was provided for both maintenance and operation.

Work of bank widening, grade raise and ballasting on a 25-mile section between miles 359.3 and 385.2 was begun and completed during the year. This work is being continued southward during the present summer. Improvements of this character reduce the expenses of maintenance, permit increased speed of trains and reduce the hazard of derailment.

A rock-fill diversion dam was constructed in the Nenana River at mile 379.5 to prevent the river from cutting into the grade.

Ten hopper-bottom steel coal cars were received during the year; a rotary snowplow delivered the previous year was assembled; a railway ditcher and crane, oil burning, was received and placed in service. Two caboose cars constructed in the Anchorage shops were completed during the year.

From June 1 to August 29, 1930, passenger service consisted of three round trips per week between Seward and Fairbanks, with special service operating every second week between Seward and Anchorage, Fairbanks and Nenana, Fairbanks and McKinley Park. There was also service each week between Curry and McKinley Park. On August 29, 1930, a winter schedule became effective, providing for one round trip per week between Seward and Fairbanks. On June 4, 1931, a summer passenger-train schedule was resumed, providing for two round trips per week between Seward and Curry and three round trips a week between Curry and Fairbanks. In addition, special service was furnished by gas car or steam train as required from time to time.

During the period July 1 to September 8, 1930, the regular scheduled freight service consisted of two round trips per week between Seward and Fairbanks. From September 9 to December 1, service was one round trip each week, and during December and January connecting with steamers at Seward, service was trimonthly between Seward and Healy, and weekly between Healy and Fairbanks. On February 1 and continuing to the end of the fiscal year, freight trains were again operated in weekly service between Seward and Fairbanks.

When the tonnage required other freight trains were operated in addition to the regular schedule. Passenger and freight service was also extended to points on the Chickaloon branch line.

Operating conditions during the year were good, excepting numerous mud and rock slides and washouts which occurred in the months of August and September following heavy rains. Snow conditions were not abnormal. The cost of removing snow, ice, and sand was \$91,884.10, as compared with \$98,572.58 the previous year, the reduction being due partly to use of improved equipment.

River-boat operation closed September 30, 1930, and was resumed May 21, 1931. The boats *Gen. J. W. Jacobs* and *Alice* were operated on a weekly schedule between Nenana and Holy Cross and every other week the service was extended by the *Jacobs* to Marshall; connection was made at Holy Cross with the Ira Wood & Day Navigation Co. boats operating between Holy Cross and Iditarod. Connection was made at Marshall with the Northern Commercial Co. boat operating every second week between Marshall and St. Michael.

Operation of the Chatanika branch (narrow gage), Fairbanks to Chatanika, a distance of 39.2 miles, was discontinued in August, 1930, the transportation needs of this district being served sufficiently by bus and truck lines. It is estimated that the resulting saving in maintenance and operating expense will be \$57,191.96 per annum, with loss of \$18,829.65 in revenues, a direct saving of \$38,362.31 per annum, and a probable total saving of \$40,000 to \$45,000 per annum.

A special committee, consisting of Senators Howell, Kendrick, and Thomas of Idaho, appointed pursuant to a resolution of the United



States Senate to investigate the operations, economic situation, and prospects of The Alaska Railroad, arrived at Seward, August 20, 1930, and departed 12 days later, the committee having inspected the railroad and held numerous hearings at various point on the line. A report by the committee was rendered to the Senate on January 5, 1931, and has been printed as report No. 1230, Seventy-first Congress, third session.

The supply of electric current heretofore provided by the railroad for street lighting and other municipal purposes, and similar service to private consumers, at Nenana, was discontinued May 15, 1931. An arrangement has since been made by the railroad and the city authorities by which a small electric plant will be operated by private parties, to supply consumers at that place, utilizing the distribution system belonging to the railroad.

Effective on various dates from March 25 to April 15, 1931, new freight tariffs were placed in effect on the railroad, increasing the rates to produce about 50 per cent additional revenue from freight, based on the traffic of the fiscal year 1930. On March 20, 1931, passenger fares on the rail line were increased to 10 cents per mile, from 6 cents. Rates on local river freight were increased about 10 per cent, effective April 10, 1931, and passenger rates of the river line were increased about 50 per cent, effective May 20, 1931.

Having in view the advantages of estimating the resources of the territory adjacent to the railroad, Congress, in the Interior Department appropriation act for 1932, provided funds (not to exceed \$250,000) "for continuation of the investigation of mineral and other resources of Alaska to ascertain the potential resources available which will affect railroad tonnage." Arrangements were entered into with the United States Geological Survey whereby it should conduct the technical phases of the work under the supervision of the general manager of the railroad. A number of projects were considered, from which the following were selected, for more or less detailed examination: The anthracite ridge coal field in upper Matanuska Valley; gold lodes in Moose Pass district of Kenai Peninsula; gold lode and placer prospects in the Girdwood district north of Turnagain Arm; gold lode prospects in the Willow Creek district north of Cook Inlet and northeast of Wasilla; gold lode prospects in the Fairbanks district, the Yukon and Tanana region; the lodes containing various metallic substances in addition to gold, notably silver, lead, zinc, and antimony, in the Kantishna district; lodes containing various metallic substances in addition to gold, notably copper, silver, lead, and zinc, in the Mount Eielson or Copper Mountain district some 50 miles west of McKinley Park station. Gold lodes and other types of mineralization in the Valdez Creek and Chulitna districts. Potential resources of nonmetaliferous products, such as clay, limestone, etc., throughout the territory adjacent to the railroad,

Passenger revenue from rail operation amounted to \$191,475.06, a decrease of \$8,959.11 or 4.5 per cent. For the first eight months (July, 1930, to February, 1931), the decrease amounted to \$18,019.52, resulting partly from decline in tourist travel. March and April showed an increase of \$8,918.54, due principally to the increase in rates and influx of laborers seeking employment. During the

remaining two months, the increase was only \$101.87, the benefit of the increased rates being offset by a decrease in tourist and other travel, as compared with the same period of the preceding year.

Rail-line revenue passengers carried were 51,217, an increase of 7,934 or 18.3 per cent. The increase consisted of 10,235 more fares between Fairbanks and College (ascribed to larger local enrollment, and night car operated twice a week), and 2,301 less in other passengers.

The number of rail-line passengers was 58,781, an increase of 5,493 or 10.3 per cent.

Freight revenue, rail line, amounted to \$688,440.14, an increase of \$10,687.98 or 1.6 per cent.

Rail-line commercial freight, exclusive of coal, amounted to 29,064 tons, a decrease of 5,481 tons or 15.9 per cent.

Coal tonnage was 72,415, an increase of 14,649 tons or 25.4 per cent.

Total commercial tonnage was 101,479, an increase of 9,168 tons or 9.9 per cent.

Total of all tonnage, including freight for the railroad, decreased 30,139 tons or 15.7 per cent. Ton-miles decreased 4,796,406 ton-miles or 16.3 per cent.

Rail-operating revenue from all sources was \$1,053,455.93, a decrease of \$46,387.29 or 4.2 per cent.

Passenger revenue from river-boat operation for the fiscal year amounted to \$14,763.20, an increase of \$253.25 or 1.7 per cent.

Freight revenue from river-boat operation amounted to \$42,126.30, an increase of \$468.04 or 1.1 per cent.

All revenue from river-boat operation for the fiscal year amounted to \$84,577.94, an increase of \$2,991.73 or 3.7 per cent.

Revenue from all sources, including nonoperating income, was \$1,147,628.86, a decrease of \$38,922.55 or 3.3 per cent.

Rail-line expenses for operation, including maintenance, amounted to \$1,632,662.37, a decrease of \$688,547.66 or 29.7 per cent.

Operating ratio decrease from 209.34 in 1930 to 154.31 in 1931.

River-boat expense was \$95,122.05, a decrease of \$2,217.47 or 2.3 per cent.

Total expense for rail and river boats was \$1,727,784.42, a decrease of \$690,765.13 or 28.6 per cent.

Deficit for rail operation was \$579,206.44, a decrease of \$642,160.37 or 52.6 per cent.

The river boats were operated at a loss of \$10,544.11 as against a loss of \$15,753.31 in 1930.

Total deficit, all expenses except charges to capital account, was \$584,487.20, a decrease of \$647,510.94 or 52.6 per cent.

Corresponding deficit for the year 1930, \$1,231,998.14.

There was expended during the year for improvements and additions to road and equipment, \$271,843.88.

Transportation revenues of the rail line amounted to \$920,486.07, a decrease of \$9,248.04 or 1 per cent.

The report of the general manager of the Alaska Railroad indicates that there was an increase of 1.6 per cent in freight revenues, a decrease of 4.5 per cent in passenger revenues, and a decrease of 49.1 per cent in revenue from the sale of power.

## TOURIST TRAFFIC

Tourist traffic over the Alaska Railroad declined during the past year. During the latter part of the 1930 tourist season many cancellations of reservations were received, the greater number of which were on account of conducted tourist parties. Some cancellations were likewise received during June, 1931. The falling off in tourist traffic was in conducted tours; individual travel is increasing.

As in the case of past years, the main routes, including a trip over the Alaska Railroad, were three in number. The first, known as the Yukon Circle tour, requires 35 days from Seattle and return, includes a cruise through Alaska's Inside Passage and Prince William Sound to Seward, thence via the Alaska Railroad to Anchorage, Curry, Mount McKinley, Fairbanks, Nenana, thence by river steamer down the Tanana River to Tanana, thence by the Yukon River to Dawson and White Horse, thence by rail over the White Pass and Yukon route to Skagway, to return southward via steamer from Skagway. Also, in the opposite direction, entering at Skagway and leaving via Seward, consuming only 23 days. The greater part of the tourist travel moves over this route.

Another route is the Golden Belt tour, requiring 19 days from departure at Seattle to time of return. This includes a cruise by steamer through the Inside Passage and Prince William Sound to Seward, over the Alaska Railroad with stop-overs at Anchorage, Curry, McKinley Park, and Fairbanks, by automobile over the Richardson Highway to Chitina and from Chitina to Cordova via Kennicott on the Copper River and Northwestern Railroad, return sailing from Cordova to Seattle. Or, the trip may be reversed, going in by way of Cordova with southbound sailing from Seward.

The third tour is all rail from Seward to Fairbanks and return, with stop-overs at the various points of interest en route. While this trip is very attractive, it is not as popular as the two previously mentioned, because of retracing the trip over the railroad.

One side trip by rail from Seward to Spencer Glacier and return was offered during the tourist season to accommodate those travelers making only the Prince William Sound cruise, Seattle to Seward and return on the same steamer. This side trip continues to be popular and the scenery of the "loop" district attracts the round-trip steamer travelers.

During the 1930 season, the Alaska Steamship Co. operated its steamers *Yukon*, *Alaska*, and *Aleutian* between Seattle and Seward. Two of the steamers alternately departed Seattle each Saturday arriving Seward early Friday morning. The third steamer departed Seattle every second Thursday morning, arriving Seward every second Wednesday.

The steamers which arrived Seward on Friday handled practically all of the Golden Belt line tour passengers, also round-trip passengers over the railroad, while the midweek steamer handled the Yukon River circle-tour passengers, and round-trip railroad passengers.

For the excursion season 1931, and starting with the sailing of steamers from Seattle on May 30, the Alaska Steamship Co. operated two steamers between Seattle and Seward, sailing alternately and

furnishing weekly service, arriving Seward early Friday morning and departing southward 9 p. m. same day.

A large majority of the passengers making a trip over the railroad also include in their itinerary a stop-over at Mount McKinley National Park. During the 1931 fiscal year there were 881 visitors to the park, a decrease of 223 from the number during the fiscal year 1930.

A stop-over at Lawing on Kenai Lake, with a trip to the Russian River fishing district is also popular with tourists.

The Pacific Steamship Co. operated during the tourist season in 1930 and 1931 two vessels between Seattle and Seward furnishing tri-monthly service. Arrivals at Seward were on Wednesday and departure southbound on Monday.

The American Yukon Navigation Co. operated during the season of navigation one river boat between Nenana and Dawson furnishing service every second week.

### *TOURIST TRAVEL*

The number of passengers traveling on the vessels serving Alaska decreased approximately 27 per cent during the fiscal year ended June 30, 1931. A total of 29 vessels carried 26,962 passengers during that period.

The Canadian National Railways operated three luxurious passenger vessels to southeastern Alaska during the summer season.

The Canadian Pacific Railway maintained their usual service throughout the year to southeastern Alaska, operating four vessels with luxurious accommodations.

The Pacific Steamship Co. continued the operation of seven vessels in the southeastern and southwestern Alaska trade, with service to all points.

The Alaska Steamship Co. operated 13 vessels, freight and passenger, during the year, rendering service to southeastern and southwestern Alaska, as well as Bering Sea.

The Northland Transportation Co. operated two vessels the entire year serving points in southeastern Alaska.

While practically all available accommodations of the several steamship lines operating in the Alaska tourist trade were reserved in February of this year, numerous cancellations were received during the early spring months and the close of the season disclosed a sharp decline in the number of persons who had visited the Territory. This decrease was no doubt partially due to the depressing conditions now existing throughout the world, and there can be no doubt that Alaska will continue to enjoy her popularity with the tourist as soon as economic conditions return to normal.

### *MOUNT MCKINLEY NATIONAL PARK AND NATIONAL MONUMENTS*

Mount McKinley National Park is growing in popularity as a tourist playground. Each year many new parties, made up of travelers from all parts of the world, visit this great natural preserve of mountains, glaciers, and abundant wild life.

Even though at times Mount McKinley itself is hidden in clouds or haze, the great mountain ranges there are never obscured by storm or other weather conditions, and the numerous bands of mountain sheep and caribou make the park attractive to the visiting public and rarely indeed does any visitor leave its gateway disappointed. On the contrary, it is doubtful if any park sends away from its boundaries more enthusiastic and satisfied patrons than does Mount McKinley National Park, our farthest north and second largest member of the great national park system, Mount McKinley, with an elevation of 20,300 feet, being the paramount attraction.

Moreover, visitors to this park are pleased with its primitive conditions. They realize that it is truly a great wilderness and that it will always be a bit of the frontier. Many travelers praise the primitiveness of the housing facilities in the park and express their pleasure in having camped at Savage River before strictly modern hotel or lodge accommodations could be financed and built.

All of this indicates that Alaska in general and the park in particular, are going to attract large numbers of people who will come here to enjoy the great open spaces under the spell of the frontier and amid the romance and charm of a land developed and still peopled by pioneers.

During the past year, the main highway through the park was extended beyond the Toklat River, pioneer work of opening the tundra and draining the roadbed being continued to mile 66. The so-called "skyline" section between East Fork of the Toklat at mile 48 and the main Toklat at mile 54 was opened to travel and at once was declared by park visitors to be one of the most scenic roads in the United States.

This road was suggested in 1929 by the chief landscape architect of the National Park Service, who saw the possibilities of this high route through Polychrome Pass. The standards of this section are necessarily somewhat different from those used in most other road construction in the Territory, and the cost of the section was appreciably higher but there is nothing but praise for the road because of its scenic magnificence and its obvious permanence.

It should be mentioned particularly that this high scenic route affords an exceptional view of the great areas of brilliantly colored rocks that suggested the name, Polychrome Pass, while always presenting to the eyes of travelers the towering glacier-clad peaks of the Alaska Range, including Mount McKinley itself.

In connection with this remarkable scenic section of the highway the new bridge over the East Fork of the Toklat deserves special reference. It was designed by the landscape architectural division of the Park Service, and is built of logs. It is believed that nothing quite like this bridge has before been attempted in Alaska, but its fitness in its environment appeals to all who behold it, and is found to be the forerunner of a system of fine bridges which will grace the park streams in the future.

The Director of the National Park Service, Horace M. Albright, made his first inspection of Mount McKinley Park this year and was delighted with every feature of its great area. He made his inspection by both airplane and automobile though was prevented by illness from penetrating the less accessible valleys and canyons on horseback.

The director increased the current road construction and maintenance allotment by \$15,000 in order to permit the construction, this year, of the main section of the Toklat River bridge. This brought the road fund for this year to \$175,000 and made possible the connecting at once of road beyond the Toklat with the new Polychrome Pass "skyline," just discussed.

Impressed with the possibilities of the Wonder Lake region as a camping and fishing resort, Director Albright authorized the Alaska Road Commission to make a reconnaissance to determine routes and costs of a continuation of the park road to this lake, lying just north of Mount McKinley. If this road is built, it will not only make accessible to park visitors a great recreational area, but will afford a view of the mountain that will be exceptionally fine. Furthermore it will make it very easy to open the Kantishna district, a rich section now accessible only by boat, dog team, and plane.

Boundary adjustments both east of the park, along the railroad, and north, in the Wonder Lake district, are essential steps in the completion of the highway system as well as important in game protection and these should be made by Congress at an early date.

Funds have been made available for extension of the patrol cabin system along the park lines already permanently established, and for further improvements at headquarters. The buildings at headquarters, both those entirely of log construction and those of log trim, have attracted much attention. Likewise the newly built dog kennels and the building that houses the dog kitchen and equipment have become points of interest on the schedule of every park visitor.

A new telephone line leading from the park station on the Alaska Railroad along the highway to Mount Eielson, near Mount McKinley, a distance of nearly 80 miles, is an installation just completed that is of incalculable importance both to the park and to the Kantishna district. This new telephone system was a project in which the chairman of the Appropriations Committee took a personal interest and was responsible for its inclusion in the 1931 appropriation bill.

The Alaskan Airways continued its airplane sightseeing service in Mount McKinley Park. Travelers who availed themselves of this service declared that the airplane trip to Mount McKinley, with its view of the great mountain, the Alaska Range, the Muldrow and other glaciers, and the bands of mountain sheep, was certainly one that could not be surpassed anywhere in the world. This was strongly confirmed by visitors who have traveled in the Alps, the Andes, and the Himalayas.

There were no airplane accidents of any kind in the park during the year; in fact, there has never been an accident in connection with airplane service since the park trips were first undertaken.

The park was visited during the year by the House of Representatives Subcommittee of the Committee on Appropriations and several other Members of Congress, headed by Representative Frank Murphy, of Ohio, and also by the Senate Committee on the Conservation of Wild Life Resources, headed by Senator F. C. Walcott, of Connecticut. The members of both groups from our National Congress expressed satisfaction with the park and indicated their support in future legislation.

There are three national monuments in Alaska under the control of the National Park Service. These are Sitka National Monument, which was established in 1910; Katmai National Monument, established in 1918; and Glacier Bay National Monument, established in 1925.

The Sitka National Monument, situated in southeastern Alaska, contains 57 acres and is a reservation of great beauty and historical interest. It was the scene of a massacre of Russians by Indians in 1802 and contains the graves of a Russian midshipman and six sailors killed in the Battle of Alaska in 1804. Among the principal objects of interest in this monument are 16 totem poles, relics of aboriginal life in that region. The old blockhouse, used by the Russians in the Battle of Alaska, has now been restored in its original dimensions and appearance by the Department of the Interior. This restoration was made possible through the action of the Alaska Historical Association and the Sitka Commercial Club, through which the necessary funds were raised. The work was accomplished under the direction of the Alaska Road Commission in connection with related work in that vicinity. Thus there has been no cost to the Government for this work.

Katmai National Monument lies near the base of the Alaska Peninsula on the shore bordering Shelikof Straits. This area of over a million acres includes Mount Katmai, which, in 1912, gave vent to a violent eruption. Another interesting spectacle in this monument is the Valley of Ten Thousand Smokes, in which several million little volcanoes or fumaroles are incessantly ejecting steam.

In addition to volcanic phenomena the surrounding region contains some magnificent lakes and mountain scenery, in which water fowl and fish are abundant, as are the great Alaska brown bears, the largest of the carnivorous animals. At present, this monument is practically inaccessible to any but the hardiest of mountaineers, but when the harbor at Amalik Bay can be developed and a 30-mile road constructed, explorers and tourists will take advantage of this unusual scenery and phenomena. On April 24, 1931, the President signed a proclamation extending the boundaries of this monument to include adjacent lands bordering Shelikof Straits.

Glacier Bay National Monument was created upon the petition of the Ecological Society of America and the indorsement of the National Geographic Society. This monument is situated in southeastern Alaska and contains approximately 1,820 square miles of glaciers and ice-covered peaks of the first rank, among which are Mount Fairweather, Lituya, La Perouse, and several others.

The region also contains a great variety of forest covering consisting of bodies of young trees which have been established since the retreat of the ice, and offers a unique opportunity for the scientific study of glacial behavior, of resulting movements and development of flora and fauna, as well as certain valuable relics of ancient interglacial forests.

### ALASKA ROAD COMMISSION

The Alaska Road Commission, constituted by the act of Congress approved January 7, 1905, as amended by an act of Congress approved May 14, 1906, is composed of three officers of the Army,

reporting to the War Department through the Chief of Engineers. The Federal funds disbursed are made available under the congressional appropriation "Construction and maintenance of roads, bridges, and trails, Alaska"; from the Alaska fund, "Construction and maintenance of wagon roads, bridges, and trails"; and from "Roads and trails, National Parks." In addition, the Territory has allotted funds for disbursement by this commission upon cooperative projects for road construction. Such funds are deposited in the Treasury of the United States and are disbursed by the disbursing officer of the Alaska Road Commission in the same way as Federal funds directly appropriated by Congress.

The total expended for all construction and maintenance to June 30, 1931, was \$17,273,794.62. Of this amount, \$11,885,558.61 was appropriated by acts of Congress, \$3,769,418.62 was allotted from the Alaska fund, and \$1,618,817.39 from Territorial appropriations and contributions.

The work in the last fiscal year was largely directed to maintaining the existing system and the improvement of the more important routes for the use of motor vehicles. New construction was confined to a few major projects upon which work has been in progress for several years.

The work accomplished during the fiscal year may be summarized as follows:

New construction: 52 miles of road,  $4\frac{1}{2}$  miles of sled road, 138 miles of trail, 6 airplane landing fields, and 19 shelter cabins.

Improvement:  $55\frac{1}{4}$  miles of road reconstructed,  $86\frac{1}{2}$  miles of road surfaced, and numerous small bridges and culverts rebuilt.

Maintenance:  $1,387\frac{1}{2}$  miles of road, 87 miles of tramway,  $789\frac{1}{2}$  miles of sled road,  $4,843\frac{3}{4}$  miles of permanent trail, 329 miles of temporary flagged trail, 736 miles of telephone lines, 30 airplane landing fields and 47 shelter cabins.

Total for all classes of work: 7,273 miles consisting of  $1,581\frac{1}{4}$  miles of road, 87 miles of tramway, 794 miles of sled road,  $4,481\frac{3}{4}$  miles of permanent trail, 329 miles of temporary flagged trail.

The cost during the year was \$907,576.62, of which \$343,916.44 was for new work and \$563,660.18 was for maintenance and improvement. Total expenditures during the fiscal year were \$1,288,273.46.

The more important roads upon which new construction was performed were the McCarthy-Nizina, Mount McKinley National Park, Gulkana-Chisana, Long-Poorman, Kasilof, Iliamna, Circle Hot Springs, Nome-Council, and Lucky Shot Mine-St. Peters. The bridge renewal program was continued.

The Richardson Highway was maintained open during the entire season. Improvement to new standard was continued and except for a few short sections this road is now in excellent condition for auto traffic.

Surfacing the Steese Highway was continued. As a result of the improvement traffic over this route continued to increase. Work was continued on the major project of constructing a road from Gulkana, on the Richardson Highway, to Chisana, through the mineralized belt north of the Wrangell Mountains. The work was started early in 1930 but an unusual amount of precipitation during the summer greatly retarded its progress.



The work of maintenance and rehabilitation has been pushed, and the roads and trails under the jurisdiction of the commission are in better shape than ever before. The total mileage of roads and trails constructed and maintained by the commission since its inception aggregate 11,189 miles, consisting of 1,664¾ miles of wagon road, 87 miles of tramway, 1,399¼ miles of sled road, 7,326 miles of permanent trail, and 712 miles of temporary flagged trail.

The roads and trails construction by the commission have not only opened up to development nearly all sections of the Territory but have effected large savings in freight charges. The major portion of this freight would not have been transported without the roads, and the indirect loss which would have been occasioned by the restriction on output and development, if the roads did not exist, can not be estimated.

A new 10-year program, to continue the work beginning with the fiscal year 1932, has been submitted. It provides for maintenance and improvement of the existing system and for needed new construction to keep pace with the development of the Territory. The appropriations recommended for this 10-year period are as follows:

(a) For maintenance and improvement of existing routes and for maintenance of new mileage added.....	\$3,047,000
(b) For new construction.....	7,500,000

Total for 10 years.....	10,547,000
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Of the above amount it is estimated that \$1,300,000 will become available from the Alaska fund, \$1,000,000 will be provided by Territorial appropriations, and the balance, \$14,247,000, will be provided by Federal appropriation; \$800,000 has been appropriated for the next year.

Under a cooperative agreement with the National Park Service the Alaska Road Commission continued the improvement, to automobile standard, of the pack trail previously constructed across the park. At the close of the fiscal year an office and warehouse had been erected at McKinley Park station; 71 miles of final location had been run, 46½ miles had been graded, 10 miles had been partially graded, and about 35 miles surfaced, at a total expenditure of \$625,931. The route selected is one of great scenic grandeur. A road and comfortable camps are absolutely necessary for the safety of the increasing tourist travel already visiting the park.

Upon the recommendation of the governor several years ago, the National Park Service made an agreement with the president of the Alaska Road Commission for the supervision of annual repairs and improvements in the Sitka National Monument. During the fiscal year \$670.95 were expended in repairing and painting the totem poles, clearing and graveling roads and footpaths, and extending and repairing a bulkhead along Indian River to protect the monument from overflow. The National Park Service provided the necessary funds.

The Sitka National Cemetery is the only national cemetery in the Territory. It was created by Executive order dated June 12, 1924. Its administration is under the direction of the Alaska Road Commission, a caretaker has been appointed, and the Quartermaster General of the Army makes a small annual allotment for its maintenance.

The original tract was withdrawn for use as a military and naval cemetery by Executive order of June 21, 1890. Following the withdrawal of the marine garrison in 1912, the tract was neglected. It contains the graves of members of the Army, Navy, Marine Corps, Public Health Service, Coast and Geodetic Survey, Coast Guard, and others stationed in the Territory or on duty in its waters. It also contains the grave of the Hon. John G. Brady, Governor of the Territory from 1897 to 1906.

Through the efforts of the local post of the American Legion, the Governor of Alaska, and the president of the Alaska Road Commission, funds were secured from the Navy in 1922, and later from the Territory and the Alaska Road Commission, with which the cemetery was partially restored, roads and walks laid out, graves identified and properly marked.

The tract was surveyed and a map was prepared, submitted, and approved showing permanent layout of roads, walks, burial plots, etc. A part of the cemetery has been cleared, a concrete rostrum built, a 60-foot flagpole erected, two field guns mounted, flags, halcyards, and small decoration flags for the graves secured; a permanent fence of concrete posts supporting a cable erected; a road within the cemetery completed, and additional gravel placed on the walks. Soldier graves have been transferred from other post cemeteries in the Territory. Expenditures during the past year were \$987.47 from funds allotted by the Quartermaster General.

Already the cemetery presents a very creditable appearance. The work of rehabilitation and improvement will be continued as funds become available. A large number of tourists visited the cemetery and the monument during the last season.

### PACIFIC-YUKON HIGHWAY

The Pacific-Yukon Highway is the name given to a road project which when completed will connect the northwestern part of the United States with British Columbia, Yukon Territory, and Alaska. The general route of this highway will probably be as shown on the map accompanying this report. The proponents of the Pacific-Yukon Highway project desire a serviceable automobile road throughout western Canadian Provinces to Alaska which can now be reached only by ship or by airplane. The northern terminal of this road would probably be Fairbanks.

It is urged in behalf of the project that it would open up vast areas in British Columbia, Yukon Territory, and Alaska which are now so inaccessible that development is impracticable.

The total distance from Seattle to Fairbanks over the general route of this highway is about 2,220 miles, of which there are now sections of usable road aggregating about 1,250 miles, leaving about 970 miles of new road to be built for the completion of the project. This new mileage is distributed about as follows:

	Miles
British Columbia.....	450
Yukon Territory.....	280
Alaska.....	230
Total.....	970



THE FEDERAL AND TERRITORIAL BUILDING AT JUNEAU, ALASKA, COMPLETED IN 1931 AT A COST OF APPROXIMATELY \$1,000,000



FOREST ROAD SCENE IN ALASKA



GRADING SALMON FROM TRAP IN SOUTHEASTERN ALASKA



TYPICAL STAND OF ALASKAN TIMBER

The country through which this proposed road would run is generally suitable for road-building operations, and from the information at hand it is not believed that any insuperable obstacles will be found.

In 1929 the Alaska legislature adopted a memorial to the United States Congress indorsing the project and petitioning that steps be taken toward arranging for conferences on the subject between representatives of the United States and Canada. The same body also passed acts in 1929 and 1931 providing for the advertisement of the advantages of the project and appropriating funds to be used for that purpose.

May 15, 1930, the President of the United States approved the following act:

[PUBLIC NO. 228, 71ST CONGRESS]

[H. R. 8888]

AN ACT Providing for a study regarding the construction of a highway to connect the northwestern part of the United States with British Columbia, Yukon Territory, and Alaska in cooperation with the Dominion of Canada.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the President of the United States is hereby authorized to designate three special commissioners to cooperate with representatives of the Dominion of Canada in a study regarding the construction of a highway to connect the northwestern part of the United States with British Columbia, Yukon Territory, and Alaska, with a view to ascertaining whether such a highway is feasible and economically practicable. Upon completion of such study the results shall be reported to Congress.

SEC. 2. The sum of \$10,000 is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, for the purposes of carrying out the provisions of this act.

Approved, May 15, 1930.

Pursuant to the foregoing act, the President of the United States appointed as commissioners:

Mr. Herbert H. Rice, assistant to the president General Motors Corporation, chairman.

Mr. Ernest Walker Sawyer, assistant to the Secretary of the Interior.

Major Malcolm Elliott, Corps of Engineers, United States Army, president Alaska Road Commission.

### BUREAU OF PUBLIC ROADS

Funds designated for expenditure by the Bureau of Public Roads have been available for use in the Territory since 1917. Construction and maintenance operations from 1917 to 1920 were handled by joint representatives of the Alaska Road Commission and Bureau of Public Roads. On July 1, 1920, a branch office of district 1 of the bureau was established and an assistant district engineer placed in charge. Since that date all roads within the national forests have been constructed and maintained by the Bureau of Public Roads. During the period from July 1, 1920, to March 1, 1927, plans for proposed projects and major problems in construction work were submitted to the district office at Portland, Oreg., for approval. On March 1, 1927, district 11 of the Bureau of Public Roads was created with headquarters at Juneau.

All Federal funds now being expended on the roads within the national forests are provided by the Federal highway act, approved June 11, 1916, and subsequent amendments thereto. Federal appropriations have made available for expenditure by the Bureau of Public Roads \$5,945,184 for roads in and adjacent to the national forests in Alaska. In addition to the Federal funds so provided, \$359,123 have been made available by the Territorial board of road commissioners, making a total to June 30, 1931, of \$6,304,307. A total of 230.174 miles of highways has been constructed and is now under maintenance by the bureau with funds provided under the above-mentioned Federal highway act and in cooperation with funds made available by the Territorial board of road commissioners. An additional 31.106 miles are at present under construction and will be completed within the present year, making a total of 261.280 miles of forest highways. A total expenditure of \$690,662.79 has been made during the past fiscal year. Segregation of this amount by projects is shown in the following tabulation. All funds have been expended on projects which are a part of a highway-development program jointly recommended by representatives of the Bureau of Public Roads, Forest Service, and Territorial board of road commissioners and approved by the Secretary of Agriculture.

All highways constructed within the forests are surfaced with gravel or crushed rock on account of the soft subgrade material ordinarily encountered in the Territory and which will not support traffic by wheeled vehicles until protected with some form of metal surface. Gravel-surfaced highways are completed adjacent to all the larger coast towns. The construction of motor highways from these communities is particularly justified by the greatly increasing number of motor vehicles owned and used by Alaskans and by the great increase of suburban homes and industrial activities, such as truck farms, dairy farms, fur farms, power sites, mines, and other industries, the sites of which are otherwise inaccessible.

Project	Miles surveyed	Miles constructed	Funds expended fiscal year 1931		
			Federal	Territorial	Total
Construction:					
Moose Pass Highway, Hope-Sunrise, surfaced		(11.10)	\$1,587.47		\$1,587.47
Kenai River, Schooners Bend Bridge		.64	362.08		362.08
Texas Creek, Texas Bridge-Ibex Creek Surfaced		(4.37)	20,040.68		20,040.68
Texas Creek, Ibex Creek-Summit section		8.80	65,993.31	\$14,440.00	80,433.31
Tongass Highway, Wards Cove, section 1, widened		(8.63)	138,353.42		138,353.42
Glacier highway, Mendenhall Glacier, section		1.43	27,859.14		27,859.14
Wrangell Highway, Shoemaker Bay, section 2		2.07	50,017.12		50,017.12
Tongass Highway, Wards Cove-Mud Bay section		2.93	73,090.84		73,090.84
Glacier Highway, Switzer Bridge-Rocky Point section		1.33	1,222.42		1,222.42
Salmon River, Riverside-11-Mile section		1.23	14,900.30		14,900.30
Moose Pass Highway, sections 1 and 2, reconstructed		{ 1.21 10.92	{ 27,080.58 27,080.58		{ 27,080.58 27,080.58
Tongass Highway, Herring Bay section		.76	6.06		6.06
Glacier Highway, Point Lena section		.57	9,790.85		9,790.85
Seward Highway, Resurrection River Bridge		.33	551.21		551.21
Wrangell Highway, Wrangell cannery section		(1.02)	3,095.50		3,095.50
White Pass Highway, Skagway River Bridge		(.41)	1.50		1.50
West Coast Highway, Craig Village Road		.38	148.59		148.59

Project	Miles surveyed	Miles constructed	Funds expended fiscal year 1931		
			Federal	Territorial	Total
Construction—Continued.					
West Coast Highway, Klawak Village Road		0.79	\$197.56		\$197.56
Petersburg Creek Highway, cemetery-boundary		2.78	935.86		935.86
Yakutat Highway, Yakutat cannery section		1.53	364.01		364.01
Kake Highway, Kake cannery section		.72	549.15		549.15
Glacier Highway, Juneau-Thane section		(3.58)	795.35		795.35
Kenal River—Coopers Creek Bridge		(.04)	2,590.52		2,590.52
Seward Highway, Grouse Lake fill		(.07)	740.41		740.41
Salmon River, Fish Creek Bridge		(.03)	1,433.49		1,433.49
White Pass Highway, Skagway-Denver Glacier section		5.23	4,080.23		4,080.23
Tongass Highway, Ketchikan-Wards Cove, section 2		(2.34)	10,355.94		10,355.94
Glacier Highway, Mendenhall widening river bridge		(.21)	912.30		912.30
Surveys:					
Tongass Highway, Saxman-Beaver Falls, section LS	11.25		1,400.92		1,400.92
Salmon River, Riverside-11-Mile section LS	2.44		3.00		3.00
Seward Highway, Resurrection River Bridge, LS	.34		452.96		452.96
Kenal River Highway, Quartz Creek relocation, LS	12.14		4,790.26		4,790.26
Glacier Highway, Juneau-Thane section LS	3.70		4,310.13		4,310.13
Douglas Highway, Douglas-Falls Creek section LS	4.40		4,157.98		4,157.98
Douglas Highway, Gastineau Channel Bridge LS	.66		1,742.00		1,742.00
Wrangell Highway, Wrangell cannery section LS	1.02		1,154.42		1,154.42
White Pass, Skagway River Bridge LS	.30		838.02		838.02
West Coast Highway, Klawak Village Road LS	2.65		3,015.67	\$250.00	3,265.67
Yakutat Highway, Yakutat Village Road LS	1.55		1,633.35	250.00	1,883.35
Glacier Highway, Point Lena section LS	1.25		742.25		742.25
Seward Highway, Snow River-Moose Pass section LS	12.19		6,218.74		6,218.74
West Petersburg Road LS	3.01		2,700.00		2,700.00
Kake Highway, Kake-Cannery section LS	1.93		1,658.80		1,658.80
West Coast Highway, Craig Village Road LS	1.53		960.78		960.78
Glacier Highway, Lemon Creek Loop LS	2.08		839.76		839.76
Glacier Highway, Juneau-Duok Creek widening LS	0.00		379.99		379.99
Glacier Highway, Eagle River Landing extension LS	.51		146.38		146.38
Mitkof Highway, Mount Point Power plant section LS	10.00		1,311.92		1,311.92
Emergency work			2,781.05		2,781.05
Maintenance			69,970.64	10,001.41	79,972.05
Commissioner of agriculture			350.00		350.00
Administration			36,239.03		36,239.03
Equipment purchase			12,317.22		12,317.22
Equipment rentals			24,085.56		24,085.56
Motor ship highway			2,066.01		2,066.01
Refunds to cooperators				4,670.00	4,670.00
Total			658,351.38	32,311.41	690,662.79

### TERRITORIAL ROAD COMMISSION

Under the provisions of the Territorial cooperative road act of April 21, 1919, amended April 30, 1931, there was created a Territorial board of road commissioners consisting of the governor as its chairman, the treasurer of the Territory, and the Territorial highway engineer.

The construction and maintenance of roads, trails, bridges, aviation fields, and shelter cabins in the Territory is handled under the direction of the board and supported by appropriations made by the legislature.

The Territory is divided into four road districts corresponding to the judicial divisions, in each of which there is a divisional board consisting of two elective members. The elective members of the respective divisional boards are asked for recommendations for road work in their districts, and such recommendations are, as far as possible, carried out either by Territorial funds or in cooperation with the Bureau of Public Roads or the Alaska Road Commission.

As funds necessary to meet the ever-increasing demands for new projects have been inadequate, the available funds must be applied to projects considered of greatest public need. In its distribution of funds the board is guided by such recommendations and petitions as are in its possession and the personal knowledge of the highway engineer who makes field inspections, reporting directly to the board as to the merits of new projects and the status of work under way.

Cooperative work with the Bureau of Public Roads is supervised by the district engineer, while funds allotted to cooperative projects with the Alaska Road Commission are supervised by the president of the Alaska Road Commission.

The Alaska Legislature at its 1931 session made the following appropriation for public works under the Territorial road board for the biennium ending March 31, 1933:

Roads, trails, bridges, landing fields, hydroplane ports-----	\$300,000
Seward Peninsula telephone lines-----	5,000
Fairbanks water front repair-----	7,500
Iditarod River-----	5,000
Shelter cabins-----	10,000
	<hr/> 327,500

In addition to this the Territory receives 25 per cent of certain revenues from timber sales in the national forests. Seventy-five per cent of the Territory's portion is available for general road work throughout the Territory. For the fiscal year ending June 30, 1931, this amounted to \$9,698.52.

The following allotments were made by the board for the year ending March 31, 1932:

	First division	Second division	Third division	Fourth division	Total
Expended by board-----		\$1,000	\$0,300	\$2,500	\$0,800
Cooperative with Alaska Road Commission-----	\$13,600	28,500	20,000	20,100	81,200
Cooperative with Bureau Public Roads-----	6,000		4,000		10,000
Seward Peninsula telephone lines-----		2,500			2,500
Fairbanks water front-----				4,611	4,611
Iditarod River-----				5,000	5,000
Shelter cabins-----		1,500	700	1,450	3,650
Total-----	19,600	33,500	31,000	42,061	126,161

### COMMERCIAL AVIATION

Commercial aviation in Alaska was first inaugurated by Col. C. Ben Eielson about nine years ago, with a special experimental air-mail contract for carrying United States mail from Fairbanks to McGrath, a distance of about 800 miles. At that time mail was being transported by dog sled and was about 17 days in transit whereas the first air mail trip was accomplished in 2 hours and 45 minutes.



Colonel Eielson's success instantly demonstrated the possibilities of the airplane as a means peculiarly adapted to the difficult transportation conditions of interior Alaska.

With the realization of its economic possibilities, the people of interior Alaska urged the legislature in 1925 to authorize the construction of aviation fields and as a result aviation fields have been constructed at the following localities:

- |                             |                         |                          |
|-----------------------------|-------------------------|--------------------------|
| 1. American Creek.          | 23. Fort Yukon.         | 46. Nome.                |
| 2. Anchorage.               | 24. Golovin.            | 47. Nulato.              |
| 3. Bettles River.           | 25. Healy.              | 48. Palmer Creek.        |
| 4. Bluff.                   | 26. Kenai.              | 49. Pilgrim Hot Springs. |
| 5. Candle.                  | 27. Kiwalik.            | 50. Ruby.                |
| 6. Cache Creek.             | 28. Koyuk.              | 51. Seward.              |
| 7. Chandalar.               | 29. Kotzebue.           | 52. Skagway.             |
| 8. Chena Hot Springs.       | 30. Kobuk.              | 53. Solomon.             |
| 9. Chicken.                 | 31. Kasilof.            | 54. Susitna Station.     |
| 10. Chisana.                | 32. Lake Minchumina.    | 55. Tanana.              |
| 11. Chistochina.            | 33. Livingood.          | 56. Tanana Crossing.     |
| 12. Circle Hot Springs.     | 34. Lost River.         | 57. Takotna.             |
| 13. Copper Center.          | 35. Lower Tonsina.      | 58. Telida.              |
| 14. Cordova (17 miles out). | 36. Manley Hot Springs. | 59. Teller.              |
| 15. Council.                | 37. Medfra.             | 60. Unalakleet.          |
| 16. Curry.                  | 38. Moose Creek.        | 61. Upper Tonsina.       |
| 17. Deering.                | 39. Moses Point.        | 62. Valdez.              |
| 18. Donnelly.               | 40. Marshall.           | 63. Valdez Creek.        |
| 19. Eagle.                  | 41. McCarthy.           | 64. Wales.               |
| 20. Fairbanks.              | 42. McGrath.            | 65. Wasilla.             |
| 21. Fishhook.               | 43. Nabesna.            | 66. Willow Creek.        |
| 22. Flat.                   | 44. Nenana.             | 67. Wiseman.             |
|                             | 45. Ninilchik.          |                          |

#### HYDROPLANE PORTS

- |                |              |                     |
|----------------|--------------|---------------------|
| 1. Ketchikan.  | 3. Wrangell. | 5. Skagway (float). |
| 2. Petersburg. | 4. Cordova.  |                     |

The dimensions of the landing fields vary in size from 250 by 600 feet to 400 by 1,400 feet. Fairbanks and Anchorage fields have two runways 400 by 2,000 feet. The Fairbanks field is equipped with lighting facilities of B. B. T. intermediate airport flood light and a beacon airport flasher.

Hydroplane airports consist of a platform and ramp leading below the water level.

The total aid to aviation has been approximately \$180,000 and it is believed the economic benefits resulting from this method of transportation have justified this expenditure.

There were six commercial aviation companies operating during the year, one each being located at Nome, Fairbanks, Anchorage, Chitina, Juneau, and Ketchikan. One individual flyer with a single plane operated out of McCarthy during the year.

The approximate business transacted during the fiscal year ending June 30, 1931, is as follows:

Planes in service.....	26
Plane miles.....	381, 234
Passengers carried.....	7, 947
Passenger miles.....	947, 695
Mail and express carried (pounds).....	161, 718

The progress and success of commercial aviation in the Territory as shown by the preceding table amply justifies the predictions of

those optimistic persons who so earnestly applied their time and capital toward the advancement of the industry in its early stages of development.

### WEATHER

July was cool throughout the Territory with precipitation slightly above normal near the Pacific coast and about normal elsewhere. Measurable snowfall was reported only at Barrow.

August temperatures were about normal in the northern division and above normal near the Pacific coast. Precipitation was light near the Pacific coast, unusually so in the extreme southeast, and was very heavy and frequent elsewhere, exceeding all previous records for August in portions of the Yukon Valley.

September was comparatively warm in the southeast and cool in other districts. Precipitation was generally below the average except in the southeast. Light snow fell at most stations except near the Pacific coast.

October was cool except in the extreme west and extreme north. Precipitation was light near the Gulf of Alaska and heavy in other districts. Snowfall was moderate. At a few stations in the southeast and on Bristol Bay there was no snowfall.

November was cool and wet, except in the southeast where it was warm, and in portions of the Yukon Valley and Bering Sea districts where it was comparatively dry. Snowfall was moderately heavy in most districts.

December was unusually warm and wet, except in the Aleutian Islands where it was cool and comparatively dry, and in portions of the Yukon Valley where it was dry. Snowfall was moderately heavy except in the southeast.

Unusually warm weather continued through January except in the Aleutian Islands and the Kuskokwim Valley. Precipitation was heavy near the Pacific coast and light elsewhere. Snowfall was light in all districts.

February was warm and wet throughout nearly all of the Territory, but precipitation was below the average over most of the Yukon Valley, and temperature was below the average in the Aleutian Islands and on Bristol Bay.

March was warmer and drier than the average in almost all portions of the Territory.

April was cold in the Yukon Valley and warm in other districts. Precipitation was above the average in the southeast and portions of the Bering Sea district and light elsewhere.

May temperatures were low especially in the interior. Precipitation was much above the average generally but was unusually light near the Alaska Peninsula. Valdez was the only station reporting snowfall near the Pacific coast and no snow fell at many stations in the interior.

June temperatures and precipitation were above the average near the Pacific coast but generally below the average in the interior. Light snow fell at Rampart and Tanana.

The highest temperature recorded during the year was 92° at Anchorage on June 26, and the lowest was -57° at Eagle on January 22.

The first freezing temperatures of fall occurred late in September and last freezing temperatures of spring during April at a few stations in the southeastern district, while in the extreme north freezing temperatures occurred during each month of the year.

The greatest amount of precipitation recorded during the year was 178.10 inches at Ketchikan, but it is probable that amount was exceeded at Latouche where the record ended with December. The least amount recorded for the year was 4 inches at Barrow. The greatest monthly amount was 35.16 inches at Ketchikan in December, and the least monthly amount was none at Barrow in January. The greatest amount of snowfall recorded for the year was 339.6 inches at Valdez and the least was 1 inch at Sitka.

The Yukon River was closed by ice from October 21 in the middle portion to November 15 in the upper portion, and the Kuskokwim River between October 20 and November 10. Ice broke in the upper Yukon, May 10, and in the middle Yukon May 18, in the upper Kuskokwim May 9, and in the lower portion May 15.

On a later page will be found a table giving temperature and precipitation data for the year for representative stations in various portions of the Territory and also similar data for a few stations in the States for the purpose of comparison.

### ALASKA AIRWAYS WEATHER SERVICE

Because of the development of aviation in Alaska, the Weather Bureau established a commissioned office at Fairbanks, in 1929, primarily for the purpose of organizing an airways weather service in the Territory. Due to limited funds the first year, the majority of the observers served without compensation, the employees of the United States Signal Corps donating their services for that work. Beginning July 1, 1930, however, funds became available whereby the airways observers in the Territory receive a small monthly salary for recording and telegraphing airways reports each day to designated stations.

Eight additional intermediate airway stations have been established during the past fiscal year. Nearly all of the airways weather stations transmit two observations daily and a few transmit three daily during a limited portion of the year. The messages contain a statement as to the height of the ceiling, the visibility, and general flying conditions. In order that the airways weather observations be available at hours when most needed, the United States Signal Corps have arranged a special network of radio schedules, thus providing a rapid and excellent dissemination of airways weather reports at strategic points in the Territory. In addition to the airways observations from the intermediate stations, the commissioned Weather Bureau offices receive meteorological data from designated places in the Territory for the purpose of constructing weather maps which are necessary for the forecasting of weather for aviation interests.

A commissioned office was established at Nome, August 1, 1930, with an assistant meteorologist in charge, and a senior observer.

As a further aid to aerial navigation in the Territory, and also in order to obtain upper air data in the northern latitudes, the depart-

ment has inaugurated pilot-balloon observations at Nome and at Fairbanks. These observations began at Nome and Fairbanks in August, 1930, and Juneau was supplied with pilot-balloon equipment during June, 1931. By means of the pilot-balloon observations, the velocity and direction of the wind of the upper air can be determined. The rubber balloons, which are used in the observations, are filled with an amount of hydrogen which will give the balloon, when released, an ascensional rate of 180 meters per minute (about 600 feet). The drift of the balloon is observed by means of a theodolite on the roof of the Weather Bureau building. The observations, when made, are taken at 7 a. m. and at 1 p. m., one hundred and fiftieth meridian time. Pilot-balloon observations are not made if precipitation is occurring at the designated observational hours nor if the ceiling is less than 1,000 feet. At the close of the fiscal year, Nome had taken 480 and Fairbanks 569 balloon observations since this service began. Only two observations were missed at Fairbanks, because of adverse weather conditions, during March, 1931. The length of the observations at Fairbanks were also greatest during that month, there being 13 observations when the balloon was followed beyond an altitude of 30,000 feet.

An aerometeorograph, with the necessary calibration equipment, was sent to Fairbanks for the purpose of obtaining temperature, humidity, and barometric pressure observations of the upper air over Fairbanks. Solar radiation equipment, consisting of an Eppley pyrheliometer and an Engelhard recording microammeter, was en route to the Fairbanks Weather Bureau office at the close of the fiscal year.

*Comparative temperature and precipitation data, July, 1930, to June, 1931*

[By U. S. Weather Bureau; mean temperatures, °F.]

Station	Section	July	August	September	October	November	December	January	February	March	April	May	June	Maximum temperature	Minimum temperature	Precipitation	Snow-fall
Anchorage	Pacific coast	56.4	58.6	48.6	35.2	23.6	26.8	24.8	26.4	26.0	38.8	46.0	56.2	92	-6	10.01	-----
Barrow	Arctic coast	43.5	38.6	32.8	16.9	-5.4	-10.3	-18.8	-----	-----	-----	-----	-----	70	79	-----	-----
Bethel	Kuskokwim Valley	51.0	52.8	42.2	31.4	7.8	11.8	7.9	5.6	11.2	18.2	38.7	52.8	79	-37	16.44	30.3
Chignik	Pacific coast	49.8	52.2	45.6	38.2	29.2	28.9	31.2	24.2	29.3	32.7	39.8	-----	75	-3	-----	106.2
Dillingham	Bering Sea coast	54.4	56.0	46.8	38.5	19.8	-----	-----	-----	23.2	27.8	40.5	-----	79	-13	24.33	-----
Dutch Harbor	Aleutian Islands	51.6	54.3	47.4	43.4	35.5	31.8	31.9	26.8	32.2	35.5	41.0	-----	76	11	53.35	157.6
Eagle	Yukon Valley	61.2	55.9	43.0	23.5	1.0	6.6	1.5	6.6	3.6	25.1	40.4	-----	84	-57	13.04	51.6
Fairbanks	Tanana Valley	59.6	54.0	42.2	26.0	-3.0	0.1	-0.8	5.2	8.0	26.1	40.8	-----	82	-37	15.98	43.6
Fort Yukon	Yukon Valley	62.8	55.0	42.0	20.2	-9.2	-9.0	-11.7	-2.3	-2.4	18.7	37.2	-----	84	-46	7.65	41.4
Holy Cross	do	52.2	52.6	41.3	29.2	4.0	9.6	7.4	6.2	11.4	22.4	38.8	-----	80	-41	20.00	80.1
Juneau	Southeast	54.8	55.6	50.2	40.3	37.0	39.0	37.6	36.2	32.8	43.2	46.0	-----	77	9	107.92	46.3
Ketchikan	do	57.2	61.1	55.8	45.2	42.6	43.8	42.5	39.9	39.4	46.5	49.6	-----	81	18	178.10	17.0
Kodiak	Pacific coast	53.4	56.3	49.1	41.0	35.0	34.5	35.6	32.8	34.2	39.6	44.2	-----	81	9	54.01	20.2
Matanuska	Matanuska Valley	58.2	57.0	44.8	32.4	20.0	26.8	24.4	25.4	25.3	38.8	45.1	-----	78	-12	24.19	46.8
Midle Seven (Cordova)	Pacific coast	54.8	57.0	49.6	39.5	34.4	38.2	37.0	35.0	30.8	42.6	45.3	-----	78	-2	146.22	99.6
Nome	Seward Peninsula	47.2	46.9	38.8	30.5	5.0	10.0	8.3	5.9	11.7	19.3	32.8	-----	87	-26	19.50	32.3
Rampart	Yukon Valley	57.4	51.6	40.0	21.4	-7.8	-4.0	-4.4	0.9	2.4	20.0	36.5	-----	80	-39	9.01	40.0
St. Paul Island	Bering Sea	43.8	47.2	44.5	40.6	30.4	29.2	26.7	18.4	24.2	29.8	35.0	-----	1	27.49	131.5	-----
Seward	Pacific coast	54.6	55.1	48.2	39.4	30.2	32.2	32.0	30.3	30.0	41.5	43.9	-----	76	0	86.22	62.5
Sitka	Southeast	54.4	57.8	50.5	44.0	41.6	42.0	40.4	39.0	38.2	45.1	47.9	-----	79	20	101.93	1.0
Skagway	do	57.2	58.0	50.5	39.0	33.0	36.4	34.2	33.6	30.7	43.3	48.5	-----	80	-4	44.15	-----
Tanana	Yukon Valley	58.3	52.6	41.2	24.7	-5.3	0.3	-0.8	11.6	6.4	22.4	39.5	-----	81	-33	17.79	41.9
Valdez	Pacific coast	52.6	52.3	44.6	33.5	27.9	29.0	27.7	27.0	22.8	34.2	38.0	-----	76	7	73.96	339.6
Whale Island	do	52.8	55.4	47.0	38.0	31.7	31.3	32.3	30.6	-----	-----	42.2	-----	76	0	48.25	38.3
Wrangell	Southeast	57.3	59.1	52.8	43.0	40.1	41.4	39.7	37.4	35.0	44.8	48.6	-----	82	17	114.43	19.7
Bismarck	North Dakota	74.8	71.3	57.7	41.4	31.1	22.8	24.6	30.4	27.2	45.6	54.4	-----	102	-9	-----	30.9
Boston	Massachusetts	72.6	70.5	69.4	53.0	45.0	33.2	30.6	30.6	39.3	50.2	60.3	-----	98	4	49.28	40.8
Chicago	Illinois	74.2	73.4	66.9	51.6	42.4	29.7	32.0	35.6	34.8	49.2	55.6	-----	101	1	26.19	27.2
Kansas City	Missouri	82.8	80.2	72.4	56.4	47.4	35.2	38.2	42.2	39.2	55.3	62.0	-----	107	7	27.49	14.6
Philadelphia	Pennsylvania	78.0	75.7	74.0	56.7	47.6	36.6	36.2	37.4	42.3	53.2	64.2	-----	103	14	33.04	4.1

## THE ALASKA CABLE SYSTEM

The Alaska Cable System continues to maintain its position as one of the most important and efficient of Government functions in the Territory. The amount of traffic over the system has steadily grown from \$26,977.69 during the first year of operation to \$673,643.94 in the fiscal year 1931. A careful study of the following table, showing the amount of business handled by the Signal Corps each year from 1903 to 1931, will reveal the upward or downward trend of Alaskan commerce and industry during those years. It is worthy of note that since 1922 there has been an appreciable increase each year, with the fiscal year 1931 showing an increase of \$2,759.95.

The system serves the newspapers throughout the Territory with press reports and during the year approximately 2,500,000 words of this class were transmitted, giving Alaska the important news dispatches simultaneously with the States.

The money-transfer service, which has been in operation on the system for the past two years, is extensively used by the public. There are now 26 money-transfer stations on the system and the value of the service is apparent in the volume of transfers made.

	Number of messages (all classes)	Number of words, press matter	Value of commercial this line and other line traffic	Value of Govern- ment traffic	Total
1903			\$14,243.54	\$83,113.34	\$47,356.88
1904	55,569		29,748.74	46,777.02	75,525.76
1905	134,680		104,139.01	71,849.28	175,988.29
1906	306,454		195,143.34	104,807.93	299,951.27
1907	310,000		236,912.39	135,746.38	372,658.77
1908	134,412		229,825.85	144,041.12	374,866.97
1909	143,995		222,888.40	188,782.66	411,671.08
1910	150,779		207,083.91	174,005.00	381,088.91
1911	189,281		208,726.95	162,214.75	360,941.70
1912	136,216		206,548.32	182,641.94	389,190.26
1913	140,343		217,499.84	180,677.23	398,177.07
1914	137,502		217,351.35	161,370.00	378,721.35
1915	115,484	1,441,471	197,736.71	116,530.83	314,267.54
1916	131,413	1,410,946	188,982.68	194,571.01	383,553.69
1917	200,363	1,657,778	221,902.63	194,194.15	416,096.83
1918	258,547	2,367,150	228,072.47	313,302.63	541,375.10
1919	260,651	3,025,023	245,599.87	360,892.19	606,492.06
1920	219,966	2,875,656	239,495.03	231,633.02	471,128.05
1921	174,636	2,732,752	212,643.89	203,341.72	415,985.61
1922	214,068	2,629,160	241,160.06	141,708.84	382,868.90
1923	214,680	2,890,728	264,961.87	127,100.52	392,161.39
1924	223,031	2,595,215	273,315.69	135,621.63	408,937.32
1925			276,900.01	165,330.97	442,230.98
1926	237,315		312,938.65	157,216.88	470,155.53
1927			324,069.02	108,274.10	432,343.12
1928			336,886.95	175,342.12	512,229.07
1929			308,292.24	226,272.14	534,564.38
1930	347,128	2,302,021	357,906.26	312,977.73	670,883.99
1931			334,015.94	339,628.00	673,643.94

<sup>1</sup> Includes receipts collected from opening of system.

## STATIONS ON THE SYSTEM

## Radio stations

Anchorage.  
Bethel.  
Candle.  
Circle.

Craig.  
Fairbanks.<sup>1</sup>  
Fort Egbert.  
Fort Gibbon.

Fort Yukon.  
Holy Cross.  
Hot Springs.  
Iditarod.

<sup>1</sup> Land line; Morse circuit used between these stations.

Kodiak.  
Kotzebue.  
Kanakanak.  
Livengood.  
Nome.

Nulato.  
Point Barrow.  
Ruby.  
St. Michael.  
Squaw Harbor.

Teller.  
Tacotna.  
Wiseman.  
Valdez.  
Fort Lawton.

*Cable and radio stations*

Juneau.  
Ketchikan.  
Seward.<sup>1</sup>  
Seattle.

Haines.  
Skagway.  
Cordova.  
Petersburg.

Sitka.  
Wrangell.

Increased activities in aviation throughout the Territory during the past year created a necessity for the collection and dissemination of meteorological data. Accordingly, the Weather Bureau established and now maintains meteorological stations at Fairbanks and Nome, where, aided by the Point Barrow station, the data are compiled and sent out twice daily over the Signal Corps system. This service is a very important factor in the weather predictions for Alaska and the entire United States.

*List of all stations with call letters and power*

Station	Call letters	Type of transmitter and power
Anchorage-----	WXE	4-kilowatt tube, GW MF; 1-kilowatt tube CW HF; 750-watt, tube CW and ICW MF.
Bethel-----	WXI	50-watt tube, CW MF.
Candle-----	WXN	Do.
Circle-----	WXD	2-kilowatt arc MF; 50-watt tube, CW MF.
Cordova-----	WTU	200-watt tube, CW, ICW, MF.
Craig-----	WXP	50-watt tube, CW MF.
Fairbanks-----	WXP	2-kilowatt arc (600-watt tube, ACW MF, unserviceable).
Fort Egbert-----	WXQ	500-watt tube, ACW MF; 50-watt tube, CW MF.
Fort Gibbon-----	WXS	50-watt tube, CW MF.
Fort Yukon-----	WXX	Do.
Haines-----	WTV	200-watt tube, CW and ICW MF.
Holy Cross-----	WXM	50-watt tube, CW MF.
Hot Springs-----	WKK	Do.
Iditarod-----	WXL	2-kilowatt arc, unserviceable; 50-watt tube CW MF.
Juneau-----	WXA	750-watt tube, CW and ICW MF; 500-watt tube CW MF.
Kanakanak-----	WZE	750-watt tube, CW MF; 50-watt tube CW MF.
Ketchikan-----	WXH	10-kilowatt tube; CW MF; 2-kilowatt tube CW and ICW and telephone 1-kilowatt tube, CW HF; 500-watt tube, ACW MF.
Kodiak-----	WZA	750-watt tube, CW MF.
Kotzebue-----	WXW	50-watt tube, CW MF.
Livengood-----	WXF	Do.
Nome-----	WXY	4-kilowatt tube, CW MF; and 200-watt tube, ACW MF.
Nulato-----	WXZ	500-watt tube, ACW MF; 50-watt tube, CW MF.
Petersburg-----	WTQ	200-watt tube, CW and ICW MF.
Point Barrow-----	WXB	500-watt tube, ACW (combined HF and MF); 100-watt tube CW MF; 100-watt tube CW HF.
Ruby-----	WXU	50-watt tube, CW MF.
St. Michael-----	WXT	Do.
Seattle-----	WVD	10-kilowatt tube, CW MF; 1-kilowatt tube CW HF; 500-watt tube, ACW HF.
Seward-----	WXR	700-watt tube, CW (BC-140) MF; 500-watt tube, ACW MF; 500-watt tube, ACW HF.
Sitka-----	WXC	200-watt tube, CW and ICW MF.
Skagway-----	WZO	500-watt tube, ACW HF.
Squaw Harbor-----	WZF	750-watt tube, CW and ICW MF; 500-watt tube, ACW HF; 50-watt tube, CW MF.
Tacotna-----	WXV	50-watt tube, CW MF.
Teller-----	WZR	100-watt tube, CW MF.
Valdez-----	WXJ	50-watt tube, CW MF.
Wiseman-----	WXG	100-watt tube, CW HF; 100-watt tube, CW MF.
Wrangell-----	WTG	200-watt tube, CW and ICW MF.

<sup>1</sup> Land line; Morse circuit used between these stations.

### NAVAL COMMUNICATION

The Navy Department maintains a radio communication system in Alaska by means of a chain of radio stations located at Cordova, Dutch Harbor, and St. Paul Island.

This communication system serves the naval requirements. In January, 1931, the handling of commercial and other Government traffic was turned over, by the Navy, to the Army Signal Corps. However, commercial messages and other Government messages from ships in Alaskan waters or from communities served only by naval radio stations are accepted by the naval radio stations and delivered to the nearest Army Signal Corps station for further transmission.

The stations at Cordova, Alaska, and Puget Sound, Wash., form the main channel for traffic between Alaska and the United States, while the other enumerated stations act as feeders and distributors for their particular territories. The stations at St. Paul Island, in the Pribilof group, and Dutch Harbor, on Unalaska Island, render very useful service because of the uniformly excellent atmospheric and electrical conditions peculiar to these sites which enables these stations to communicate with merchant ships anywhere in the North Pacific Ocean.

The naval direction finder stations at Soapstone Point and Cape Hinchinbrook, Alaska, render service of inestimable value in furnishing direction finder bearings to ships making the difficult entrances of Icy Straits and Prince William Sound.

### ALASKA FISHERIES

The output of the fisheries of Alaska in 1930 compared favorably with the average for the past decade with respect to quantity, but the value was considerably below normal. This was attributable partly to the generally lower prices that prevailed throughout the season and partly to the sharp decline in the production of red salmon as a result of the scant runs in Bristol Bay and in certain waters of central Alaska. Enormous runs of pink salmon appeared in the southeastern district, and more than 60 per cent of the total output of canned salmon was made up of this species. While the bulk of the decline in value of fishery products was borne by the salmon-canning industry, the halibut and herring fisheries shared materially in the loss, although the weight of the herring products was greater than in any preceding year except 1925. Only the clam and shrimp and two or three of the less important fisheries showed a gain in both quantity and value of output as compared with the figures for 1929.

The marked fluctuations in the salmon runs, which in some cases were wholly unforeseen and inexplicable, necessitated a sharp curtailment of commercial fishing in certain localities in order to provide a brood stock for future runs. In some places it was possible to modify the existing restrictions to permit more extensive operations. The Commissioner of Fisheries spent several weeks in Alaska during the active salmon-fishing season to observe conditions and to give immediate personal attention to fishery problems.

In the work of enforcing the laws and regulations for the protection of the fisheries of Alaska 20 statutory employees and 232



temporary stream guards and special workmen were employed in 1930. The former group included eight fisheries scientists who continued the studies of the salmon and herring of the Territory. Many of the stream guards provided their own launches and were stationed near the mouths of important salmon streams to prevent fishing in closed areas. Fifteen bureau vessels, manned by 50 men, and 10 chartered vessels with 15 men were engaged in general patrol of the fishing grounds. Supplementing the vessel patrol, chartered seaplanes were used at intervals, chiefly in southeastern Alaska during the weekly closed periods.

With the cooperation of the Territory in providing funds for the work, good progress was made in improving streams by the removal of barriers that prevented the ascent of salmon to the spawning grounds and by the destruction of predatory fishes in certain waters to the westward.

Scientific investigations of the life history of salmon dealt with the red-salmon runs of Bristol Bay, Chignik, Karluk, and Copper Rivers, and with the pink salmon in southeastern Alaska. To develop further information regarding migration routes approximately 2,000 salmon were tagged and released from traps in the vicinity of Cape Fox and neighboring islands, and about 1,500 in the Kasaan Bay region. Weirs for counting the escapement of spawning salmon were operated in 26 important salmon streams, of which 9 were in southeastern, 13 in central, and 4 in western Alaska. Special attention was given to the study of the herring of the Territory.

The International Fisheries Commission, functioning under provisions of the convention of March 2, 1923, between the United States and Great Britain for the preservation of the halibut fishery of the North Pacific, continued investigations into the life history of the Pacific halibut, extending its oceanic studies into Bering Sea. A new convention between the United States and Canada, signed at Ottawa on May 9, 1930, and made effective on May 9, 1931, by the exchange of ratifications of the two Governments, gives effect to recommendations of the afore-mentioned commission and invests that body with additional regulatory powers. Under the terms of the new treaty the season for halibut fishing is shortened two weeks, the closing date being advanced from November 15 to November 1 of each year.

#### *SALMON HATCHERIES*

Two fish-cultural stations were operated by the Government and one under private management in the fiscal year 1931. During that period the privately owned hatchery released 20,266,000 red-salmon fry, for which at the rate of 40 cents for each 1,000 fry the operating company was entitled to a rebate of \$8,106.40 in Federal license taxes on the output of its salmon canneries.

In the season of 1929-30 the total number of young red or sockeye salmon liberated was 40,717,000, of which 15,100,000 were released by the Government hatchery at Afognak and 14,332,000 by that on McDonald Lake. The Afognak hatchery took 6,262,790 red-salmon eggs, 10,964,470 pink-salmon eggs, and 123,904 steelhead-

trout eggs in the calendar year 1930. In October and November 10,155,776 eyed pink-salmon eggs were shipped from this hatchery to the Department of Fisheries and Game of the State of Washington. At the McDonald Lake hatchery there were collected 27,469,000 red-salmon eggs, 7,055,000 pink-salmon eggs, and 100,000 chum-salmon eggs, from which shipments totaling 6,107,000 pink-salmon eggs and 3,055,000 red-salmon eggs in the eyed stage were forwarded to Seattle. The take of red-salmon eggs at the privately owned hatchery in 1930 was 21,190,000.

### STATISTICS OF THE FISHERIES

The number of persons employed in the commercial fisheries of Alaska in 1930 was 27,568, a decrease of 1,715 from the preceding year. Of these, 15,451 were whites, 4,962 natives, 771 Chinese, 1,258 Japanese, 4,222 Filipinos, 733 Mexicans, 90 negroes, and 81 miscellaneous (Kanakas, Porto Ricans, Koreans, etc.).

The total value of Alaska fishery products in 1930, exclusive of aquatic furs was \$37,679,049, a decrease of \$13,116,770 from 1929, when the value was \$50,795,819. The quantity and value of the various products of the Alaska fisheries in 1930 were as follows:

#### *Summary of products of the Alaska fisheries in 1930*

Products	Quantity	Value
<b>Salmon:</b>		
Canned.....cases.....	5,032,320	\$29,604,898
Mild-cured.....pounds.....	4,447,525	808,722
Pickled.....do.....	802,960	103,641
Fresh.....do.....	1,295,216	117,620
Frozen.....do.....	6,014,200	561,848
Dried, smoked, and dry-salted.....do.....	1,013,750	118,185
Smoked and packed in olive oil.....cases.....	99	891
Pudding.....do.....	32	100
Eggs and heads canned for dog feed.....do.....	1,081	4,324
Fertilizer.....pounds.....	2,283,882	51,674
Oil.....gallons.....	55,883	10,525
<b>Herring:</b>		
Fresh, for bait.....pounds.....	3,340,180	42,037
Frozen, for bait.....do.....	5,957,960	60,807
Frozen, for food.....do.....	78,750	3,544
Pickled, for food.....do.....		
Scotch cure.....do.....	8,081,245	402,810
Norwegian cure.....do.....	145,375	9,166
Special cure for repacking.....do.....	33,600	2,520
Roused.....do.....	362,500	15,045
Spiced.....do.....	2,000	300
Dry-salted.....do.....	160,750	6,395
Meal.....do.....	23,411,023	655,050
Oil.....gallons.....	3,545,422	876,013
<b>Hallibut:</b>		
Fresh.....pounds.....	21,678,343	2,244,154
Frozen.....do.....	9,875,622	747,090
Cheeks, frozen.....do.....	3,119	156
<b>Cod:</b>		
Dry-salted.....do.....	180,502	9,034
Stockfish.....do.....	15,600	2,090
Pickled.....do.....	120,135	5,665
<b>Whale:</b>		
Oil.....gallons.....	810,700	371,276
Sperm oil.....do.....	121,150	45,431
Fertilizer.....pounds.....	2,340,000	51,400
Pickled meat.....do.....	37,000	1,850
Whalebone.....do.....	5,600	308
<b>Clam:</b>		
Canned.....cases.....	32,790	241,831
Juice.....do.....	3	50
Whole in shell.....dozen.....	100	9
<b>Crab:</b>		
Meat.....pounds.....	87,461	34,073
Whole in shell.....dozen.....	774	1,324

*Summary of products of the Alaska fisheries in 1930—Continued*

Products	Quantity	Value
<b>Sbrtrup:</b>		
Meat.....pounds.....	510,066	\$210,072
Whole in shell.....do.....	2,870	431
<b>Trout:</b>		
Canned.....cases.....	152	974
Smoked and packed in olive oil.....do.....	00	594
Fresh.....pounds.....	62,003	8,042
Frozen.....do.....	26,853	2,424
Pickled.....do.....	450	50
<b>Sablefish:</b>		
Fresh.....do.....	16,073	574
Frozen.....do.....	422,500	19,400
Pickled.....do.....	10,800	540
Rockfish, frozen.....do.....	5,876	122
Smelt, fresh.....do.....	37,720	5,231
"Lingcod":		
Fresh.....do.....	423	13
Frozen.....do.....	22,403	672
<b>Flounder:</b>		
Fresh.....do.....	245,000	6,125
Frozen.....do.....	73,930	1,829
<b>Total.....</b>		<b>37,670,040</b>

These figures represent the value of the manufactured product. It is estimated that the value of the catch to the fishermen was approximately \$12,285,000. The round weight of the salmon catch landed by the fishermen was approximately 426,441,857 pounds and the corresponding figures for herring were about 145,671,895 pounds. The cod figures given above do not include the offshore catch from waters adjacent to Alaska, which amounted to 5,963,204 pounds of dry-salted cod, having a total value of \$302,118, landed at ports of the Pacific Coast States. The persons employed in this offshore industry are not included in the foregoing list.

**SALMON INDUSTRY**

As compared with the number of salmon caught in 1929, the catch in 1930 showed an increase of 15 per cent. This increase was due entirely to the heavy runs of pink salmon in the southeastern area. By districts, southeast Alaska showed a gain of 82 per cent, while in the central and western districts the catch decreased approximately 17 and 53 per cent, respectively, from the catch of the preceding year.

The total number of salmon taken in 1930 was 82,741,632. The take by species was as follows: Coho or silver, 3,918,443; chum or keta, 6,620,784; pink or humpback, 60,404,001; king or spring, 892,879; and red or sockeye, 10,905,525. The total take in 1929 was 71,939,618, or 10,802,014 less than in 1930. There was an increase of pinks, cohos, and kings, and a decrease of reds and chums.

The salmon catch in Alaska is secured almost wholly by means of traps, seines, and gill nets. In 1930 there were operated 701 traps, 796 seines aggregating 116,397 fathoms, and 5,100 gill nets aggregating 274,615 fathoms.

*Salmon canning.*—The value of the output of canned salmon in 1930 represented about 94 per cent of the total value of all products of the salmon industry. The number of persons engaged was 22,324, or 1,947 less than in 1929. The output of canned salmon in 1930 consisted of 5,032,326 cases, valued at \$29,694,898, as compared with

5,370,159 cases, valued at \$40,469,385, in 1929. The pack and value according to species in 1930 were as follows: Coho or silver, 332,422 cases, valued at \$2,745,024; chum or keta, 599,934 cases, valued at \$2,162,124; pink or humpback, 3,188,534 cases, valued at \$13,288,421; king or spring, 59,922 cases, valued at \$798,288; and red or sockeye, 851,514 cases, valued at \$10,701,041. In 1930 there were 149 canneries operated, 7 less than in the preceding year.

*Mild curing of salmon.*—Unfavorable market conditions prevented operators in the salmon mild-curing business from realizing any material benefit from the good runs of kings and cohos. Twenty plants were operated, 3 more than in 1929, and the number of persons employed was 1,150. The pack of mild-cured salmon consisted of 5,129 tierces of kings and 430 tierces of cohos, a total of 5,559 tierces, valued at \$868,722, representing a decrease of 2 per cent in quantity and 30 per cent in value from the output of the preceding year.

*Pickling of salmon.*—Although the shortage of red salmon in western Alaska brought about a greatly reduced output of pickled salmon in that region, the production for Alaska as a whole showed a gain over that in 1929, due to expanded operations in the southeastern and central districts as a result of the lack of demand for mild-cured fish. Eleven plants were operated, four more than in the previous year, and the number of persons employed was 114. The total production was 862,950 pounds, valued at \$103,641.

*Other salmon industries in 1930.*—The output of fresh salmon in 1930 was 1,295,216 pounds, valued at \$117,620, and the output of frozen salmon was 6,614,206 pounds valued at \$561,848. There were prepared 1,593,600 pounds of dried salmon, valued at \$115,585; dry-salted salmon 19,200 pounds, valued at \$2,400; kippered salmon, 500 pounds, valued at \$100; beleke, 456 pounds, valued at \$100; smoked and packed in olive oil, 2,376 pounds, valued at \$891; fish pudding, 768 pounds, valued at \$160; and eggs and heads canned for dog feed, 51,888 pounds, valued at \$4,324. By-products of the salmon industry amounted to 2,283,882 pounds of fertilizer, valued at \$51,674, and 55,883 gallons of oil, valued at \$10,525.

#### HERRING

Herring of suitable size for curing appeared in fair numbers in all the principal fishing districts except Cook Inlet. The western district continued to lead in the production of Scotch-cured herring, although the output there was substantially less than in the previous year and represented but 46 per cent of the total pack in Alaska, as compared with 77 per cent in 1929. While the quantity of herring products for the Territory as a whole showed a considerable gain over 1929, due to better runs in parts of central Alaska, there was a marked decrease in value as a result of lower prices on meal, oil, and pickled fish.

Thirty-nine plants were operated in 1930, as compared with 30 in the preceding year, and the number of persons employed increased from 1,175 to 1,413. The total value of herring products in 1930 was \$2,133,677, as against \$2,794,084 in 1929. Scotch-cured herring increased from 6,545,125 pounds in 1929 to 8,081,245 pounds in 1930, oil from 3,341,179 to 3,545,422 gallons, and herring for bait from

8,920,885 to 9,298,140 pounds, while meal decreased from 25,499,254 to 23,411,023 pounds.

#### HALIBUT

Halibut fishing was curtailed considerably in 1930 because of economic conditions. Operators voluntarily postponed the opening of the fishing season until March 1, two weeks later than the usual date, so that the carry-over from the previous year might be reduced before additional supplies were brought on the market. The number of persons employed was 1,176, and the landings of the Alaska fleet (American vessels landing more than one-half of their catch in Alaska or British Columbia ports) amounted to 31,557,084 pounds, valued at \$2,991,400. Landings of halibut in Alaska totaled 11,408,984 pounds, valued at \$863,089, which include 27,000 pounds valued at \$2,000 landed by Canadian vessels. In 1929 the landings of the Alaska fleet totaled 37,456,998 pounds, valued at \$4,422,605, while landing in Alaska amounted to 13,841,874 pounds, valued at \$1,424,623.

#### COD

A sharp decline, both in the number of persons employed and in the quantity and value of products, marked the cod industry carried on from shore stations in 1930. Forty-one persons were engaged, as compared with 67 in the preceding year, and the products decreased from 713,838 pounds valued at \$39,756 in 1929 to 322,237 pounds valued at \$16,789 in 1930.

#### WHALING

Two whaling stations were operated in Alaska in 1930, giving employment to 206 persons. Seven steam whalers were used, and the number of whales taken was 355. Products consisted of 816,700 gallons of whale oil, valued at \$371,276; 121,150 gallons of sperm oil, valued at \$45,431; 1,170 tons of fertilizer, valued at \$51,400; 37,000 pounds of pickled meat, valued at \$1,850; and 5,600 pounds of whalebone, valued at \$308. The total value of whale products was \$470,265, as compared with \$502,081 in the previous year.

#### CLAMS

In 1930 two companies that canned salmon again prepared the bulk of the clam pack, and six other plants also engaged in the clam industry. With the exception of one plant in southeastern Alaska, which put up an experimental pack of butter clams, all operations were carried on in the central district, on Prince William Sound and Kukak Bay. There were 283 persons engaged in the industry, as compared with 180 in 1929, and products consisted of 32,802 cases and 100 dozen clams in the shell, having a total value of \$241,890, an increase of about 21 per cent in quantity and 19 per cent in value over the production in 1929, when 28,001 cases valued at \$203,656 were packed.

#### SHRIMPS

Operations in the shrimp industry in 1930 were on about the same scale as in the preceding year. Two companies in southeast Alaska were engaged in the business, giving employment to 113 persons. The products were 510,956 pounds of shrimp meat valued at \$210,-

072 and 2,870 pounds of fresh shrimp in the shell value at \$431, a total of 513,826 pounds valued at \$210,503, as against 497,750 pounds valued at \$200,312 in 1929.

#### MISCELLANEOUS

Crab products were prepared at two plants in Cordova and one in southeastern Alaska. Thirty-seven persons were engaged in the industry, and the products consisted of 87,461 pounds of cold-packed crab meat, valued at \$34,073, and 774 dozen crabs in the shell, valued at \$1,324, a total value of \$35,397, as against \$72,865 in 1929.

The trout fishery yielded 89,366 pounds of fresh, frozen, and pickled products, valued at \$10,516; 152 cases, or 7,296 pounds, canned, valued at \$974; and 1,584 pounds smoked and packed in olive oil, valued at \$594; a total of 98,246 pounds, valued at \$12,084. Sablefish, fresh, frozen, and pickled, amounted to 449,463 pounds, valued at \$20,514. Other miscellaneous species were: Smelts, 37,720 pounds, valued at \$5,281; flounders, 318,936 pounds, valued at \$7,954; "lingcod," 22,826 pounds, valued at \$685; and rockfishes, 5,876 pounds, valued at \$122.

#### FUR-SEAL SERVICE

Under the provisions of the North Pacific sealing convention for the preservation of the fur seals of the North Pacific and the legislation enacted to make such provisions effective, the fur-seal industry of the Pribilof Islands is administered by the Secretary of Commerce. A staff of white employees supervises the work at the islands, which is performed largely by the natives, and includes sealing, foxing, and various activities in connection with the maintenance of the villages and the extension of improved roads. The natives are virtual wards of the Government and are provided with food, clothing, shelter, and medical and educational aid in return for their services. In addition, they receive cash payments at the rate of 75 cents for each seal skin and \$5 for each fox skin taken. Such payments, with some additional compensation to foremen and a cook, amounted to \$36,000 for seal skins taken in the calendar year 1930 and fox skins taken in the season of 1929-30. Thirty-five temporary native workmen from the Aleutian Islands and the mainland were employed to assist with sealing activities and construction work on St. Paul Island in the summer of 1930.

The number of fur-seal skins taken at the Pribilof Islands in the calendar year 1930 was 42,500, of which 34,382 were secured on St. Paul Island and 8,118 on St. George Island. This represents an increase of 2,432 over the number taken in the preceding year.

Provision was made for the future breeding stock by marking 6,539 3-year-old male seals to be reserved from killing. The reserve was augmented by large numbers of seals of this age class which were not handled in the drives.

The annual computation of the number of seals in the herd was made as of August 10, 1930, after the completion of commercial killing operations. The number of animals of all ages and classes was 1,045,101, an increase of 73,574 over preceding year.

Two public auction sales of seal skins from the Pribilof Islands were held by the Fouke Fur Co., at St. Louis, Mo., and 364 Pribilof Islands seal skins were disposed of at special sales in the fiscal year 1931.



AN ISLAND FOX FARM WHERE BLUE FOXES ARE RAISED IN PENS AS WELL  
AS RUNNING FREE ON THE ISLAND



A SILVER-TIPPED BLUE FOX



A LITTER OF PEN-RAISED BLUE FOXES



AN OFFICE OF INDIAN AFFAIRS SCHOOL WHICH IS IN THE EASTERN HEMI  
SPHERE, AT ATTIL, ALASKA



At the sale on September 15, 1930, there were sold 20,081 Pribilof Islands fur-seal skins for a total gross price of \$357,990.25. Of these, 11,675 skins dyed black brought \$219,305.50, 8,307 dyed logwood brown brought \$138,619, and 99 miscellaneous skins (unhaired and raw salted) brought \$65.75. Average prices for skins of the black dye were \$25.40 for regular skins, \$14.07 for scarred and faulty skins, and \$4 for No. III. The logwood-brown skins brought average prices as follows: Regular skins, \$23.21; scarred and faulty skins, \$11.98; and No. III skins, \$2.91.

At the sale on March 30, 1931, 21,071 fur-seal skins taken on the Pribilof Islands were sold for a gross price of \$453,699.75. Of these, 11,503 dyed black brought \$279,220.50, and 9,568 dyed logwood brown brought \$174,479.25. For the black dyed skins the average prices were \$29.43 for regular, \$21.26 for scarred and faulty, and \$6.94 for No. III skins. The logwood-brown skins brought average prices of \$22.48 for regular, \$15.66 for scarred and faulty, and \$5.51 for No. III skins.

The 364 sealskins sold at special sales during the year brought a total of \$10,068.74. Of these skins, 110 were dyed black and 188 logwood brown, 50 were raw salted, and 16 were miscellaneous skins for display purposes. These sales were authorized by the Acting Secretary of Commerce.

There were also sold at public auction at St. Louis 745 blue and 32 white-fox skins taken on the Pribilof Islands in the season of 1929-30. At the September sale 375 blue pelts were sold for \$12,149.50, an average of \$32.40 per skin, and the 32 white pelts brought \$992, an average of \$31 per skin. The remaining 370 blue pelts were sold in March, 1931, for \$14,593.50, an average of \$39.44 per skin.

In the season of 1930-31 there were taken on St. Paul Island 211 blue and 24 white fox skins, and on St. George Island 678 blues and 2 whites, a total of 889 blue and 26 white skins.

No changes were made in the regulations previously issued for the protection of fur seals and sea otters, nor in the regulations affecting walrus and sea lions.

The following table shows the results of fur-seal computations in the years from 1919 to 1930:

*General comparison of recent computation of the seal herd on the Pribilof Islands*

Classes	1919	1920	1921	1922	1923	1924
Harem bulls.....	5,158	4,060	3,900	3,562	3,412	3,513
Breeding cows.....	157,172	107,527	170,655	185,914	197,650	208,306
Surplus bulls.....	0,010	6,115	3,301	2,340	1,891	2,043
Idle bulls.....	2,230	1,101	747	508	312	390
6-year-old males.....	8,001	4,153	3,001	3,771	4,803	8,480
4-year-old males.....	5,262	5,007	4,720	6,080	10,012	5,132
2-year-old males.....	5,747	5,007	0,780	11,807	5,710	18,670
3-year-old males.....	13,596	10,740	14,008	7,450	22,788	21,551
2-year-old males.....	33,081	30,111	41,893	40,020	43,112	45,085
Yearling males.....	46,444	51,074	50,249	52,988	55,709	50,201
2-year-old cows.....	33,287	30,480	43,410	40,280	48,801	51,359
Yearling cows.....	46,447	51,081	54,447	57,413	60,422	64,240
Pups.....	157,172	107,527	170,655	185,914	197,650	208,306
Total.....	524,235	552,718	581,443	604,902	603,008	607,158

*General comparison of recent computation of the seal herd on the Pribilof Islands—Continued*

Classes	1925	1926	1927	1928	1929	1930
Harem bulls.....	3,526	4,034	4,643	6,050	7,187	8,312
Breeding cows.....	226,090	214,114	263,566	284,725	307,491	332,084
Surplus bulls.....	3,568	2,002	4,527	5,285	5,207	3,963
Idle bulls.....	311	423	972	1,449	1,633	1,890
6-year-old males.....	4,105	13,434	13,450	12,867	10,399	6,012
5-year-old males.....	16,792	16,812	15,073	13,001	7,016	8,191
4-year-old males.....	18,692	17,872	14,445	7,798	9,102	11,327
3-year-old males.....	21,185	17,189	9,730	11,133	13,639	14,871
2-year-old males.....	43,515	38,183	41,252	49,087	64,354	69,674
Yearling males.....	52,091	56,514	61,023	66,861	85,381	92,232
2-year-old cows.....	49,736	44,415	48,186	57,061	67,210	72,806
Yearling cows.....	57,309	62,175	67,131	72,481	85,417	92,247
Pups.....	226,090	214,114	263,566	284,725	307,491	332,084
Total.....	723,080	761,281	808,870	871,513	971,527	1,045,101

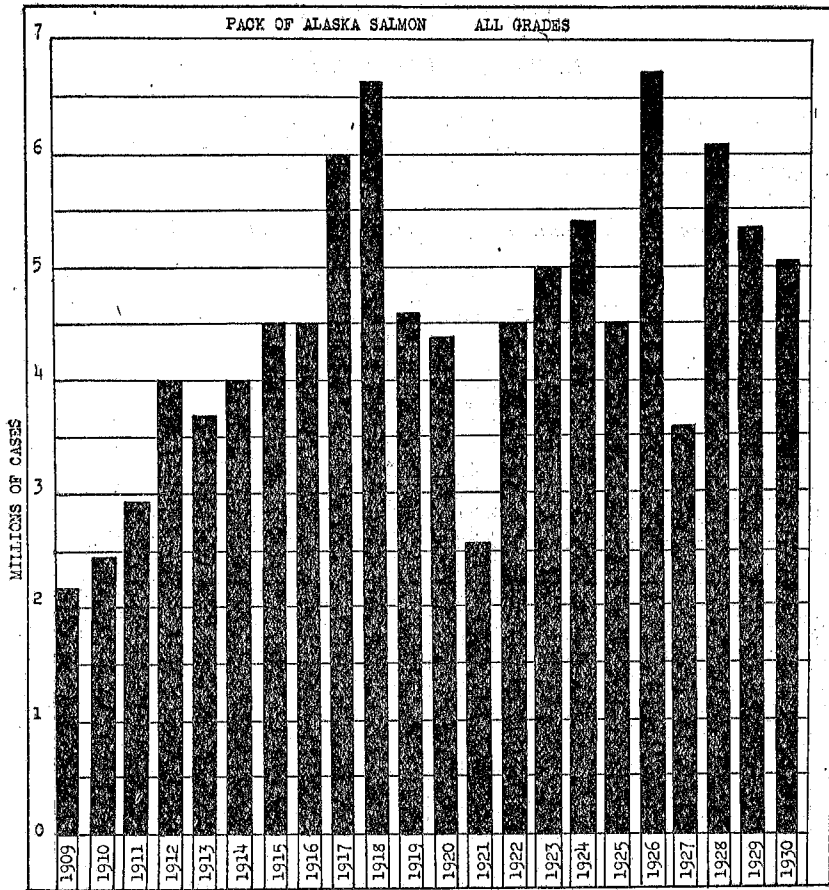
The steady increase in the size of the fur-seal herd permits the taking of more pelts of surplus male seals in successive years without detriment to the growth of the herd. As sealing operations are expanded it is necessary to provide greater facilities for the efficient handling of the work. Good progress was made during the fiscal year 1931 in the development of the stations at the Pribilof Islands.

On St. Paul Island the by-products plant was enlarged and modern equipment was installed with a view to the more profitable utilization of the seal carcasses. The sum of \$65,000 had been appropriated for this plant, which represents the largest single item in the construction program for the year. Considerable work was done on the electrical system and cold-storage plant. With adequate cold-storage space it will be possible to preserve frozen seal meat taken in the regular sealing season and thus eliminate the necessity of fall killings to provide food for the natives. Other building operations included an extension to the sealskin washhouse and work on a new dock at East Landing.

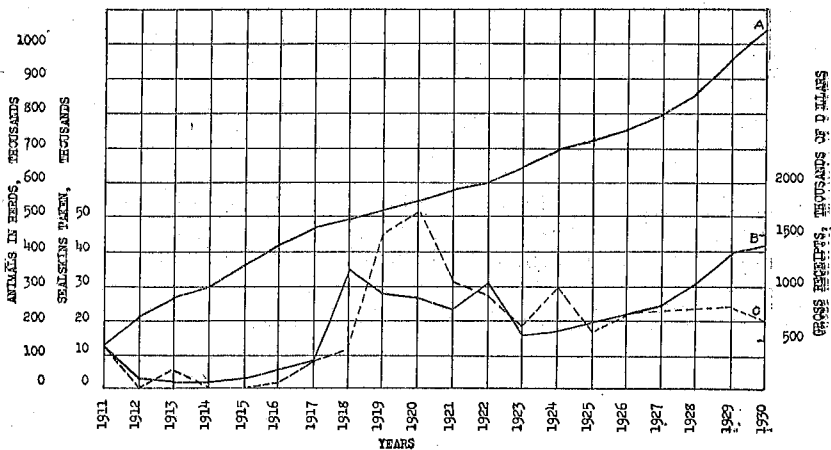
On St. George Island a building 30 by 56 feet was erected to provide accommodations for miscellaneous white employees. A new salt house also was constructed.

The extension of improved roads was carried forward on both islands when weather permitted and when sealing activities were not pressing. On St. Paul Island one-half mile of road between Big Lake and Northeast Point and a side road, about three-fourths of a mile in length, to a scoria deposit in Polovina Hill were constructed. A considerable amount of work was done on the road to North Rookery on St. George Island, including the surfacing of 700 feet with plank.

The property devoted to the fur-seal service of the bureau at the Pribilof Islands, including buildings, roads, other structures, machinery and other equipment, and stores, was valued, on March 31, 1931, at \$577,249.84 for St. Paul Island and at \$192,865.39 for St. George Island, a total of \$769,615.23. Buildings alone were valued at \$218,537.07 on St. Paul Island and at \$112,602.05 on St. George Island, a total of \$331,139.12, as compared with \$291,954.81 on March 31, 1930.



(A) NUMBER OF ANIMALS IN FRIBILOF ISLANDS FUR-SEAL HERD  
 (B) NUMBER OF SEALSKINS TAKEN AND (C) GROSS RECEIPTS  
 FROM SALE OF SEALSKINS, 1911 TO 1930



## GEOLOGICAL SURVEY

## MINING IN ALASKA IN 1930

The total value of the mineral production of Alaska from 1880, the earliest year for which records are available, to the end of 1930 was \$629,313,000, as shown by the following table:

*Value of total mineral production of Alaska 1880-1930*

1880	\$6,826	1907	\$20,840,871
1881	15,000	1908	20,092,501
1882	23,000	1909	21,140,810
1883	67,146	1910	16,875,226
1884	72,000	1911	20,720,480
1885	425,000	1912	22,581,943
1886	540,000	1913	19,547,202
1887	657,000	1914	19,109,731
1888	667,181	1915	32,790,344
1889	847,490	1916	48,386,508
1890	873,276	1917	40,694,804
1891	1,014,211	1918	28,218,935
1892	1,019,493	1919	19,626,824
1893	1,104,982	1920	23,330,586
1894	1,339,332	1921	16,994,302
1895	2,588,832	1922	19,420,121
1896	2,885,029	1923	20,330,643
1897	2,539,294	1924	17,457,333
1898	2,329,016	1925	18,220,692
1899	5,425,262	1926	17,664,800
1900	7,995,209	1927	14,404,000
1901	7,306,381	1928	14,061,000
1902	8,475,813	1929	16,066,000
1903	9,088,564	1930	13,812,000
1904	9,627,495		
1905	16,490,720		629,313,000
1906	23,501,770		

Of this total a little less than 62 per cent was furnished by the gold lodes and placers and nearly 34 per cent by copper lodes. The following table shows the distribution of the total output of minerals from Alaska, by substances:

*Total value of mineral production of Alaska, by substances, 1880-1930*

Gold	\$389,317,000	Marble and other prod-	
Copper	212,252,600	ucts (including plati-	
Silver	11,895,300	num metals)	\$5,640,300
Coal	7,373,000		
Tin	1,092,300	Total	629,313,000
Lead	1,742,500		

Mines in Alaska produced \$13,812,000 worth of minerals in 1930, as compared with \$16,066,000 in 1929. The following table shows in summary form the mineral output of Alaska in 1930 and in 1929:

<sup>1</sup> \$37,205 for coal produced prior to 1890 should be distributed among these years, but data are not available for this purpose, and the entire value of that coal has been credited to 1890.

*Mineral output of Alaska, 1930 and 1929*

	1930		1929		Increase or decrease 1930	
	Quantity	Value	Quantity	Value	Quantity	Value
Gold.....fine ounces.....	410,020	\$8,476,000	375,438	\$7,701,000	+34,582	+\$715,000
Copper.....pounds.....	32,651,000	4,244,600	40,510,000	7,130,000	-7,859,000	-2,885,400
Silver.....fine ounces.....	408,670	167,300	472,000	252,000	-64,330	-64,700
Coal.....short tons.....	120,100	631,000	100,000	628,000	+19,500	+103,000
Tin, metallic.....do.....	14.7	9,300	38.0	35,000	23.0	-25,700
Lead.....do.....	1,395	186,600	1,315	100,000	+50	-20,500
Miscellaneous mineral products, including petroleum, platinum metals, marble, gypsum, etc.....		167,300		194,000		-36,700
Total.....		13,812,000		16,000,000		-2,254,000

From the table it is evident that there was a great increase in the gold output and some increase in the coal output. The decrease in the other commodities is interpreted as being due not only to the very low prices that prevailed for metals such as copper, silver, and lead, but also to the deterrent effect of those low prices in discouraging the undertaking of new enterprises and dissuading operators from making even as large an output as they ordinarily would from the mines already operating. The world-wide stagnation of business and the accompanying depression seem to have been felt less in Alaska than in most other countries. Instead, therefore, of regarding the foregoing record as one to cause alarm for the future of the Alaska mining industry it seems that when all things are considered the record of a decrease of only 15 per cent compares favorably with the records from similar enterprises in the States. Each year brings more and more general development throughout the Territory, and these improvements in general conditions are stimulating prospectors and others to undertake the development of deposits that had previously been too difficult to exploit. Such improvements are exerting a continuing and growing force, so that each year Alaska is becoming less and less an unknown frontier, and the hazards of mining under pioneer conditions are being correspondingly reduced.

**GOLD LODES**

Alaska lode mines in 1930 yielded \$3,639,000 in gold, or essentially the same as in 1929, when the production was \$3,644,000. The gold derived from lodes was approximately 43 per cent of the entire gold production of the Territory for 1930. The proportion of lode gold to placer gold was somewhat less in 1930 than in 1929, when the proportion was 47 to 53.

*Gold and silver produced from gold-lode mines in Alaska, 1930*

District	Gold		Silver	
	Fine ounces	Value	Fine ounces	Value
Southeastern Alaska.....	164,427	\$3,399,000	98,900	\$38,000
Willow Creek.....	1,741	30,000	470	180
Fairbanks district.....	6,483	134,000	1,535	610
Other districts.....	3,387	70,000	1,065	410
Total.....	176,038	3,639,000	102,980	39,200

Over 93 per cent of the total lode gold production of Alaska comes from mines in southeastern Alaska. The outstanding mine in this region is that operated by the Alaska Juneau Gold Mining Co. near Juneau. Other notable producing mines in southeastern Alaska in 1930 were those operated by the Hirst-Chichagof Mining Co. and the Chichagof mines. In the Willow Creek district the season was spent mainly in development and construction work, but there was a considerable increase over the amount of gold produced in 1929, though far less was produced than in the earlier years of this camp. In the Fairbanks district the largest production from lodes came from the Mohawk and Ready Bullion mines in the vicinity of Ester Dome, the McCarty mine of McCarty & Ewers Gold Mining Co. on Fairbanks Creek, and the Wyoming mine and the Cleary Hills property or old Rhoads-Hall mine on Bedrock Creek.

Gold was also produced from lodes in the Nuka Bay district, at the southern end of Kenai Peninsula, notably from the Sonny Fox mine of Babcock & Downey. Farther north on Kenai Peninsula the Lucky Strike mine of John Hirshey was active, and in the Girdwood district, near the head of Turnagain Arm, some lode gold was mined near the head of Crow Creek. The only lode gold mine in the Kuskokwim that produced any considerable amount of gold in 1930 was on Ruby Creek in the Nixon Fork district.

Some prospecting and development work was done at several mines in the Prince William Sound district, at a few places in the Copper River region and in the Nabesna district to the north, and even in parts of Seward Peninsula.

**GOLD PLACERS**

Placer gold produced in 1930 had a total value of \$4,837,000. The following table shows by regions the output of placer gold in 1930 and in 1929:

*Value of placer gold produced in Alaska in 1930 and 1929*

Region	1930	1929	Decrease or increase, 1930
Southeastern Alaska.....	\$7,000	\$10,000	-\$3,000
Copper River region.....	98,500	53,000	45,500
Cook Inlet and Sustina.....	75,500	98,000	-22,500
Yukon Basin.....	3,416,800	2,058,000	1,358,800
Kuskokwim region.....	44,500	105,000	-60,500
Seward Peninsula.....	1,101,200	1,008,000	93,200
Northwestern Alaska.....	3,200	5,000	-1,800
Total.....	4,837,000	4,117,000	720,000

As shown by the above table the largest yield of placer gold came from the Yukon region and the next largest from camps on Seward Peninsula. The present trend is for the placer production to come more and more from larger, well-equipped mines and less from individual or small groups of prospectors.

#### DREDGES

The total value of gold recovered by Alaska dredges in 1930 was \$3,912,600, of which the greater part came from 15 dredges in the Yukon region and the rest from 12 dredges in Seward Peninsula. Over 81 per cent of the gold produced from placers in 1930 was mined by dredges. This is an unusually high percentage, but the trend of placer mining seems to be toward this type of mining. It is estimated that 9,906,000 cubic yards of gravel were handled by dredges in 1930, with an average yield of 39½ cents a cubic yard.

#### COPPER

The value of the copper output in 1930 was \$4,244,600. Most of this came from three mines operated by the Kennecott Copper Corporation. Two of these mines are near Kennecott, in the Copper River region, and the ore from them consists mainly of high-grade copper sulphides and carbonates; the third mine is on Latouche Island, and its ore is mainly a low-grade copper-iron sulphide. Some copper was also produced from native copper nuggets recovered in the course of placer gold sluicing in the Nizina district. During the year the Beatson mine of the Kennecott Copper Corporation, which has been productive for so long, was closed down and much of the plant dismantled.

The total copper ore mined during the year, from all the copper properties, amounted to 531,000 tons, and the copper produced from it is estimated to have been 32,651,000 pounds. This was a decrease of over 7,850,000 pounds from the amount recovered in 1929. Owing to the low price of copper in 1930 it was worth \$1,500,000 less than it would have been if the price of copper in 1929 had prevailed during 1930. All the Alaska copper ore is shipped to the States to be smelted.

#### SILVER

None of the ores that are mined in Alaska are valuable solely for the silver they contain, and by far the greatest part of the silver that is produced occurs as a relatively minor constituent in ores whose principal constituent is copper or gold. Thus in 1930 silver to the value of \$107,800 was recovered from ores principally valuable for the copper they contain, \$39,300 from ores principally valuable for their gold content, and \$10,200 from the placer gold. The total silver produced in 1930 from all sources in Alaska amounted to 408,570 ounces, having a value of \$157,300. Compared with 1929 this was a decrease in quantity of about 64,330 ounces or about \$95,000. The low value was due to the low selling price of silver, which was 14.8 cents an ounce less in 1930 than in 1929.

### LEAD

The lead produced from Alaska ores in 1930 amounted to 2,730,000 pounds. At the average price of lead for the year of 5 cents a pound, the total value of the output was \$136,500. This is the largest quantity of lead that has been produced in any year from Alaska ores since mining began in the Territory.

By far the largest part of the lead produced was recovered in connection with the mining of gold ores at the Alaska Juneau mine in southeastern Alaska. According to the reports of this company it produced 2,640,771 pounds of lead. This was a recovery of less than two-thirds of a pound of lead from each ton of rock trammed from the mine to the mill. The rest of the lead came from a number of small shipments from mines whose ore is principally valuable for gold content. All the lead is recovered at smelters in the States.

### PLATINUM

For several years one of the platinum group of metals was produced in large quantities at a lode mine on Prince of Wales Island in the Ketchikan district, but the mine was closed down in 1926. In 1930 all the platinum metals produced in Alaska came from placers. The largest amount of placer platinum that was sold during the year came from several streams in the Goodnews Bay district, near the mouth of the Kuskokwim, and from deposits on Dime Creek in the eastern part of Seward Peninsula. The total production of platinum metals amounted to 385 fine ounces, having a value of \$16,900. There has been a good deal of interest shown in the increasing amounts of platinum metals that have come from the placers in the Goodnews Bay region, and a few years ago a slight rush to that region was in progress. From present indications it appears that while a more thorough investigation of this field is well warranted there is little probability that bonanza deposits which can be easily worked occur there.

### TIN

Stream tin, or cassiterite, has been found in concentrates in sluice boxes of placer operations at many places in Alaska. Tin minerals have also been found in veins and in the mineralized country rock of the York or Port Clarence districts in western Seward Peninsula. In 1930 tin minerals were recovered from only two camps in the York district and from a few camps in the Hot Springs district in the Yukon region. In the Seward Peninsula camps the cassiterite is mined principally for the tin alone, but in the camps in the Yukon region it is a by-product recovered mainly in the course of placer gold mining. The production of cassiterite in 1930 was 21 tons, which contained from 68 to 72 per cent of metallic tin. Its total metal content was approximately 14.7 tons of metallic tin. The average price of metallic tin for the year, as computed by the Bureau of Mines, was 31.7 cents a pound. The value of the total Alaska output was therefore about \$9,300. This represents a decrease in quantity of about 24 tons of metallic tin and in value of \$25,700 from the output of 1929.



### COAL

The amount of coal produced in 1930 showed some increase over the production of 1929, and has been exceeded in only one year since coal mining began in the Territory. Practically all the coal came from 3 mines, 2 in the Matanuska field near the head of Cook Inlet and 1 in the Healy River field north of the Alaska Range. The total quantity of coal produced by Alaska mines in 1930 was 120,100 tons, valued at \$631,000. Small amounts of coal were mined at other properties in the Matanuska field and in the vicinity of Wainwright, on the northwestern coast of Alaska. No new developments were reported to have been in progress during the year. In addition to the coal mined in Alaska 37,123 tons were imported from mines in the States, chiefly from Washington, and 23,892 tons from foreign countries, chiefly from British Columbia. The total domestic consumption of coal in Alaska in 1930 was approximately 181,000 tons.

### PETROLEUM

The only petroleum produced in Alaska comes from wells of the Chilkat Oil Co., in the Katalla field in central southern Alaska. At that place the company obtains oil from a number of shallow wells, few of which are more than 1,000 feet deep. A small refinery is operated by the company, and the products, gasoline and distillate, find a ready market near at hand, especially in Cordova.

Large quantities of petroleum products are imported into Alaska from the States. According to the Bureau of Foreign and Domestic Commerce, of the Department of Commerce, 13,801,746 gallons of heavy oil, including crude oil, gas oil, residuum, etc.; 6,317,934 gallons of gasoline, including lighter products of distillation; 401,646 gallons of illuminating oil; and 701,946 gallons of lubricating oil were imported into Alaska during 1930.

Search for new oil fields in Alaska has temporarily quieted down. This condition is believed to be due to the oversupply from many of the fields in the States and to the fact that the few wildcat holes that have been drilled in Alaska show that difficulties will be encountered in finding commercial pools and that considerable expense will be incurred in the search. At only two places was drilling in progress during the year, in the Katalla fields and near Chickaloon, in the Matanuska Valley.

### MISCELLANEOUS MINERAL PRODUCTS

Many other minerals, including such metals as antimony, arsenic, bismuth, chromium, iron, manganese, mercury, molybdenum, nickel, tungsten, zinc, and such nonmetallic minerals as asbestos, barite, clay, garnet, graphite, gypsum, jade, limestone, marble, mica, stone, and sulphur, have from time to time been exploited in Alaska. The Geological Survey does not have records that any considerable amounts of any of these mineral products except limestone were produced or sold in 1930.

The production of limestone comes from quarries of high-grade limestone rock, owned by the Pacific Coast Cement Co. and located

on Dall Island, between Baldy Bay and Tlevak Strait, about 40 miles west of Ketchikan. The enterprise is of recent origin, having been started in 1928. The general practice is to drill the limestone in the quarry and blast it down, haul it to the local crushing plant where it is broken down to coarse size, and shipped to Seattle where it is ground in the company's mill and used in its cement plant. This limestone has proven to be entirely satisfactory for use in the manufacture of cement.

The marble quarries of the Vermont Marble Co., near the west coast of Prince of Wales Island, which for several years have been the only place in Alaska from which any quantity of marble has been shipped, are reported to have been inactive during 1931.

A little development was done at antimony prospects on Cleveland Peninsula, north of Ketchikan, and at several places south of the Kantishna district, but no shipments of ore were made, and it is doubtful whether the deposits in remote areas like the Kantishna can be successfully developed unless the price of antimony increases greatly or much better transportation facilities are available. Prospecting and development work are reported to have been continued on properties whose lodes carried quicksilver as their most valuable mineral in the Livengood district of the Yukon Basin and in the Bluff district of Seward Peninsula. Only a very small amount of quicksilver was produced from any of the quicksilver prospects that have long been known in the central and western part of the Kuskokwim Valley.

Although the various mineral commodities grouped here, under the general term miscellaneous mineral products, yielded only relatively small returns in money, yet their diversity, their wide distribution, and the interest that is being displayed in the search for them, indicate that they already play an important part in the mineral economics of the Territory and that they are destined to become even more significant as the development of Alaska proceeds.

### ADMINISTRATIVE ARRANGEMENTS

The work of the Geological Survey in Alaska consists of two distinct kinds, namely the investigations of the mineral resources of the Territory and the activities connected with the administration of certain land laws relating to the leasing and prospecting of mineral deposits on the public domain. Administrative control of both types of work is vested in the chief Alaskan geologist at Washington, D. C. For the conduct of certain phases of both types of work district offices are maintained by the Geological Survey at Juneau and Anchorage, the local administration of which is delegated to a supervising mining engineer with headquarters at Juneau.

The main staff of geologists and engineers engaged in the Alaska work spend practically all of the open season in Alaska, but have headquarters at Washington, D. C., where extensive laboratory and other facilities are available for the economical conduct of the office studies which are essential parts of all the investigations that are carried on.

In accordance with an informal arrangement between the Geological Survey and the Bureau of Mines, the resident supervising

engineer of the Geological Survey has general supervision of the work of the small staff of Bureau of Mines members engaged in Alaskan work where such supervision will not interfere with his regular duties.

The Territorial government of Alaska has cooperated in certain phases of the work with the supervising mining engineer to the extent of furnishing office quarters and clerical facilities at Juneau and supplying funds for such traveling expenses as are incurred in the interests of the Territory. Formerly the Territory maintained a Territorial mining engineer whose duties in a large measure were identical with the services rendered by the Federal engineers, but this office was discontinued a few years ago and the expense of maintaining two separate organizations thereby avoided.

#### INVESTIGATIVE WORK

The investigations of the mineral resources of the Territory include the study of individual mineral deposits, the preparation of reports and maps covering prospective mineral-bearing areas, and an annual canvass of the mineral production of the Territory. In connection with the work both geologic and topographic surveys are carried on. The following table shows in separate column the extent of the area that has been mapped geologically and topographically, with different degrees of refinement during the course of the work. It will be seen that only a little more than two-fifths of the entire Territory has been surveyed on scales even up to exploratory standards. There still remain more than 200,000 square miles that have prospective mineral value and have not been mapped.

*Areas surveyed by Geological Survey in Alaska, 1898-1930, in square miles*

Field season	Geologic surveys			Topographic surveys		
	Exploratory (scale 1:500,000 or smaller)	Reconnaissance (scale 1:250,000)	Detailed (scale 1:62,500 or larger)	Exploratory (scale 1:500,000)	Reconnaissance (scale 1:250,000)	Detailed (scale 1:62,500 or larger)
1898-1920.....	75,150	176,330	4,277	55,630	209,905	4,066
1930.....	600	480			3,344	
Total.....	75,650	176,810	4,277	55,630	213,249	4,066
Percentage surveyed of total area of Alaska.....	43.7			46.5		

<sup>1</sup> Includes 180 square miles revised extensively in 1930 and included also under 1930 and therefore counted only once in total.

In addition to the routine duties of supplying information in answer to hundreds of inquiries received from the public and from various branches of the Government, as well as disposing of the administrative details attendant on the general conduct of the work, the different members of the branch took part in one or more of the 10 principal projects that were carried on during the season of 1930. Seven of these projects involved field work and three required only work in the office. The seven field projects were as follows: Reconnaissance topographic mapping of parts of Revillagigedo Island in

southeastern Alaska, mining and related studies in the Taku district and other parts of southeastern Alaska, geologic investigations related to the mineral resources of the Kantishna and Bonnifield districts on the northern flanks of the Alaska Range in central Alaska, geologic investigations related to the mineral resources of the Chulitna district and near-by areas in the Broad Pass section on the southern slopes of the Alaska Range, reconnaissance topographic surveys north of Bristol Bay in the Wood River-Nushagak district of southwestern Alaska, geologic investigations of the mineral resources of the unsurveyed tract north of the Yukon adjacent to the international boundary, and general studies related to the mineral resources of the Territory as a whole. The projects involving no direct field work were as follows: Compiling base maps from the aerial photographs taken by the Navy Department in southeastern Alaska for the cartographic work of the Geological Survey in connection with its mineral resources investigations, the annual canvass of mineral production, and the miscellaneous duties conducted at the Juneau office.

The topographic mapping in parts of Revillagigedo Island in southeastern Alaska was a continuation of the surveys started in this general region in 1928 to complete the drainage maps compiled from the aerial photographs made by the two photographic expeditions of the Navy Department into the region in 1926 and 1929. This is part of the general project of topographically mapping the whole of southeastern Alaska as rapidly as funds and personnel are available and following up this mapping by geologic investigations relating to the mineral resources of the region. The mapping is being done on a scale of about 4 miles to 1 inch.

The great interest aroused by the finding of sulphide ores containing copper, zinc, lead, and gold, in the Taku region, not far from Juneau, led to the assignment of the Supervising Mining Engineer to make an examination of this region. The lateness of the season prevented starting this work until August. It was not finished during the field season of 1930 and is being continued in the summer of 1931. Studies were also made at many of the mines and prospects in the Hyder and Ketchikan districts.

Two parties of geologists spent most of the open season of 1930 in surveys in the region adjacent to the Alaska Railroad in central Alaska. One of these parties examined practically all the known lode prospects in the Kantishna district and along the northern front of the Alaska Range from Slippery Creek eastward to include Mount Eielson, and examined lodes and placer properties in the Bonnifield district to the east of the Alaska Railroad. The other party extended the mapping into the head of the West Fork of the Chulitna River on the south side of the Alaska Range and filled in the gap that had remained geologically unexplored to the west of the railroad.

In southwestern Alaska, north of Bristol Bay, was one of the largest unsurveyed tracts still remaining in Alaska. The mapping of this region was started in 1930. The area surveyed covered practically the whole of the Wood River and the group of four large lakes that drain into it, the Snake River and the large lake in the northern part of its valley, and the Nushagak River as far north as its junction with the Nuyakuk River at the village of Koliganek.

In the course of this work an area of about 2,400 square miles was surveyed for publication on a scale of 4 miles to 1 inch and about 125 miles of river traverse on a scale of about  $1\frac{1}{2}$  miles to 1 inch was made.

In the region north of the Yukon and adjacent to the international boundary reconnaissance geologic surveys were made and the drainage and geologic features of an area of about 500 square miles were mapped adequately for publication on the usual reconnaissance scale.

The collection of information regarding the production of minerals from Alaska is an annual project that has been in progress for more than 25 years, and no change in the general scope of the work was made in the canvass that was conducted in 1930. All sources of information are freely drawn on to supply reliable information regarding the production of the different ores and metals, and the resulting statistics are regarded as the authoritative official figures.

Familiarity with mining matters throughout many parts of the Territory and his availability for consultation enabled the supervising mining engineer at Juneau to give much valuable information and advice to many of the Federal and Territorial agencies in Alaska as well as to many individuals. The Alaska offices also act as local distributing offices for handling publications of the Geological Survey and assist in furnishing the Washington office with information on many phases of the mineral industry.

#### *PROJECTS FOR THE SEASON OF 1931*

Eleven projects, funds for which were appropriated directly to the Geological Survey, have been approved for the season of 1931 and are now under way. Eight of the projects involve field work and are as follows: Reconnaissance topographic mapping in the Wrangell-Ketchikan district, southeastern Alaska; mining studies principally in the Taku district near Juneau and at other points in southeastern Alaska; geologic investigations in the vicinity of Glacier Bay; reconnaissance topographic mapping in the Klutina Lake district in the Copper River Valley; reconnaissance geologic studies in the Alaska Range region at the head of the Copper River; geologic and topographic reconnaissance surveys in the Tikchik Lakes district of southwestern Alaska; geologic reconnaissance of parts of the Yukon-Tanana region, central Alaska; general studies of mining developments throughout Alaska. Three projects do not directly involve field work and are the annual canvass of the mineral production from Alaska in 1931, the compilation of drainage maps from the aerial photographs obtained by the Navy Department in 1926 and 1929, and general work conducted by the Geological Survey field offices.

#### *ALASKA RAILROAD PROJECT*

During the summer of 1930 a committee of the Senate, composed of Senators Howell, Kendrick, and Thomas, made a study of the Alaska Railroad and its problems. Their investigations revealed the necessity of determining, rather specifically, the amount of tonnage that the railroad might expect from the mineral deposits that occur within a reasonable distance of its tracks. The appropriation for the Alaska Railroad, as passed by Congress, provides: "That

not to exceed \$250,000 of this fund shall be available for continuation of the investigation of mineral and other resources of Alaska to ascertain the potential resources available which will affect railroad tonnage." Arrangements were entered into whereby the Geological Survey was to conduct these investigations for the railroad in such manner and at such places as approved by the railroad officials. Plans were drawn up by the Geological Survey and approved by the manager of the railroad and the funds necessary to start the work were supplied for examinations in the following areas: Anthracite Ridge, Copper Mountain, Kantishna, Valdez Creek-Chulitna, Fairbanks, Willow Creek, Girdwood, and Moose Pass. The plans also include an examination of the nonmetallic mineral resources of the railroad belt and the maintenance of a geologist throughout the year to serve as general representative to advise with the manager on mining and geologic matters, to work with prospectors, and make available the results of the surveys, and to serve as a medium of coordination between the railroad and other agencies engaged in this program.

#### MINERAL LEASING WORK

Supervision of the operations in Alaska carried on under the various acts relating to mineral leases and permits on the public lands is conducted by the Geological Survey through the conservation and Alaskan branches. Most of the field work and direct supervision is performed by the offices at Juneau and Anchorage under the direction of the supervising mining engineer. Nearly all the productive coal mining and some of the oil drilling in Alaska is being done on public lands held temporarily by private individuals or companies under leases or permits issued by the Secretary of the Interior. The interest of the Government in these lands requires that the developments shall be so carried on as to prevent waste and safeguard the lives, health, and welfare of those employed in the work. The coal-mining developments are supervised with special care and wherever possible assistance is given to the operators by outlining and putting into effect economical and safe development and mining programs. Special attention is given to the installation of safe and efficient hoisting and tramming equipment, to mine ventilation, to the reduction of fire, explosion, and blasting hazards, and to the provision of adequate pillars in advance of all mining operations.

The care and maintenance of the coal properties and equipment that the Government owns at Eska and Chickaloon, although actually in charge of the Alaska Railroad, has been delegated by the railroad to the supervising engineer and local Geological Survey staff attached to the Anchorage office. All these properties are now idle, but the Eska mine and camp are maintained in condition for immediate opening in case an emergency should arise that might jeopardize the commercial supply of coal for the Alaska Railroad.

#### TRANSPORTATION ASSISTANCE TO PROSPECTORS

Funds appropriated by the 1929 session of the legislature for transportation assistance to prospectors during the biennium ending March 31, 1931, were all applied for early in 1930 and it was necessary to notify the local agents for the commissioner of transporta-

tion to accept no more applications until after additional funds were appropriated. There were undoubtedly a number of prospectors who would have used the assistance in 1930 that were unable to do so on account of the early depletion of the fund available. For the purpose of assisting in administering this act providing assistance to prospectors 16 local agents for the commissioner served in different sections of the Territory. Ten of these agents were United States commissioners and the other six are men who have a wide acquaintanceship among the prospectors of their respective districts and are therefore well qualified to pass on the merits of individual applications for assistance from their sections. Four of these agents served in the first, 2 in the second, 5 in the third, and 5 in the fourth division.

During the biennium ending March 31, 1931, 196 prospectors were assisted. Of this number 42 were prospecting in the first division, 43 in the second, 47 in the third, and 64 in the fourth. The act providing assistance to prospectors during the past biennium requires that every prospector who receives transportation assistance shall, within one year from the date of receiving such assistance, file with the commissioner a written report covering the results of the operations for which he receives aid. A blank form showing the data required is furnished each prospector with his application blank. A rather disappointing feature of the operation of the act during the past biennium was the failure of a majority of the prospectors to file the reports required. Out of the 196 who received assistance only 85 filed reports. Of these reports 16 were from the first division, 18 from the second, 27 from the third, and 24 from the fourth. Most of the reports received were well prepared and contain valuable information which has been of much service in answering inquiries by prospectors and others concerning the mineral resources of regions about which little is known. Prospectors who failed to file the required reports according to the terms of the act will be unable to obtain further assistance until the expiration of one year from the date on which their reports should have been filed.

During the past biennium two associate mining engineers, while engaged in conducting field examinations in various parts of the Territory, investigated the work done by about 75 prospectors who had received transportation assistance from the Territory. Reports rendered on these investigations indicate that a very high percentage of the work done by the prospectors whose fields were visited was of a bona fide nature, and that the funds furnished were actually employed in defraying transportation expenses for the prospectors and their outfits as contemplated by the act.

The full value of the results obtained by the operation of the act is difficult to appraise for the reason that much of the benefit derived is of an indirect and intangible nature. The mere fact that the Territory has lent its support to prospectors in their efforts to carry on their operations has undoubtedly been a large factor in stimulating prospecting throughout the Territory. Many cases are on file where prospectors who continued their search for minerals throughout the biennium would have been unable to do so without the assistance in transporting their equipment and supplies that was given by the Territory. This assistance has also expanded the field of operations of

many prospectors, enabling them to visit and examine remote localities that they would otherwise have been financially unable to reach. This is particularly true of those who were assisted in employing transportation by airplane.

An outstanding result accomplished by the operation of the act thus far has been the exploration and development of the promising placer fields in the Shungnak section of the Kobuk River district. Assistance in airplane transportation from Fairbanks was given to the first group of prospectors who entered this field in 1928 and whose work has resulted in such development in the area as has so far been accomplished. Assistance in airplane transportation has also been given subsequently to other groups who have been engaged in this development work. Other discoveries of potential importance are reported to have been made by beneficiaries of the act in two placer districts of the fourth division. The only discovery of a lode deposit of outstanding merit was made by a prospector while working in a district to reach which transportation funds had been granted him by the Territory. This discovery was in the Nizina River district, and an option on the property was taken by the Kennecott Copper Corporation, which company conducted development work on the deposit with a crew of about 15 men over a period of nearly a year. Many discoveries of mineralized deposits of sufficient merit to induce prospectors to return to them for further examination during the coming year have been reported to the commissioner by prospectors who have received assistance from the Territorial fund.

At its 1931 session the Alaska Legislature again appropriated \$20,000 for transportation assistance to prospectors in the Territory, one-half of which is to be spent during each year of the biennium. The new act provides for a small payment to local agents of the commissioner for their services in connection with the administration of the act. This action will enable the commissioner to keep a closer check on prospectors who apply for assistance, as he will be able to call on the local agents for reports that he did not feel free to request when the agents were giving their services gratis. The 1931 act also provides that prospecting for which assistance is received must be done on claims which have not been held for a longer period than two years prior to application for assistance. This will eliminate assistance in doing assessment work on claims held for long periods and make funds available only for work in new areas. A number of applications for assistance have already been received, and it is evident that the appropriation for the first half of the present biennium will be applied for before the end of the year.

#### BUREAU OF MINES

The activities of the Bureau of Mines in Alaska during the fiscal year ended June 30, 1931, were again confined to the mine-safety service, assaying and mineral analysis for prospectors and others, and the sampling and analysis of coal. The supervision of this work continued in charge of the supervising mining engineer for the Geological Survey in Alaska, with headquarters for the work of the Bureau of Mines at Anchorage and branch offices at Juneau and Fairbanks.



*MINE-SAFETY SERVICE*

The purpose of the mine-safety service is to safeguard the lives and health of those engaged in mining and related activities. This work in Alaska is conducted by a senior foreman miner assigned from the Bureau of Mines staff. His duties include giving to miners and subordinate mine officials training in approved mine-rescue and first-aid methods; giving instruction in accident prevention, and the nature and seriousness of various types of hazards that are met in the mining industry, and approved methods of eliminating or overcoming them; conducting field contests in first-aid and mine-rescue work; giving exhibits and demonstrations of the bureau's safety work; and maintaining in condition for service the rescue apparatus provided by the bureau in the Territory.

The equipment of the mine-rescue car, which is maintained on the Alaska Railroad, was kept complete and in good condition for service at the operating coal mines adjacent to the railroad. This car also serves as a base for training in mine rescue and first aid in that vicinity.

Five sets of oxygen-breathing apparatus, an approved inhalator, and other mine-rescue equipment are kept at Juneau in good condition for use at any disaster that may occur in the mines of southeastern Alaska.

Training in first aid, mine rescue, or both, was conducted during 1930 for the Fairbanks Exploration Co. at seven of its camps near Fairbanks; Pacific Coast Cement Co., View Cove, Dall Island; Citizens Light, Power & Water Co., Ketchikan; Alaska Juneau Gold Mining Co., Juneau and Douglas; Juneau Public Schools, Juneau; Hirst Chichagof Gold Mining Co., Kimsham Cove, Chicagof Island; and Evan Jones Coal Co., Jonesville.

An exhibit of Bureau of Mines rescue and first-aid equipment was prepared and displayed at a first-aid contest held at Juneau that was attended by about 100 people. The foreman miner also assisted, with the Bureau of Mines H-H inhalator which is kept at Juneau, in saving the lives of two children at Juneau who had been overcome by smoke in a burning dwelling. In addition to the first-aid contest held at Juneau during the year a contest was held at Fairbanks, where five teams of the different camps of the Fairbanks Exploration Co. participated. About 150 spectators attended this contest. Eight lectures on first aid were given during the year to girl scouts, firemen, chambers of commerce, and to the Indian boys at a Government school. Safety inspections were made of four gold dredges in the Fairbanks district and reports submitted. Data was collected for a report on limestone quarrying in Alaska and a report submitted to the supervising mining engineer. During a trip to the States the foreman miner made a study of safety at gold dredges in California and collected data for use in making recommendations at gold dredges in Alaska. He also acted as a judge at the international first-aid and mine rescue contest held at Louisville, Ky., and attended the accident-prevention course at the Pittsburgh station of the bureau and meetings of the National Safety Council at Pittsburgh. All breathing apparatus at Juneau and Anchorage were rebuilt and the trunks painted and varnished.

Following is a record of the training completed in mine rescue and first aid during the year:

Original training:		Additional training:	
First aid.....	532	First aid.....	( <sup>1</sup> )
Mine rescue.....	20	Mine rescue.....	( <sup>1</sup> )
Combination.....	( <sup>1</sup> )	Combination.....	( <sup>1</sup> )

#### ASSAYING AND MINERAL ANALYSIS

Assaying and mineral analysis work was continued at the Alaska Agricultural College and School of Mines near Fairbanks by an analytical chemist and mineralogist detailed to that work by the Bureau of Mines. This work is carried on under a cooperative agreement whereby the college furnishes quarters and supplies and the bureau furnishes fixed equipment and details and pays the salary of the chemist who conducts the work.

This service provides prospectors and others in Alaska with an opportunity to secure official assays of ore samples at actual cost and of having made identification tests of mineral specimens free of charge. Assays of ore samples taken by field engineers of the Geological Survey and of the Territorial Mining Department, in connection with the investigation of mining development and assistance to prospectors, are also made at the college by the analyst of the Bureau of Mines. Opportunity is also given the mining students at the college of witnessing the assaying and identification tests conducted by a skilled analyst and mineralogist as well as to actually assist in the work.

During the fiscal year the following determinations were made in the laboratory at Fairbanks:

Custom assays.....	858
Official assays and analyses.....	198
Duplicates and miscellaneous.....	230
Identification tests.....	356

These determinations were as follows: Aluminum, 1; antimony, 8; arsenic, 4; bismuth, 5; calcium, 2; copper, 50; cobalt, 4; iron, 14; lead, 50; manganese, 2; nickel, 4; phosphorus, 2; platinum, 15; silica, 4; sulphur, 3; water (sanitary analysis), 26; gold and silver (requiring 1,532 fusions or scorifications and 1,105 cupellations), 1,090.

#### COAL SAMPLING AND ANALYSIS

The analysis of samples of coal in Alaska is carried on by the Bureau of Mines in a well-equipped laboratory at Anchorage furnished by the Alaska Railroad. The analyst who conducts the work is detailed and his salary paid by the Bureau of Mines.

All coal purchased by the Alaska Railroad under contract from private operators is inspected, sampled, and analyzed by the analyst; and, if necessary, appropriate penalties are applied on the basis of the results obtained. The facilities of the coal-analysis service are also available to other departments and bureaus of the Government and to the public. In addition to the Alaska Railroad, advantage of the service was taken during the year by the special investigator for

<sup>1</sup> None.

the Interior Department, Bureau of Education, Bureau of Indian Affairs, Geological Survey, Light House Service, several of the coal companies, Bureau of Public Roads, Territorial Mining Department, Alaska College, Alaska agricultural experiment stations, and the Signal Corps. The analyst also made a log of the No. 5 bed of the Alaska Matanuska coal mine and assisted in investigations being carried on in the railroad belt by the Interior Department and the Geological Survey.

A brief summary of the sampling and analysis work done in the coal-testing laboratory during the fiscal year is as follows:

Tons of coal inspected and sampled.....	39, 652. 42
Analyses made:	
Ash control determinations.....	274
Proximate analyses for Alaska Railroad.....	26
Proximate analyses for the public and other services.....	35
Miscellaneous determinations.....	4
Total terminations .....	339

### PUBLIC LANDS

Alaska is divided into three land districts, which include the four judicial divisions of the Territory. A local land office is maintained at Anchorage to care for the land entries of the first and third judicial divisions, and the Nome office and the Fairbanks office handle the second and fourth divisions, respectively.

The land laws of the United States, modified to meet local conditions, are applicable to Alaska. The administration of the town sites in Alaska is in charge of the division inspector at Anchorage. Timber sales, outside of the national forests, are arranged through the local land offices. Birch timber may be exported, though all other timber on the public domain outside of the national forests may be sold exclusively for local consumption.

The third and fourth judicial divisions contain the greater part of the suitable homestead lands, and requests for information should be directed to the local offices at Anchorage and Fairbanks, respectively.

The following statement shows the total number of entries made and the total acreage of land entries filed in the offices in Fairbanks, Nome, and Anchorage during the year 1931:

Kind of entry	Number of entries	Acreage
Homesteads.....	57	3, 420. 38
Soldiers' additional homesteads.....	30	328. 70
Trade and manufacturing sites.....	3	80. 00
Mineral entries.....	10	17, 631. 731
Coal applications.....	14	21, 229. 32
Oil applications.....	1	301. 73
Indian allotments.....	2	318. 91
Fur-farm applications.....	13	
Grazing applications.....	13	
Total.....	152	43, 308. 771

*PUBLIC SURVEY OFFICE*

The returns of all surveys executed for patent proceedings in Alaska, including surveys of mining claims, homesteads, homestead entries in national forests, trade and manufacturing sites, soldiers' additional homesteads, Indian and trustee townsites, and township surveys under the rectangular system, are filed in the Public Survey office, where they are examined and transcripts of the field notes made and the plats constructed.

Several classes of Government reservations are surveyed by field engineers of the public surveying service, and the returns of these surveys follows the same course.

The United States supervisor of surveys, Denver, Colo., approves all townsite and township surveys after they have been worked up in the public survey office. All other surveys are approved by the cadastral engineer in charge of the Public Survey office.

After the approval of surveys, the field notes and plats are submitted to the Commissioner of the General Land Office for final consideration and acceptance, excepting mineral surveys. Immediately after the approval of a mineral survey by the cadastral engineer in charge, the plats are blue printed and blue-print plats and transcripts of the field notes are mailed to the claimants for use in patent proceedings.

Homesteads, homestead entries in national forests, Government reservations, townsites, and townships under the rectangular system are surveyed by field engineers of the public surveying service, who may also execute surveys of trade and manufacturing sites and soldiers' additional homesteads, when deposits are made by applicants to cover the cost of field and office work, under the act of April 13, 1926.

Mineral surveys are made by the United States mineral surveyors on orders issued by the cadastral engineer in charge; and trade and manufacturing sites and soldiers' additional homesteads are executed by United States deputy surveyors as a general rule, under special instructions prepared by the cadastral engineer in charge. Both the mineral and deputy surveyors perform their work under private contract with the applicants for the respective surveys.

During the fiscal year the following surveys were approved:

Four fractional townships, three of which are in the Tanana Valley and one in the Susitna Valley.

Twenty mineral surveys, embracing 78 locations.

Five homestead entry surveys in national forests.

Seventy-nine surveys of townsites, homesteads, trade, and manufacturing sites, etc., 36 of which were executed by the public-surveying service and 43 by United States deputy surveyors.

One subdivision party is now engaged in extending the rectangular net over the pulp timber area in the southern part of Admiralty Island.

During the fiscal year an area of approximately 12,000 acres was subdivided, including subdivision of the timbered area in the southern part of Admiralty Island and on Kosciusko Island near Tokeen, in connection with the pulp and paper development of southeastern Alaska.

## FOREST SERVICE

Approximately 4,800,000 acres of Federal land in the Prince William Sound region and 16,547,000 acres in southeastern Alaska have been set aside as the Chugach and Tongass National Forests, respectively. The former is estimated to contain 6,260,000,000 and the latter 78,500,000,000 feet b. m. of commercial grades of timber. The percentages of principal tree species which occur are approximately:

	Per cent
Western hemlock.....	73
Sitka spruce.....	20
Western red cedar.....	3
Alaska cedar.....	3
Others.....	1

The annual cut of timber from this area is between forty to fifty million board feet. This material is used mainly to supply local needs in the form of saw timber, piling, or ties. It would be possible, according to present estimates, to cut 1,000,000,000 board feet annually from these national forests, but no great increase in output can be expected until the material is utilized for pulp and paper purposes, for which it is admirably suited.

The present financial depression has delayed development on the pulp and paper projects in the vicinities of Juneau and Ketchikan, to which reference has been made in previous reports. Until economic conditions generally are adjusted the start of construction work on these proposed enterprises is likely to be held in abeyance.

## ROADS AND TRAILS

Road-building activities within the national forest region are financed from forest highway funds appropriated under authority of the forest road section of the Federal highway act and amendments thereto, together with Territorial funds available. A system of roads adjacent to settlements and centers of activity has been adopted by the Secretary of Agriculture with the approval of the Territorial road board. Construction work on this system has been carried forward as rapidly as funds permit, until 237 miles costing \$4,646,000 have been constructed up to June 30, 1931. Work is all done by the Bureau of Public Roads, the road building agency of the department. A very satisfactory increase in property improvements and settlement has followed the road construction. At the end of 1929, when the last appraisal was made, improvements worth over \$4,000,000 had been placed along these forest highways. Material additions have been made since.

During the past year construction work has been started on roads at several of the smaller towns in the national forest region, in communities which heretofore have had no direct benefit from the road-building funds.

Trails are constructed and maintained by the Forest Service to the extent of about \$28,000 annually. Prior to June 30, 1931, 410 miles of trails had been built at a cost of \$408,000. These trails have opened up mineralized regions, facilitated the use of the forest areas in many ways and assisted forest administration.

The granting of 5-acre home-site tracts, authorized by the act of March 3, 1927, is working out very satisfactorily; 371 home sites have been applied for and large numbers of these have been improved with substantial buildings and are occupied as permanent homes. Many other tracts of land are used under a form of permit for fur farming, industrial sites, summer homes, etc., at nominal rentals. At the end of 1930, 913 permits covering 143,307 acres of land, were in effect.

Mineral development on national forests carries no special restrictions and is encouraged by the construction of trails and roads. Prospecting and filing of mining claims is permitted and requires no Forest Service permit of any kind.

Receipts from the national forests during 1931 fell off very materially as a result of the general slackening in business, only \$51,789 having been received in 1931 as against \$110,320 in 1930. One-fourth of such receipts is paid into the Territorial treasury to be used for roads and schools, while 10 per cent is added to the trail-building fund of the Forest Service.

### WATER POWER

The Navy Department, with the cooperation of the Geological Survey and other Federal agencies, made an aerial photographic survey in 1926 and 1929 of most of southeastern Alaska. The series of photographs obtained are of inestimable value in the study of the water-power resources of that region, and since they became available the Forest Service, with the cooperation of the Federal Power Commission, has been making field reconnaissance surveys of those power sites not previously well known which the pictures show to have good power possibilities. Those well situated with respect to mining, pulp and paper, or other possible industrial developments, have been given special attention. In addition to the above work more intensive surveys have been made in recent years of the larger and better-known power sites by the Federal Government and private interests. As a result a vast amount of engineering data on undeveloped water powers is now at hand.

The studies made to date show that southeastern Alaska has excellent and well-distributed water-power resources. Many of the sites are highly attractive for mining and industrial enterprises; they show an unusually low installation cost per horsepower and at the same time the projects are relatively small so that financing their development cost is within the reach of mining and industrial concerns and does not call for the formation of separate and large public utility companies.

Approximately 450,000 horsepower has now been covered by surveys of various types.

### GAME AND FUR CONDITIONS AND ADMINISTRATION

The Alaska Game Commission entered its seventh year of operations under the Alaska game law. (Act of January 13, 1925, 43 Stat. 739.) The commission is composed of five members, one from each

of the four judicial divisions of the Territory, and the chief representative of the Biological Survey resident in Alaska acting as executive officer, fiscal agent, and secretary.

The general public is still somewhat confused regarding the activities and functions of the United States Bureau of the Biological Survey and the Alaska Game Commission. Although both agencies are under the general jurisdiction of the Secretary of Agriculture, they are independent organizations, each with separate duties to perform. The former is responsible for, and conducts scientific studies and investigations on the wild life of the Territory in its relation to agriculture, grazing, game, and fur industry. It also administers certain bird reservations. The fundamental activities of the latter agency are regulatory and pertain to the requirements of the Alaska game act and the rules and regulations promulgated thereunder.

By reason of economic conditions in many sections of the interior the commission held a special meeting late in the fall and recommended an opening of the beaver and marten season with a limited catch. The regular annual meeting of the commission was held in Juneau, November 19 to December 13, both dates inclusive. All members were present and after disposing of routine reports and fiscal matters, attention was devoted to the questions of many reports and recommendations received from residents of widely scattered sections of the Territory. In response to a petition from the residents of Valdez, the Keystone Canyon closed area was extended from mile 16 to mile 20. This closed area was established to protect game animals and birds along the scenic portion of the Richardson Highway. The fur districts of the Territory were completely revised. New districts to No. 8 were created to enable the making of open seasons to conform with climatic conditions and the primeness of furs. In the revision of these fur districts it was necessary to completely revise the open seasons on all land fur-bearing animals throughout the Territory. Congress passed an amendment to the Alaska game law during its Seventy-first session which necessitated slightly revising many of the regulations to conform with the Alaska game law as amended. The provisions of the amendment revised the fur dealers' license schedule clarifying the section defining residents and made provision for the more liberal shipment of trophies by residents of the Territory. The penalty provision of the Alaska game law was also revised to facilitate enforcement work. The Alaska game law as amended and the revised regulations were published in the Game Law Circular No. 8, on April 2, to become effective on July 1, 1931.

The revenues from licenses, fines, and forfeitures received by the executive officer during the fiscal year totaled \$42,621.58 which, in accordance with the Alaska game law, have been equally divided between the Federal and Territorial Treasury. The moneys to the Territory are deposited in the school fund. Sources of revenue and disbursements are shown in the following table:

*Receipts*

	Number of licenses	Value of each	Total value
Nonresident general	105	\$50.00	\$5,250.00
Nonresident small game	14	10.00	140.00
Resident shipping (mounting and return)	31		41.00
Resident shipping (moving residence)	13		120.00
Registered guide	86	10.00	860.00
Alien special	79	100.00	7,900.00
Fur farm	431	2.00	862.00
Resident fur dealer	343	10.00	3,430.00
Nonresident citizen fur dealer	7	250.00	1,750.00
Alien fur dealer	2	500.00	1,000.00
Domestic organization fur dealer	13	250.00	3,250.00
Resident trapping	4,425	2.00	8,850.00
Total received from licenses			33,453.00
Sales of forfeited articles			4,499.60
Fines			2,587.98
Total distributed receipts			40,540.58
Undistributed receipts deposited to suspense			2,081.00
Grand total receipts			42,621.58

*Disbursements*

Paid to the Treasurer of the United States in accordance with sub-division K, section 11 of the Alaska game law (43 Stat. 739)	\$20,221.29
Paid to the treasurer, Territory of Alaska, in accordance with sub-division K, section 11 of the Alaska game law (43 Stat. 739)	20,221.29
Outstanding for collection	64.00
Payments for canceled licenses	34.00
Refunds from suspense	\$279.00
Carried forward in suspense to fiscal year 1931	1,802.00
	2,081.00
Grand total disbursements	42,621.58

During the year 51 cases of game-law violations were filed in court, resulting in fines totaling \$3,975 and jail sentences of 407 days. Numerous furs, traps, guns, trophies, and game meats were forfeited.

The Diesel motor patrol vessel *Seal*, built by the commission in 1926, made her sixth patrol to the Alaska Peninsula, Aleutian Islands, and Bristol Bay. This vessel is 68 feet long and carries a crew of five men in addition to a warden. During the winter months the vessel is stationed in southeastern Alaska, where it engages in a very effective patrol. Continued improvement in law observance in the areas visited on the *Seal's* patrol along the Alaska Peninsula, Aleutian Islands, and Bristol Bay is noticeable. The *Sea Otter*, a 48-foot gas-motor patrol vessel, built in 1916, continues to efficiently carry on the work assigned to it in southeastern Alaska. The small cabin cruiser purchased in 1928 for service on the Kuskokwim River continues to be successful in its operations. The commission authorized the construction of a 37-foot patrol vessel for the Cook Inlet and Kenai Peninsula district. The keel for this vessel was laid in June and it is anticipated that favorable results in the protection of game and land fur-bearing animals in those districts will be obtained upon this vessel's assignment to that area.

The executive officer of the commission spent the summer and fall in the field conferring with the commissioners of each division and the wardens in the interior districts. Contacts were made with



trappers, fur dealers, guides, and game hunters for discussion and study of the present regulations as affecting the increase or decrease of game and land fur-bearing animals in the Territory.

The value of land fur-bearing animals shipped from the Territory during the calendar year 1930 was \$2,141,289.74, a decrease of approximately \$2,300,000 under the previous year. A decline in the market price of furs was responsible for this decrease. Furs, except fur seals, shipped from Alaska during the years 1928, 1929, and 1930, are shown in the following table:

*Furs shipped from Alaska during the years 1928-1930*

Species	Number			Average value			Total value		
	1928	1929	1930	1928	1929	1930	1928	1929	1930
Bear:									
Black, or glacier	709	491	1,125	\$4.60	\$4.85	\$4.00	\$3,261.40	\$2,381.35	\$4,590.00
Polar	80	48	156	32.00	50.00	50.00	4,960.00	2,400.00	7,800.00
Beaver	32,712	1,547	476	26.00	26.25	20.00	850,512.00	40,608.75	9,520.00
Coyote	621	480	806	16.25	20.50	18.00	10,091.25	9,840.00	8,978.00
Fox:									
Red	20,907	21,023	10,288	38.28	40.60	34.00	1,020,990.96	1,042,740.80	553,792.00
Cross	3,018	3,109	1,956	63.37	95.62	65.00	191,250.66	300,391.58	127,140.00
Silver	708	1,008	1,044	121.00	125.00	100.00	85,668.00	145,000.00	104,400.00
White <sup>1</sup>	4,533	12,179	4,848	45.50	60.25	45.00	206,251.50	733,784.75	218,160.00
Black	53	61	106	52.00	55.00	50.00	2,756.00	3,355.00	5,250.00
Blue <sup>1</sup>	7,576	7,976	7,480	68.52	101.33	65.00	519,107.52	808,208.08	486,200.00
Hare	459	401	192	1.00	.50	.40	459.00	200.50	76.80
Lynx	10,173	7,575	2,980	45.25	61.10	57.00	460,828.25	462,932.50	20,860.00
Marmot	112	361	67	.75	.50	.40	84.00	180.50	28.80
Marten	142	276	637	20.05	30.00	18.00	4,125.10	8,280.00	11,466.00
Mink	32,353	26,695	27,785	15.87	20.70	8.50	513,442.11	552,586.50	236,172.50
Muskrat	107,957	190,377	411,934	1.33	1.02	.56	263,282.81	194,184.54	230,553.04
Otter	3,191	2,943	3,491	24.68	31.68	23.00	78,763.88	92,930.94	80,299.00
Squirrel	2,860	1,317	838	.17	.10	.10	486.20	131.70	83.80
Weasel (ermine)	10,253	17,467	11,582	2.04	1.74	1.15	20,016.12	30,392.58	13,310.30
Wolf	536	688	355	26.00	41.55	28.00	13,930.00	28,580.40	9,280.00
Wolverine	831	873	495	21.27	19.95	10.50	17,675.37	17,410.35	5,197.50
Total	335,784	290,895	404,140				4,277,347.13	4,477,441.82	2,128,147.74
Pribilof Islands (foxes only):									
Blue	278	544	375	74.09	63.93	32.40	20,598.00	\$5,805.92	12,150.00
White	15	9	32	40.13	61.78	31.00	692.00	556.02	992.00
Total	293	553	407				21,290.00	36,421.94	13,142.00
Grand total	336,077	291,448	404,547				4,298,637.13	4,513,863.76	2,141,289.74

<sup>1</sup> Not including pelts from Pribilof Islands.

Pursuant to an appropriation by the seventieth session of Congress, 34 musk oxen were obtained from Greenland and transferred to the interior of Alaska in an effort to reestablish musk oxen in the Territory. It is anticipated that these animals will thrive in their new environment. The elk and buffalo planted by the Territory in 1927 and 1928 are reported as increasing in numbers. Beaver and muskrats, planted in the Kodiak district, have increased and are spreading over a wide area.

Four hundred and thirty-one fur-farm licenses were issued during the year. To encourage and assist persons in establishing fur farms, 48 permits were issued for the capture of live fur-bearing animals for propagation purposes. This is a decrease of 91 permits under the previous year and is largely due to the decline in the demand for live animals for breeding purposes. The permits provided for the

capture of 238 mink, 75 red fox, 25 white fox, 14 silver fox, 34 marten, 83 beaver, 4 lynx, and 6 land otter.

Predatory animal control work, under the joint direction of the governor and the Alaska Game Commission, was carried on with Territorial and Federal funds until March 1, 1931, by Harlan H. Gubser, who was assigned to the Territory by the Bureau of Biological Survey. The 1931 Territorial legislature did not appropriate funds for continuance of the Territory's part in this joint project and the work is being completed with Federal funds under the direction of the Biological Survey. The bounty on wolves and coyotes was increased to \$15 for each animal by the 1931 Territorial legislature.

During the spring and fall hunting season a total of 105 non-resident hunters visited the Territory. To care for this number of nonresident hunters 86 guides were licensed.

The services of 60 licensing officers in widely scattered sections of the Territory are available for the convenience of persons desiring to comply with the licensing provisions of the Alaska Game Law and Regulations.

### *PREDATORY ANIMAL CONTROL*

From July 1, 1930, to March 31, 1931, work in the control of predatory wild animals was carried on under a cooperative agreement between the Territory of Alaska and the Biological Survey, the object being to investigate reported depredations by coyotes and wolves and to train assistants in control methods in each peculiar climatic section that they might efficiently work with and increase the catch by the private trapper of predatory animals.

The failure of the Territory to appropriate funds to carry on control work during the biennium 1931-32 and the limited Federal funds available has made it necessary since April 1 to somewhat alter previous plans; therefore operations have been confined principally to the investigation of reports and to written instructions to private trappers.

Investigation and experience during the past two years in Alaska have proven conclusively that due to the slow means of transportation and the almost total lack of communication that the only economical and practical method of control in the interior of Alaska must be accomplished through the private trapper. The 4,000 or more people engaged in trapping are located in all sections of the Territory and are each well acquainted with the local climatic conditions of their locality. When properly equipped and instructed in control methods, they should be a very formidable factor in the control of predatory animals. That the average trapper in Alaska is very keenly interested in the control of the coyote and wolf is evidenced by the fact that before control work was started in 1925-26 there were 1,111 coyotes and wolves presented for bounty. In 1927-28, after trapping demonstrations were held and scent formulas given, the number increased to 2,161. In 1929-30 the number offered for bounty increased to 2,304 in spite of the fact that the bounty was reduced from \$15 each to \$7.50 on the wolf and \$5 on the coyote. During this same period there was also a very marked decrease in the fur-bearing animals throughout the Territory, due to the almost total absence of rodents.

Though there is seemingly a very marked decrease in each locality where the coyote was formerly found, he has migrated until he is to be found in practically all sections of the Territory.

Investigations of reported losses were carried on through visits of a trained hunter and by correspondents with traders and trappers in the sections involved. All reported wolves and coyotes were considerably less numerous during the past two years than formerly. Following reports of loss among the reindeer herd at the reindeer experiment station near Fairbanks, a trap line was established and instructions given in coyote trapping. Two coyotes were taken from this line and the losses immediately stopped.

At Holy Cross, the game warden in the Kuskokwim district reported that coyotes had reached as far south as the mouth of Stony River and that there was rather a heavy infestation of both wolves and coyotes in the Rainy Pass and McGrath sections.

Owners of approximately 20,000 reindeer in the St. Michael section report the loss of not less than 250 deer by wolves each year and an equal amount by bear for the past three years.

Coyotes were reported as far down the Yukon River as Marshall. Losses in the reindeer herds, from both coyotes and wolves, were reported all along the route. It was reported that the reindeer herd at Kokrines suffered more losses than any other, and in the latter part of August a special investigation of these reports was undertaken. On the first trip of the hunter into the range, the carcasses of three freshly killed reindeer were found and the tracks of six wolves were seen. Accordingly, plans were made for a strenuous campaign in this area during the winter. However, while these plans were being perfected the reindeer herd scattered and as a consequence the home range was practically deserted by the reindeer until about the middle of November, when some of them drifted back with the caribou herds.

During this time only two wolves came through this country. These killed one yearling deer and left. It was expected that the band of wolves reported to have been there would return in the late fall and winter, but this they failed to do. The trappers in this section seem exceptionally responsive to help given them. It is hoped that through their cooperation a satisfactory solution will be found for the control of predatory animals in the reindeer area.

All reports indicate a heavy infestation of both coyotes and wolves on the headwaters of the Kuskokwim River and Rainy Pass section toward Lake Minchumina, the heaviest losses among game, according to reports, occurring in the Mount McKinley Park section.

Investigations were continued in the islands of southeastern Alaska until January 31, 1931, to determine the degree of infestation of wolves and to determine where they denned. During this time 15 wolves were taken by traps. These investigations show there is a marked shift in the wolves during the denning season. Nearly all the wolves caught were adults. Not one pup or pup track has been seen on any of the more northern islands. It is thought that there is a limited amount of denning on Dall Island and the south end of Prince of Wales Island. On each of these islands one female wolf was trapped that was suckling young. Ten other females trapped in the northern islands gave no evidence of having reared young this season.

It was found there were two very distinct trails of migration from the mainland to the islands; one by way of Farm, Dry, Mitkof, Kupreanof, and Level Islands to Prince of Wales Island. The other route from the mainland by way of Deer, Wrangell, Etolin, Zarembo, Busy, and Shrubby Islands to Prince of Wales Island.

During the early spring investigations were made of the coyote situation in the Skagway-Haines section. There are undoubtedly few places that prove as conclusively the effect of coyote depredations among the fur bearers as this particular section. According to reports, in former years, before the advent of the coyote, the fur bearers—martens, beaver, mink, and fox—were plentiful in this section. Since the coyote made his first appearance they have been decreasing each year, while the coyote has increased, until this year they have very little of any but coyotes left. This condition seems to be on the mainland only, for on the islands adjacent to this section, where the coyotes can not reach, the fur catch is nearly normal.

## UNITED STATES COAST AND GEODETIC SURVEY

### TIDE AND CURRENT WORK

Primary tide stations for the control of hydrographic work and the establishment of tidal planes were maintained at Ketchikan and Seward for the entire year. The cooperative tide station at Cordova was maintained throughout the year by the Cordova Chamber of Commerce.

Automatic tide gage records covering one or more months were obtained in connection with hydrographic surveys at Yes Bay, Loring, Chance Lagoon, Nuka Passage, Takoma Bay, Lazy Bay, Moser Bay, and Olga Bay. A series of tides covering periods of less than a month were obtained at Shrimp Bay, Traitors Cove, Roosevelt Lagoon, Anchorage, and Narrows (Moser Bay).

Current observations were taken at Behm Canal to increase the scope and usefulness of the current data published by the Coast and Geodetic Survey. Sixty-five tidal bench marks were established or connected by levels at 19 Alaskan tide stations during the fiscal year, from which standard datum planes may be obtained for engineering and construction work. The daily temperature and density observations of the sea water at Ketchikan and Seward were continued.

The Pacific Coast Tide Tables, published annually in advance by the Coast and Geodetic Survey, include the predicted times and heights of the tide for every day of the year at Sitka, Juneau, Seldovia, Anchorage, Kodiak, Apokak, and St. Michael. These tide tables also give tidal differences and ratios for about 300 other places in Alaska by means of which the navigator is enabled to determine the times and heights of high and low water for practically all the tidal waters of Alaska.

The Pacific Coast Current Tables, also published annually in advance, include complete current predictions for each day of the year for Wrangell Narrows, Sergius Narrows, North Inian Pass, and Isanotski Strait. They also give differences and ratios by means of which navigators are enabled to obtain in advance the times and velocities of the current for about 250 other places in Alaskan waters.

## HYDROGRAPHY AND TOPOGRAPHY

The party on the United States Coast and Geodetic Survey ship *Surveyor* continued surveys along the west coast of Kodiak Island. Work was extended during the 1930 season from Cape Ikolik southward through Sitkinak Strait, and included a survey of Olga Bay. Combined with work of the previous season, this completed the survey of Alitak Bay and tributaries. During the present season surveys are being extended eastward along the south coast of the island toward Sitkalidak Strait. These will include the western approaches of that strait as well as the eastern approaches to Sitkinak Strait. The results of the work of last season will be published on nautical chart No. 7537, scale 1:80,000, now under construction.

Surveys along the south coast of Kenai Peninsula, westward from Aialik Bay, were continued by the party of the ship *Discoverer*. These were extended offshore to the 100-fathom curve and as far west as Port Dick. They include a detailed survey of that bay as well as of Nuka Island Pass. The results are being applied to nautical chart No. 8530, the area embraced now having been entirely surveyed.

During the present season this party is employed in extending the surveys southward across the passages between the Kenai Peninsula and Afognak Island. Detailed surveys will be made of Windy Bay, the area around the Barren Islands, and around the west, north, and east side of Shuyak Island, and will clear up several reported dangers to navigation in the passage between Shuyak Island and the Barren Islands.

The party on the ship *Explorer* continued work in Behm Canal, started during the latter part of the fiscal year 1930. Approximately over half of the waterway was surveyed in detail, and it is expected that the remainder will be completed this season and shown on two new charts, scale 1:80,000.

## NAUTICAL CHARTS

Six new nautical charts of the Alaska coast were issued during the year, namely:

- 8256. South and west coasts of Kruzof Island.
- 8272. Monte Carlo Island to Entrance Island, Keku Strait.
- 8410. Cape Spencer to Icy Point.
- 8530. Seal Rocks to Gore Point, Kenai Peninsula.
- 8531. Gore Point to Anchor Point, Kenai Peninsula.
- 8551. Prince William Sound.

Work is in progress on new charts of Ketchikan Harbor, Kodiak Island, and the south coast of Kenai Peninsula.

New editions of nautical charts, containing extensive revisions based on new surveys, were published of the following charts:

- 8164. Steamer Bay, Wrangell Harbor, and Highfield Anchorage.
- 8170. Wrangell Narrows.
- 8200. Frederick Sound and Sumner Strait.
- 8210. Thomas, Farragut, and Portage Bays.
- 8243. Kelp, Takatz, and Warm Spring Bays, Chatham Strait.
- 8244. Sitka Harbor and Approaches.
- 8248. Salisbury Sound and Peril Strait to Emmons Island.
- 8250. Chatham Strait and Baranof Island.
- 8281. Sitka Sound to Salisbury Sound, Inside Passage.

- 8502. Cape St. Elias to Shumagin Islands.
- 8515. Prince William Sound, Western Entrance.
- 8525. Orca Bay and Inlet, Channel Islands to Cordova.
- 8555. Shelikof Strait and Afognak Island.
- 8822. Bays and Anchorages, Kodiak Island.
- 9007. Unalaska Bay, Iliuliuk Bay, and Dutch Harbor.

Agencies for the sale of United States Coast and Geodetic Survey charts and nautical books are maintained at Anchorage, Cordova, Craig, Hoonah, Juneau, Ketchikan, Kodiak, Petersburg, Seward, Sitka, Valdez, and Wrangell.

#### MAGNETIC AND SEISMOLOGIC WORK

The Sitka magnetic observatory was continued in operation throughout the year. Preparations are being made to install improved magnetic and seismological instruments in the near future and will result in making this a first-class seismological station, as it has been a first-class magnetic observatory for many years.

Observations were also made on the aurora and magnetic information was furnished the Alaska Agricultural College and School of Mines, at Fairbanks, in connection with the program for observations of the aurora being carried on at that institution in cooperation with the Rockefeller Foundation, the Carnegie Institution of Washington, and the United States Coast and Geodetic Survey.

Magnetic observations were also made at various places along the coast by vessels of this service engaged in hydrographic and topographic surveys.

#### RIVERS AND HARBORS

The establishment of the Juneau engineer district on April 1, 1921, by the Chief of Engineers, United States Army, marked a great advance in the manner of handling river and harbor improvements. The president of the Alaska Road Commission was appointed district engineer, and the other two members of the commission were designated as his military assistants. The president of the commission was also detailed to superintend the construction or repairs of any aid to navigation authorized by Congress in the sixteenth light-house district and to act in a consulting capacity therewith, and was directed to report by letter to the Secretary of Commerce.

The seven works of improvement now authorized are Nome Harbor, Wrangell Harbor, Wrangell Narrows, Tolovana River, Ketchikan Harbor, Port Alexander, and Harbor of Refuge, Seward.

The improvement of Nome Harbor, which was completed in 1923, involved the dredging of the mouth of Snake River and the construction of two jetties at a cost of \$272,950.13. Annual redredging and seasonal maintenance have been accomplished as required at a cost of \$188,582.50.

The improvement of Wrangell Harbor, which was completed in 1925, involved the construction of a breakwater about 300 feet long, extending from Point Shekesti in a northeasterly direction, and forming a safe anchorage for small boats. Construction began in April, 1924; the rubble-mound breakwater was completed in November, 1924; and the concrete curb wall was completed in November, 1925; total cost \$37,321.32. No maintenance has been required.

The improvement of Wrangell Narrows was completed in June, 1928. A channel 200 feet wide and 21 feet deep at mean low water with increased width on curves, and 300 feet wide and 27 feet deep across Petersburg Bar, has been provided at a cost of \$452,970.93. Maintenance dredging has been performed as required at a cost of \$79,776.84 to date.

Practically all traffic destined for Alaskan and Canadian points north of Wrangell, now amounting to about 60,000 passengers and 600,000 tons of freight, will use the completed channel, where heretofore about half the existing traffic was forced to detour around Cape Decision. The improved channel has been marked by the Lighthouse Service.

Authority for the improvement of the Tolovana River is contained in the river and harbor act of January 21, 1927, but this work has not yet been started.

The improvement of Ketchikan Harbor, which is now in progress, provides for the construction of a stone breakwater 960 feet in length and for dredging the protected area to a depth of 10 feet below mean lower low water. Costs to date are \$59,988.76.

The improvement at Port Alexander, which is now in progress, provides for the removal of ledge rock to provide a channel 15 feet deep at mean lower low water and 150 feet wide at the main entrance and for a channel 2 feet deep and 40 feet wide at the entrance to the inner lagoon.

The project for harbor of refuge at Seward provides for a stone breakwater 580 feet long and for dredging the protected area to a depth of 12.5 feet at mean lower low water. The breakwater is completed and dredging is in progress. Costs to date are \$40,172.80.

An item for the improvement of Dry Pass has been recommended to Congress. Survey reports have been submitted for the improvement of Gastineau Channel and Sitka Harbor. Surveys have been authorized and are now in progress for the improvement of Stikine River, Wrangell Harbor, and Petersburg Harbor. The act of Congress approved March 4, 1931, authorized a survey of Salmon River at Hyder with a view to the control of floods.

This engineer district carries out the important duties of the Federal Government in connection with permits for the construction of bridges, wharves, and other structures over navigable waters, including fish traps, both fixed and floating. The local supervision of such permits has been of great value in facilitating efficient supervision over such structures. A thorough investigation is made of all fish traps within the Territory to insure compliance with the Federal regulations guarding the interests of navigation, including location, display of lights, etc., which is of great importance to both the large shipping interests and the operators of many small gas boats and fishing schooners within the Territory.

### AIDS TO NAVIGATION

Aids to navigation are established and maintained by the Lighthouse Service of the Department of Commerce, the work in Alaska being conducted from the district headquarters at Ketchikan under the direction of the superintendent. A supply and buoy depot is also maintained at Ketchikan. Two lighthouse tenders, both oil-

burning steam vessels built especially for the work in Alaska, are operated throughout the year in connection with the work of establishing and maintaining aids. These are the *Oedar*, a large steel vessel, and the *Fern*, a smaller wooden vessel.

Construction work was continued during the fiscal year on the new Cape Decision light and fog signal station at the southern extremity of Kuiu Island, field operations being confined mainly to the summer months. This station will include a flashing light of suitable intensity, a first-class sound fog signal and a second-class radiobeacon. Quarters for three keepers are being provided. It is expected that the station will be placed in commission in the fall of this year.

In the latter part of May a construction crew was sent to Cape Hinchinbrook at the entrance to Prince William Sound for the purpose of constructing a new lighthouse to replace the present building, which is threatened with destruction by the rapid progressive caving of the high rock bluff on which it stands. This project will extend over two working seasons and completion is scheduled for the latter part of the calendar year 1932. The new main building will be of modern design and will be constructed of reinforced concrete.

A first-class radiobeacon was established during the year at Scotch Cap Light Station, on Unimak Pass. This station transmits radiobeacon signals whenever the weather is thick, and a semihourly radiobeacon schedule is maintained at all other times. The light was changed from fixed to flashing and its intensity was greatly increased. A third-class radiobeacon was established during the year at Mary Island Light Station, on the main inside steamship route of southeastern Alaska. Five radiobeacons in all were being maintained in Alaska on June 30, 1931, the others besides the two new ones mentioned being first-class stations at Cape Spencer and Cape St. Elias and a second-class station at Sentinel Island. An hourly clear weather radiobeacon schedule has been put into effect at Cape St. Elias. Another third-class radiobeacon will be placed in commission at Five Finger Light Station, Stephens Passage, in July of this year.

Several new automatic lights and a number of unlighted aids were established during the year. The following table shows the progress that is being made in carrying out the policy of the Bureau of Lighthouses to extend and improve the system of aids to navigation in Alaska as rapidly as the necessary funds become available from appropriations made by Congress:

Aids	1910	1915	1920	1925	1930	1931
Lights.....	37	112	196	260	324	336
Gas buoys.....			10	19	25	25
Radiobeacons.....					3	5
Fog signals.....	9	10	11	13	14	14
Buoys.....	84	167	224	303	308	307
Daymarks.....	30	49	94	140	178	180
Total.....	160	338	535	735	852	807



### MAIL SERVICE

The transportation of mails in Alaska is under the supervision of the superintendent of the thirteenth division, Railway Mail Service, at Seattle, Wash. This office exercises supervision over the entire Alaska service and has immediate charge of all service in southeastern Alaska and all direct steamboat service from Seattle. The chief clerk, Railway Mail Service, at Seward, has immediate charge of the service provided along the south coast, north and west of Yakutat, the service provided over the Copper River & Northwestern Railway and the Alaska Railroad, the upper and lower Yukon River, Tanana River, Kuskokwim River, and the Seward Peninsula.

### TERRITORIAL SCHOOLS

The Territorial public schools are of two classes, viz, schools within incorporated towns and districts and schools outside of incorporated towns and districts. The schools outside of incorporated towns and districts are further divided to include schools in regularly organized school districts and schools maintained where the population is insufficient to warrant the establishment of a school district. The latter type school is called a "special school."

The Alaska schools are largely supported by appropriations from the Territorial treasury, augmented by 25 per cent of the Alaska fund, which consists of a variety of Federal taxes collected in the Territory and which annually nets the schools approximately \$50,000, and by a small local property tax in incorporated towns and districts. Schools outside of the incorporated towns and districts derive their support entirely from appropriations from the Territorial treasury and the Alaska fund. These funds are disbursed through the Territorial department of education.

The Territorial schools, including elementary and high schools, and citizenship night schools for adults, are under the general supervision of a Territorial board of education, with the commissioner of education as chief executive of the board.

Alaska boasts of an excellently trained and experienced staff of teachers. The average experience of teachers in the Territorial schools is over eight years. Normal school graduation is required before a teacher may be employed in the elementary grades. College graduation with a minimum of 12 semester hours in education is required of high-school teachers.

The following 4-year high schools are accredited at the University of Washington: Anchorage, Cordova, Douglas, Fairbanks, Juneau, Ketchikan, Petersburg, Seward, and Wrangell. Fairbanks, Juneau, and Ketchikan high schools are also accredited by the Northwest Association of Secondary and Higher Schools. Skagway, Haines, Valdez, Nome, and Sitka also offer four years of high-school work.

### SCHOOLS IN INCORPORATED TOWNS AND DISTRICTS

There are 17 schools in incorporated towns and districts. The cost per pupil for the school year 1930-31 was \$124.61. Following

is a statistical report showing the enrollment and cost of these schools:

*Schools in incorporated towns and districts, 1930-31*

Location	Number of teachers	High-school enrollment	Elementary-school enrollment	Total	Average daily attendance
Anchorage	10	91	312	403	350
Cordova	10	59	194	250	219
Douglas	8	41	79	120	112
Eagle	1	0	11	11	10
Fairbanks	14	96	221	317	286
Haines	5	14	49	63	67
Juneau	24	155	472	627	536
Ketchikan	25	182	568	750	599
Nenana	3	11	50	61	53
Nome	5	24	55	79	73
Petersburg	12	54	203	260	226
Seward	8	50	104	154	120
Sitka	7	23	98	121	101
Skagway	7	29	62	91	83
Valdez	4	12	45	57	52
Wrangell	10	28	141	169	123
Charcoal Point	3	0	74	74	67
Total	162	866	2,741	3,607	3,073

*Financial statistics*

Location	Graduates		Teachers' salaries	Other expenditures	Total
	Elementary	High school			
Anchorage	21	12	\$23,718.76	\$14,606.17	\$41,324.93
Cordova	21	8	18,420.25	5,738.97	24,159.22
Douglas	12	6	12,000.00	4,792.00	16,792.00
Eagle	0	0	1,710.00	181.29	1,891.29
Fairbanks	24	14	27,305.00	11,398.86	38,703.86
Haines	4	4	7,880.00	2,044.48	9,874.48
Juneau	40	28	43,135.75	14,221.24	57,356.99
Ketchikan	26	30	39,848.50	14,565.30	54,413.80
Nenana	3	0	5,355.00	2,607.86	7,962.86
Nome	3	5	9,070.00	4,202.63	13,272.63
Petersburg	17	4	18,115.00	2,735.41	20,850.41
Seward	18	8	13,936.72	7,350.29	21,287.01
Sitka	2	0	12,125.00	4,875.00	17,000.00
Skagway	0	5	11,450.00	4,381.36	15,831.36
Valdez	4	0	7,100.00	3,392.00	10,492.00
Wrangell	9	4	17,091.00	6,663.46	23,754.46
Charcoal Point	7	0	4,700.00	3,255.69	7,955.69
Total	215	184	275,900.98	107,040.01	382,940.99

*SCHOOLS OUTSIDE INCORPORATED TOWNS AND DISTRICTS*

Schools were maintained during the year in 64 districts outside of incorporated towns and incorporated districts. Seven special schools were also maintained during the year. The cost per pupil of the schools outside of incorporated towns and districts was \$151.02. The cost per pupil in the special schools was \$219.10.

The following statistical table contains detailed information regarding the enrollment and cost of these schools:

*Schools outside of incorporated towns and districts, 1930-31<sup>1</sup>*

School	Number of teachers	Enrollment	Average daily attendance	Terms in month	Salaries of teachers	Other expenses	Total
Afognak	3	75	59	0	\$4,455.00	\$1,050.00	\$5,105.00
Akiak <sup>2</sup>	1	13	12	0	1,800.00	880.50	2,680.50
Anchorage Bay <sup>2</sup>	1	44	25	7	1,221.50	976.00	2,190.50
Bethel <sup>2</sup>	3	30	35	0	3,000.00	1,963.10	5,563.10
Blackburn	2	20	10	0	2,925.00	643.07	3,568.07
Candle <sup>2</sup>	1	15	13	0	1,575.00	1,140.25	2,724.25
Chadanika <sup>2</sup>	1	13	11	0	1,575.00	984.05	2,559.05
Chitina	1	0	0	0	1,575.00	841.04	2,416.04
Chitina	1	12	10	0	1,395.00	500.93	1,955.93
Chishagof <sup>2</sup>	1	18	15	0	1,050.00	133.25	1,233.25
Chignik <sup>2</sup>	3	61	41	0	4,275.00	1,072.25	5,947.25
Craig <sup>2</sup>	1	14	14	0	1,800.00	908.50	2,708.50
Crooked Creek <sup>2</sup>	1	11	8	0	1,575.00	840.25	2,424.25
False Pass	1	0	5	7	1,120.00	471.80	1,601.80
Fairview <sup>2</sup>	1	20	10	0	1,575.00	874.25	2,449.25
Fortuna Ledge <sup>2</sup>	1	24	15	0	1,575.00	1,144.25	2,719.25
Fort Yukon <sup>2</sup>	1	0	0	7	1,120.00	276.80	1,396.80
Goddard	1	10	12	0	1,800.00	908.00	2,700.00
Golovin <sup>2</sup>	1	13	12	8	1,600.00	1,336.00	2,936.00
Haycock <sup>2</sup>	1	9	5	8	1,440.00	436.00	1,876.00
Healy <sup>2</sup>	1	7	0	8	1,320.00	388.80	1,708.80
Homer <sup>2</sup>	2	33	24	0	2,970.00	708.30	3,708.30
Hoonah <sup>2</sup>	1	16	10	0	1,575.00	776.75	2,351.75
Ilyder	1	25	22	0	1,800.00	802.00	2,602.00
Kanakanak <sup>2</sup>	1	17	11	0	1,440.00	756.00	2,196.00
Kasaan <sup>2</sup>	1	7	0	8	1,440.00	423.95	1,863.95
Katalla	3	63	53	0	4,905.00	2,715.00	7,620.00
Kenal <sup>2</sup>	1	20	16	0	1,800.00	817.00	2,617.00
Kiana <sup>2</sup>	1	10	10	0	1,575.00	1,444.25	3,019.25
King Cove <sup>2</sup>	5	190	95	0	8,325.00	2,487.50	10,812.50
Kodiak	1	23	21	0	1,065.00	1,103.35	2,708.35
Kotzebue <sup>2</sup>	2	10	0	0	2,700.00	840.30	3,630.30
Latoche	3	68	58	0	4,545.00	1,037.00	5,582.00
Longwood	2	34	24	0	3,150.00	1,143.50	4,293.50
Matanuska <sup>2</sup>	1	7	5	8	1,520.00	547.20	2,067.20
McCarthy	1	13	0	0	1,800.00	946.00	2,746.00
McGrath <sup>2</sup>	4	90	84	0	6,435.00	1,035.05	8,370.05
Mission	1	14	13	0	1,800.00	800.30	2,600.30
Naknek <sup>2</sup>	1	18	17	0	1,800.00	595.00	2,395.00
Napamuto <sup>2</sup>	2	40	30	0	3,015.00	1,119.85	4,134.85
Nimilchie <sup>2</sup>	1	10	15	0	1,800.00	1,398.00	3,198.00
Oiter <sup>2</sup>	1	0	7	8	1,400.00	721.00	2,121.00
Pavlov Harbor <sup>2</sup>	1	10	13	0	1,440.00	642.10	2,082.10
Point Agassiz <sup>2</sup>	1	21	20	8	1,400.00	950.00	2,350.00
Fort Graham	1	10	17	0	1,020.00	754.80	2,374.80
Portlock <sup>2</sup>	1	24	18	0	1,800.00	902.00	2,702.00
Ruby	1	14	12	0	1,575.00	1,081.75	2,606.75
San Point <sup>2</sup>	3	74	67	0	4,455.00	1,990.00	6,445.00
Seldovia <sup>2</sup>	1	22	10	0	1,800.00	687.00	2,787.00
Snag Point <sup>2</sup>	1	14	13	0	1,575.00	1,074.25	2,649.25
Squaw Harbor <sup>2</sup>	1	30	23	0	1,800.00	1,157.66	2,957.66
St. Michael <sup>2</sup>	1	10	8	8	1,000.00	674.00	2,274.00
Takotna <sup>2</sup>	2	50	38	0	3,000.00	2,299.00	5,899.00
Tanana <sup>2</sup>	1	13	13	0	1,575.00	940.25	2,521.25
Teller <sup>2</sup>	1	20	0	0	1,440.00	605.80	2,045.80
Tenakee	1	11	10	0	1,440.00	755.60	2,195.60
Thane	1	0	8	8	1,400.00	422.00	1,822.00
Tofty <sup>2</sup>	2	44	35	0	3,405.00	840.35	4,305.35
Unalaska <sup>2</sup>	2	44	41	0	3,150.00	1,384.50	4,534.50
Unga <sup>2</sup>	1	35	31	0	1,020.00	586.60	2,206.60
Uzinko <sup>2</sup>	1	15	11	0	1,350.00	501.50	1,911.50
Wards Cove <sup>2</sup>	1	14	11	0	1,440.00	655.00	2,065.00
West Petersburg	1	21	17	0	1,800.00	642.00	2,442.00
Wasilla	1	15	11	0	1,800.00	603.00	2,403.00
Wiseman <sup>2</sup>	1	15	11	0	1,800.00	603.00	2,403.00
Total	90	1,048	1,343	-----	139,206.50	63,563.91	202,830.41

SPECIAL SCHOOLS<sup>3</sup>

Chilkoot	1	0	0	8	\$1,200.00	\$183.50	\$1,383.50
Gustavus	1	0	0	8	1,200.00	202.81	1,402.81
Heceta	1	0	0	8	1,200.00	53.27	1,253.27
Mile 7	1	11	7	8	1,320.00	34.71	1,354.71
Moose Pass	1	5	5	8	825.00	32.18	857.18
Riddiford	1	8	8	8	1,320.00	145.50	1,465.50
Franklin	1	7	5	8	1,520.00	184.33	1,704.33
Total	7	49	43	-----	8,585.00	830.30	9,421.80

<sup>1</sup> Cost per pupil (based upon average daily attendance), \$151.02.<sup>2</sup> Teachers' quarters are provided without expense to teachers.<sup>3</sup> Cost per pupil (based upon average daily attendance), \$219.10.

## CITIZENSHIP NIGHT SCHOOLS

Citizenship night schools were maintained in seven communities for the purpose of preparing adult foreigners for citizenship. A total of 217 students were enrolled. Of this number 39 were foreigners; 129 were declarants or holders of first papers, 25 were petitioners for second papers, and 24 were citizens of the United States.

The total cost of maintenance of these citizenship night schools was \$1,995.75. The subjects taught were United States history and civics, geography, English grammar, spelling, and penmanship.

The following table shows the enrollment in each school:

School	Aliens	Declarants	Petitioners	Citizens	Total
Cordova	4	25		2	31
Juneau	13	43	7		63
Ketchikan		30	7		38
Lafayette	6	3		3	12
Petersburg	9	10	6	6	31
Seldovia	6	5	1	11	23
Wrangell	1	7	4	1	13
Total	39	129	25	24	217

## ALASKA AGRICULTURAL COLLEGE AND SCHOOL OF MINES

At its ninth annual commencement, held on May 25, nine students were awarded diplomas as follows: 4 in geology and mining; 1 in mining engineering; 1 in home economics; 1 in civil engineering; and 2 in general science.

The first year of the cooperative extension service by virtue of the provisions of the Smith-Lever Act has been highly successful. While extension service has been in operation in Alaska only one year, the response has been all that could be expected. Women's clubs, the parent-teachers' associations, American Legion auxiliaries, and Native Sisterhood have assisted in securing suitable places and publicity for meetings. The attempt to organize home-demonstration clubs has not been very successful. However, at Matanuska, Douglas, Fairbanks, and Ketchikan home-demonstration clubs have organized and meet regularly. The greatest interest has been manifested in problems of health and nutrition, in home crafts, and in sewing problems.

A part of the extension program is to encourage boys and girls' club work. Eighteen 4-H clubs, with a total enrollment of 205 members, are working on garden, sewing, or cooking projects, learning to take an active part in the work of the home or the farm. Another part of the extension service is to make available the many excellent bulletins published by the United States Department of Agriculture and State extension bulletins on subjects pertaining to farming and home making.

Federal appropriations of \$10,000 each year will be supplemented during the biennium of 1931-1933 by territorial appropriations of \$6,000 to be used either as supplementary or offset funds.

The Hatch Act having been extended to the Territory by an act of the Congress of the United States will become operative July 1,

1931. Under the provisions of another Federal act the Secretary of Agriculture transferred to the college on May 1 the United States experiment station located on the four sections of land granted to the Territory as a site for the college. Contingent upon this transfer becoming effective, the Territorial legislature, at its 1931 session, appropriated \$10,000 to be available during the biennium 1931-1933 for maintaining the station. Federal appropriations of \$15,000 each year are available under the Hatch Act for experiment-station purposes.

Cooperative work with the Bureau of Biological Survey has been continued during the past year. Construction of fences, corrals, buildings, etc., in establishment of the Biological Survey experiment station at the college, initiated during the summer of 1927, will near completion this summer. Expansion of program has taken place with increase in projects. The work performed in cooperation with the college now includes three major investigations, namely, studies pertaining to the reindeer industry, musk oxen, and mountain sheep. The future program anticipates the handling of between 250 and 300 animals, about equally divided among the three groups. Accordingly, a total of 2,127 acres has been put under fence, divided into 15 pastures. These include both summer and winter range. Supplemental feeding will also be provided, particularly in the conduct of comprehensive feeding and digestion tests to determine the values of both cultivated and native forage. Numerous corrals have been constructed to facilitate handling, and three shelter sheds, hay barn, granary, scales house, and digestion house have been erected. A second hay barn will be completed during the summer.

At present the station livestock numbers 26 reindeer, 5 mountain sheep, and 32 musk oxen. Additional animals are to be procured this fall. The musk oxen, captured in Greenland and delivered at the station in November, were young animals—calves and yearlings. They are doing well in their new home and are being successfully handled.

The cooperative agreement between the United States Bureau of Mines and the college has been continued during the past year. As a part of this work custom assaying, as the nominal price of \$1 per assay for most of the assays generally desired, is done. For identification tests no charge is made.

Following is a report of the work for the fiscal year ending June 30, 1931:

Custom assays made.....	858
Official assays and analyses.....	198
Duplicates and miscellaneous.....	239
Identification tests.....	855

In performing the above work the following determinations were made: Aluminum, 1; antimony, 8; arsenic, 4; bismuth, 5; calcium, 2; copper, 50; cobalt, 4; iron, 14; lead, 50; manganese, 2; nickel, 4; phosphorus, 2; platinum, 15; silica, 4; sulphur, 3; water (sanitary analysis), 26; gold and silver, 1,090 (requiring 1,532 fusions or scorifications and 1,105 cupellations).

The American Museum of Natural History and the college, through the courtesy of the Fairbanks Exploration Co., are continuing the work of collecting the skeletal remains of prehistoric animals as the

same are exhumed in the company's mining operations. Large quantities have been collected.

Early in May archaeological work, under a permit granted to the college by the Department of the Interior, was resumed on St. Lawrence Island.

The study of the aurora was continued under funds supplied by the Rockefeller Foundation.

The Margaret R. Phipps scholarship for boys, awarded upon competitive examination and open to high-school graduates of the Territory, was won by John Stewart, of Juneau, in 1931.

The 1931 winner of the Col. James G. Steese prize of \$50 for excellence in mathematics is Inge Trigstad.

Hon. Lawrence C. Phipps, of Colorado, has loaned to the board of trustees of the college the sum of \$5,000 without interest for the period of 10 years to be used by the board in making loans to worthy students.

Territorial appropriations for the biennium 1931-1933 total \$159,420. Of this amount \$25,000 is available for the construction of a fireproof building for gymnasium, library, and museum purposes.

A 40 per cent increase in enrollment of students doing credit work has filled the dormitories to capacity.

#### *SCHOOLS AND MEDICAL RELIEF FOR NATIVES OF ALASKA*

Two changes in the administration of affairs of the native school and medical service occurred in the fiscal year 1931. The first was in moving the administrative office from Seattle to Juneau on July 1, 1930, a change which had been considered for several years and which has brought about a more satisfactory direction of the activities in Alaska. The second, transferred the service from the Office of Education to the Office of Indian Affairs and was effective March 16, 1931.

The difficulties which had been anticipated as a result of moving the office were insignificant. It was assumed that in the selection of personnel grievous mistakes would be made due to lack of personal interviews with new applicants. However, those who have been recommended for appointment during the past year were thoroughly investigated, and in each case have met the requirements and rendered as satisfactory and conspicuous service as those with whom personal interviews were held.

The purchasing office in Seattle has continued to function under the same management as formerly. Requisition books from various schools are checked at Juneau and forwarded to the Seattle office for purchase in wholesale markets.

During the year 101 schools were maintained, 3 of which were industrial schools and 98 day schools. Two hundred and ten teachers were employed for a total enrollment of 4,206 pupils. The total appropriation in education, covering salaries, travel, supplies, new buildings, repairs, freight, boxer repairs, rentals, telephone and telegraph service, for the fiscal year, amounted to \$752,690.

During the year the administrative office, with the aid of the field service, secured four surveys of native activities in the Territory. The first, a survey of industrial occupations of the native popula-



A MODEL OF A REINDEER CORRAL MADE BY BOYS AT THE OFFICE OF INDIAN AFFAIRS SCHOOL AT AKIAK, ALASKA



OFFICE OF INDIAN AFFAIRS HOSPITAL FOR NATIVES AT JUNEAU, ALASKA  
90-1



DRESSES MADE BY THE DOMESTIC SCIENCE CLASSES AT THE OFFICE OF  
INDIAN AFFAIRS SCHOOL AT AKIAK, ALASKA



tion over 16 years of age, consisted of data showing the number of people engaged in industrial activities; the number in each locality where schools are operating, over 16 years of age, who are incapacitated; the number engaged in each of the activities, showing the amount of money estimated as earned by them; the municipal officers in each of the native towns; the number of homes owned, boats owned, reindeer owned, number of gardens made, and miscellaneous property; and the average income for each family in the community. The occupations shown by this survey are fishing, cannery work, reindeer herding, public works, mining, logging, trapping, fur farming, boat building, carpentering, native crafts, storekeeping, business enterprises, teaching, domestic work, guides, and several unclassified.

The second survey consisted of a detailed study showing the number of schools, pupils in each community, and where they were attending school, if in the local school system, in Territorial schools, industrial schools, or at some institution in the States. It also showed the total literate and illiterate native population, and the names of members of the local school boards. This year an effort is being made to have the native people, wherever Indian schools are located, elect a school board consisting of three members who will cooperate with the local teachers in securing progress for their children. This survey also showed the valuation of school property and gave each local representative an opportunity to estimate the needs of the community for the succeeding year.

The third survey was made to determine the number of new schools needed. The six district superintendents were furnished with a questionnaire, as were also the various teachers, the purpose of which was to secure detailed information concerning the actual needs for establishing schools and sufficient justification to warrant entering a request for the new schools in the estimates for the budget. Information from this survey warranted a request for 25 new station schools in none of which were there less than 25 children of school age.

It is the purpose of the administrative office to eventually secure schools for the natives of Alaska wherever 10 children are permanently residing. It is realized that several years will pass before schools can be secured for all the native communities, however, in the appropriation for 1930-31 new school buildings and improvements were allowed as follows:

Etikutna	\$35,000
Cordova	7,000
Nome	20,000
White Mountain	8,000
Unalakleet	400
Aklajak	7,000
Tuliksak	7,000
Quinhagak	7,000
Sleetmute	5,000
Saxman	300
Wrangell	71,000
Akutan	2,500
Nondalton	5,000
Kanakakanak	10,000

185,200

The fourth survey dealt with matters of health and included data on the blind children in each community in the Territory. The survey showed 7 blind children between the ages of 6 and 14 in the Territory and 3 other blind children are being educated at the expense of the Government in an institution for the blind in the States. Plans were therefore made to open a school for the blind at Tanana in connection with the orphanage. A blind girl, Melba Call, unusually gifted to the extent that she is designated as the "Helen Keller of Alaska," has completed her course of training at the Perkins Institute, Boston, and was appointed as teacher.

Acute destitution in many native communities of the Territory became evident during the year. In order to relieve conditions, school lunches were served in several communities, and it is the plan to extend these lunches to other schools as long as funds are available.

The requirements of teachers in the Indian Service are on a par with the requirements of all regular school systems and consists of graduation from high school, with two years' normal-school training, or graduation from a college of recognized standing, with at least one year of successful teaching experience. The position of assistant teacher requires graduation from high school, with two years' normal-school training, and experience in practice teaching. At the present time these qualifications may be waived with reference to teachers who give instruction in domestic science, or in the various industries, or who are able to perform community welfare work, and also with reference to natives who are appointed as assistant teachers.

The salaries of principal teachers range from \$1,800 to \$2,040 per annum in the day schools, including transportation and traveling expenses from Seattle, Wash., to the station in Alaska. The salary also includes quarters, fuel, and light, but not subsistence.

Three industrial schools are now maintained by the Office of Indian Affairs. One is located at Eklutna on the Alaska Railroad about 30 miles from Anchorage; the second is at Kanakanak, in Bristol Bay; and the third is at White Mountain, near Nome. At each of these industrial schools academic subjects, following regular courses of study, are taken up, but special emphasis is placed upon native arts.

It is well known that the natives of Alaska must be prepared to make a living in Alaska. They are especially apt in handwork. In the past there has been practically no market for articles made by the native people, however, the publicity given to the totems made for the Paris Exposition and to the totems at the Secretary of the Interior's office at Washington has created a desire for such art work, and we are in hopes a market will soon be available for the products made at the industrial schools as well as for those made in the native villages.

The girls at the industrial schools are taught sewing, both plain and fancy, cooking, and home making. At the Eklutna school two divisions of a 4-H Club have been organized. These clubs are valuable in training the girls in parliamentary procedure as well as carrying on various projects in rug making, moccasin and bead work, and fancy work of different types.

The boys at Eklutna have as part of their industrial work all the chores connected with the institution. They haul the coal and provisions, tend furnaces, repair and build equipment, do necessary electric work, slash and clear land, plow, plant garden crops, and catch, dry, and can fish for the winter food supply. Shop activities for the boys include both wood and metal work. As a part of the chores for boys they milk 6 cows, tend 110 laying hens, and care for 12 hogs.

At the White Mountain industrial school intensive work in carving ivory is now started. Raw ivory collected along the Arctic coast, which was formerly taken to Seattle and offered for sale, is now being sent to White Mountain, where the boys will make it up into hundreds of standard articles which are of common need by people outside of Alaska. Machinery has been installed for ivory work and the superintendent given a free hand to produce articles for which there will be a ready market. The girls at White Mountain have an equally interesting project, that of curing, tanning, and making articles from the reindeer fawn skins that will be readily demanded by the best retail trade in the States. Already certain large establishments in New York, Chicago, and Los Angeles have indicated an interest in Alaska native crafts and when such a market is opened up, the boys and girls graduating from our industrial schools will have established a permanent business.

The Kanakanak industrial school, due to its location, does not have the advantages of contacts and occupations as do the first two institutions, but in its own way this school is training the young people of the Bristol Bay section in the art of making a living.

The fourth industrial school, at Wrangell, is now under construction. It is not expected this institution will open for students until the summer of 1932, but when it is ready for use, the advanced pupils of southeastern Alaska will have the same advantages in learning trades as do those in the three other sections of the Territory.

With the exception of 24 pupils, 17 in the ninth grade, 4 in the tenth, and 3 in the eleventh, the total enrollment of 4,206 pupils is in the elementary grades. Eighty-one completed the eighth-grade work this spring, and for their final graduation tests were given the standard graduation examinations published by the Department of Research and Test Service, World Book Co. The results were entirely satisfactory considering that these standard examinations are made for all eighth-grade graduates throughout the United States. The teachers and pupils had every reason to be proud of their work.

## Statistics of Alaska native school service for year ending June 30, 1931

School	Year school started	Population of village	Number of teachers	Total enrollment	Average daily attendance	Per cent of attendance	Number of days taught	Cost of instruction	Expenditures	
									Other	Total
Aklajak	1930	200	2	43	37.21	93.8	85	\$2,270.00	\$12,649.33	\$14,919.33
Aklak	1911	179	2	50	38.99	96.8	104	2,680.00	1,379.29	4,059.29
Akutak	1930	69	2	21	16.4	99	149	1,735.00	1,034.67	2,769.67
Alltak	1909	79	2	15	12.3	97.7	148	2,516.50	424.11	2,940.61
Angoon	1920	871	3	98	70	97.43	183.5	3,940.00	1,850.84	5,790.84
Atka	1910	91	1	23	22.0	98.0	163	1,800.00	1,230.42	3,030.42
Barrow	1890	246	3	77	53	96.5	168	3,627.67	126.82	4,754.49
Beaver	1926	55	1	25	12.24	94	140	1,191.67	1,157.11	2,348.78
Belkofski	1919	102	2	20	12	95	180	1,641.17	781.84	2,422.61
Bethel	1885	191	2	56	42.24	98.81	164	2,120.00	1,849.84	3,969.84
Buckland	1912	115	2	31	28.94	97.86	110	2,296.00	1,818.79	3,614.79
Chanaga	1927	83	2	19	14.34	97.1	103	2,480.00	657.17	3,137.17
Chitina and Copper Center	1920	118	1	63	56	98	243	1,885.00	1,497.77	3,382.77
Circle	1907	40	1	9	4.4	78	160	1,040.00	925.29	1,965.29
Cordova	1923	180	2	44	29	97	268.5	1,845.00	12,086.10	14,481.10
Deering	1926	175	2	35	27.43	97.7	156	2,720.00	1,192.88	3,912.88
Diomedes	1907	139	2	44	38.72	98	164	2,539.67	818.86	3,358.53
Douglas	1887	127	1	26	14	90	184	1,395.00	1,814.68	2,709.68
Earle	1906	73	1	23	20	97	183	1,170.00	667.46	1,837.46
Eek	1910	115	2	39	30.2	98.8	132	1,879.67	620.83	2,500.50
Egegik	1928	70	2	20	8.0	78	157	2,720.00	835.10	3,555.10
Elim	1916	106	2	43	38	87	120	2,179.67	1,235.60	3,415.27
Fort Yukon	1904	304	2	49	30.4	95.6	183	2,240.67	1,089.36	3,280.03
Galena	1927	82	1	18	11.27	98.4	151	1,040.00	1,093.51	2,133.51
Gambell	1894	250	2	42	35.6	97.8	141.5	2,159.05	443.70	2,602.75
Goodnews Bay	1910	170	2	35	28.4	97.0	30	1,467.00	968.94	2,435.94
Haines	1883	209	3	73	60.34	99.06	185	3,764.50	1,287.27	5,051.77
Hamilton	1908	67	1	15	14.6	98.5	165	1,040.00	628.01	1,668.01
Hoonah	1884	620	3	101	69	97	185	3,879.17	1,887.04	5,766.21
Hoopers Bay	1911	175	1	35	29.6	84	128	1,800.00	684.75	2,484.75
Hydaburg	1911	821	4	79	61.22	96.3	180	5,536.34	3,332.82	8,869.16
Igloo	1906	97	2	33	29.5	93.0	151	2,584.00	928.01	3,512.01
Iliamna	1906	28	2	16	12	99	161	2,726.32	804.83	3,531.15
Juneau	1883	350	3	112	65.25	95.8	170	3,915.00	14,107.81	18,022.81
Kake	1899	833	4	90	73.37	96.2	180	5,265.00	2,165.41	7,430.41
Kaitag	1924	125	1	26	15.6	95	123	1,810.80	749.26	2,560.06
Kanatak	1924	54	1	12	9.7	92	108	1,560.00	1,094.65	2,654.65
Karluk	1924	173	1	44	34	98	161	1,560.00	930.69	2,490.69
Kashoga	1926	35	2	10	8.02	97	106	2,639.67	981.84	3,621.51
Ketchikan	1923	185	3	94	67	97.3	184.5	3,915.00	1,970.40	5,885.40
King Island	1929	170	1	46	43	96	132	1,560.00	755.92	2,315.92
Kiyalina	1905	127	1	44	31	90	137	1,859.67	1,801.30	3,660.97
Klawock	1902	475	5	113	88.8	98.44	170	0,705.00	1,899.63	2,604.63
Klukwan	1903	87	1	27	18	90	174.5	1,210.83	1,026.23	2,237.06
Kokrine	1907	51	1	13	9.68	96	100	1,040.00	673.23	1,713.23
Kotlik	1928	104	1	39	31.6	98.7	159	1,560.00	1,328.53	2,888.53
Kotzebue	1901	315	2	50	37	99	137	2,636.67	3,093.78	5,730.45
Koyuk	1926	118	2	31	29.3	99.5	143	2,720.00	1,055.63	3,775.63
Koyukuk	1908	150	2	37	15.71	97.43	138	2,471.33	1,016.28	3,487.61
Kulukak	1910	49	1	16	11	95	121	1,425.00	1,019.52	2,444.52
Medakata	1887	460	6	131	113.5	98.3	184	8,395.73	3,800.81	12,196.54
Mountain Village	1908	168	2	35	25.31	97.99	176	2,720.00	2,295.55	5,015.55
Nootak	1908	240	2	60	51	98.56	140	2,720.00	1,268.46	3,988.46
Nome	1900	200	2	54	28	92.7	150.5	2,835.00	17,407.65	20,305.65
Nondalton	1930	82	2	30	30	96.7	121	2,270.00	8,836.13	11,106.13
Noorvik	1915	105	3	60	49.0	99.45	139	3,640.00	1,672.75	5,312.75
Nunivak	1924	34	2	24	19	91	138	2,664.67	493.26	3,157.93
Old Harbor	1920	85	1	35	26.8	97	154	1,560.00	383.89	1,943.89
Perryville	1922	88	2	29	27	98.05	138	8,805.00	690.81	1,495.81
Petersburg	1904	200	1	34	17.57	96	183	2,586.67	824.19	3,410.86
Pilot Station	1910	100	2	20	13.59	95	102	2,095.00	768.83	2,863.83
Point Hope	1906	112	2	63	47	89	139	2,720.00	1,678.53	4,398.53
Quigillingok	1924	143	2	39	30	93	150	2,402.67	782.00	3,184.67
Quinhagak	1903	176	2	40	26.2	99.1	98	2,570.00	10,172.38	13,142.38
Quithlook	1922	211	2	54	45	98	101	2,404.67	901.18	3,305.85
Rampart	1904	62	1	15	13	90	150	1,027.00	837.61	1,864.61
Russian Mission	1906	34	1	12	6.47	87.2	142	1,040.00	703.98	1,743.98
St. Michael	1905	105	1	44	47	97	121	464.67	322.69	787.20
Saxman	1895	97	1	22	18	97	183.5	1,215.00	842.10	2,057.10
Selawik	1908	279	2	55	45	90	121	2,720.00	1,004.41	3,724.41
Sevoonga	1923	139	2	40	33.5	99.05	109	2,720.00	656.72	3,376.72
Shageluk	1909	91	2	20	15.95	98.4	155.5	2,781.33	768.76	3,550.09
Shaktolik	1912	103	2	33	24.89	98.2	124	2,326.84	1,017.00	3,343.84
Shishmaref	1906	217	2	86	60.9	490.2	145	3,517.83	1,340.95	4,858.78
Shungnak	1909	185	2	49	39.4	96.3	127.5	2,720.00	1,488.68	4,208.68

<sup>1</sup> New buildings and major repairs.

## Statistics of Alaska native school service for year ending June 30, 1931—Contd.

School	Year school started	Population of village	Number of teachers	Total enrollment	Average daily attendance	Percent of attendance	Number of days taught	Cost of instruction	Expenditures	
									Other	Total
Sinruk	1920	52	1	20	14	98.6	106	\$1,040.00	\$958.96	\$1,998.96
Sitka	1883	463	4	97	70.8	98.5	186	5,920.50	7,248.18	13,174.68
Steebmate	1921	60	1	14	12.48	96.48	189	1,010.97	1,586.40	2,597.37
Stebbins	1923	109	1	27	14.1	94	160	1,590.00	793.41	2,383.41
Tanana	1907	116	1	33	16.5	97.3	157	1,170.00	1,110.15	2,280.15
Tanana orphanage	1930	40	4	86	56	100	303	4,065.88	15,000.01	19,065.89
Tanukuk	1925	59	2	27	19	94	145	2,905.09	468.01	3,373.10
Tatitlek	1909	60	1	21	14	97	158	1,040.00	710.02	1,750.02
Teller	1893	112	1	40	30.4	98.6	145.6	1,040.00	1,284.79	2,324.79
Tellin	1924	59	1	14	12	98	120	1,740.00	1,514.61	3,254.61
Togiak	1910	71	2	19	13	96	140	2,604.07	894.66	3,498.73
Tuklitsak	1930	85	2	31	20	96.8	87	2,270.00	11,800.99	14,070.99
Tundra	1921	123	2	41	31.3	98.8	104	2,170.00	864.30	3,034.30
Tyonek	1908	68	2	14	12.7	89.0	137	2,590.00	968.98	3,558.98
Ugashik	1909	64	2	18	13.4	90.4	146	2,005.00	769.66	2,774.66
Umanak	1920	94	2	27	21.5	97.4	142	2,065.00	1,888.70	3,953.70
Unalakleet	1889	224	2	37	45.07	98.32	129	2,543.07	1,052.40	3,595.47
Valdez	1928	48	1	26	18.76	97.4	160	1,200.00	770.43	1,970.43
Wainwright	1904	190	2	66	45.4	95	155	2,720.00	1,321.28	4,041.28
Wales	1890	165	2	43	34.8	90	150	2,720.00	919.37	3,639.37
Yakutat	1880	261	2	56	47.65	95.78	107	2,265.17	1,899.27	4,164.44
INDUSTRIAL SCHOOLS										
Eklutna	1924	125	11	110	80.2	94.8	180	15,000.83	144,087.73	159,088.56
Kanakanak	1924	108	9	88	68.61	96.46	163	11,771.61	158,642.95	170,414.56
White Mountain	1924	207	9	98	78.3	98	145	12,225.84	194,487.25	206,713.09
		14,895	210	4,209				268,823.90	345,800.78	614,624.68

<sup>1</sup> New buildings and major repairs.

NOTE.—Items such as travel, destitution supplies, salaries for superintendents and administrative office, etc., not included in above amounts.

The appropriation for medical relief for the natives of Alaska in the year 1930-31 totaled \$268,760, and included the salaries of physicians, nurses, transportation of patients to and from hospitals, medical supplies and equipment, new buildings, freight, and miscellaneous expenses.

Hospitals are maintained at the strategic centers of Aliak, Juneau, Kanakanak, Kotzebue, Noorvik, Mountain Village, and Tanana, with summer medical boat service on the Yukon River. Part-time physicians are under appointment at Cordova, Nome, and Chitina. Station nurses are maintained at 16 different settlements throughout the Territory. Medical supplies are furnished to all schools, the teachers rendering first-aid treatment as needed.

Hospitals of 16 beds each have been constructed at Kotzebue and Mountain Village. The Kotzebue hospital serves the entire population of the Selawik River, the Kobuk River, and the Noatak River sections. The physician in charge of the Kotzebue hospital, with the assistance of a traveling nurse, has been able to extend his work through the entire Kotzebue Sound section. Also, provision is made at this hospital for the care and treatment of the tubercular patients.

The Mountain Village hospital also meets an urgent need at the lower section of the Yukon River where the people have been without regular medical service, excepting that rendered by the medical boat during the summer season.

The hospital at Juneau, the largest maintained by the Office of Indian Affairs with a total of 26 beds, has been increased in size by

the addition of a tubercular annex whereby 26 tubercular patients may be treated. A laboratory technician has been added to the Juneau hospital staff and an X-ray machine installed and regular treatment of tubercular patients is now given.

The appropriation bill for 1930-31 provided for the appointment of a medical director. Such a director has long been needed as the coordination of the medical service requires the direction of a man trained for that work. Teachers also need certain training which only a member of the medical profession can give as he visits all stations in Alaska.

The survey covering public health work for the native population of 14,895, where schools are maintained, showed the following situation: Tubercular adults, 41; tubercular children, 207; syphilitic adults, 204; syphilitic children, 81; blind adults, 53; blind children, 10; diseases of the eye, 335; destitution, 58; dependent children, 153; delinquent children, 3; orthopedic hospital cases, 28.

The requirements for physicians and nurses in the Alaska medical service are: For a physician, graduation from a legally chartered medical school where requirements for graduation are not less than the requirements of the Association of American Medical Colleges, as well as evidence of the completion of a year's internship in a recognized hospital, or of successful practice for at least four years, and a license from the medical examining board of the Territory of Alaska. For the position of nurse the requirements are: Graduation from a school for nurses of recognized standing, as well as evidence of successful professional practice for at least one year. The profession of dentist requires graduation from a legally chartered dental college of recognized standing, as well as a certificate from the board of dental examiners of the Territory of Alaska. In addition to certain professional qualifications, all persons recommended in the Alaska medical service should have upright character, philanthropic motives, good judgment, initiative, and ability to do effective work under adverse circumstances.

Nurses appointed for service in native villages are under continuous duty at the salary of \$1,760 per year, with quarters, fuel, and light furnished. Nurses at the hospitals and also those on duty at the industrial schools receive the salary of \$1,640 per annum, with subsistence, quarters, fuel, and light. The salary of physicians is at the rate of \$3,940 per annum, with travel allowance, subsistence, quarters, fuel, and light.

The appropriation bill not only allowed for a medical director, but also for the continuous appointment of a dentist. The dentist is assigned to the Yukon medical boat during the summer season and when that season closes will begin a professional visit to all stations in the Territory. This will require considerable time, as it is expected at least two weeks will be needed in each community to do the dental work required by school children.

Epidemics have hit the native people of the Territory during the year with diphtheria at Barrow, whooping cough on the Lower Kuskokwim, and diphtheria and scarlet fever in the Bristol Bay section. Natives fail to appreciate the necessity of maintaining a quarantine, consequently when an epidemic strikes one community it logically scatters throughout the entire section.

Nurses are urgently needed wherever native people are located. In primitive sections, where civilization has not as yet made contact, the ideal proposition is for nurses to be the first workers in such settlements. These nurses, when of mature age and well trained, prepare the people and the children for the coming of the school. However, in times past, this system has been reversed, as the school invariably preceded the medical work.

The unique medical service in the Territory is that performed on the Yukon River. The fifth year of the medical-boat service on the Yukon ended October 15, 1930; it began June 6, making a season of 108 days. The medical work during the season was unquestionably of higher quality than ever before, owing to the interest in and the understanding of the natives on the part of the physician in charge. Time was also available and taken so that the highest type of dental service could be rendered. According to the statement of the dentist a great many of the Yukon natives suffer from dental caries due to improper nutritional necessities. Of the 400 children who had badly decayed teeth, 62 per cent showed poor calcification as a result of malnutrition. Forty-five per cent of these were between the ages of 8 and 12 years. The boat made stops at all settlements on each side of the Yukon either going down or on the return trip. No distinction was made as to the nationality of the river residents where medical and dental services were needed.

The physician's report for the season showed a total of 1,493 clinical cases examined and treated. A total of 234 successful surgical operations were performed aboard the boat. The dentist's report showed a total of 4,122 actual operations, consisting of prophylaxes, amalgams, cements, porcelains, and extractions. As stated by one of the medical workers at the close of the season, "The medical boat is a very worthy and necessary institution and looked upon by the natives as a godsend."

*Statistics of the medical service for year ending June 30, 1931*

Station	Number of employees	Births	Deaths	Patients treated	Treatments for diseased eyes	Major and minor operations	Salaries	All other expenses	Total
<b>NURSES</b>									
Angoon.....	1	12	3	1,508	74		\$1,755.00	\$457.78	\$2,242.78
Bethel.....	1	8	5	2,050	160		1,341.00	821.41	2,162.41
Eklutna.....	1	2	7	1,375	1,451		1,071.76	2,034.11	4,905.87
Hoonah.....	1	14	14	4,470	10		1,620.00	360.67	1,980.67
Hydaburg.....	1	11	6	2,370	100		1,755.00	508.18	2,263.18
Kake.....	1	10	10	1,060	185		1,701.00	516.97	2,217.97
Karluk.....	1	12	11	575			1,500.00	323.50	1,823.50
Klawook.....	1	24	10	5,003	273		1,822.50	515.90	2,338.40
Motlatkatla.....	1	16	13	4,230			1,679.07	574.52	2,254.10
St. Michael.....	1	9	9	654			1,755.00	64.15	1,819.15
Shishmaref.....	1	10	8	531			1,426.50	133.81	1,560.31
Sitka.....	1	13	12	1,080	78		2,322.34	281.51	2,603.85
Unalakleet.....	1	15	11	1,067			1,875.00	626.10	2,501.10
Wainwright.....	1	15	13	205	32		1,751.50	200.14	2,011.64
White Mountain.....	1	5	10	759			1,640.00	2,249.50	3,889.50
Yakutat.....	1	10	10	460			2,015.00	258.04	2,273.04
<b>PART-TIME PHYSICIANS</b>									
Cordova.....	1	7	5	312			1,025.00	356.56	1,381.56
Nome.....	2	7	7	90		1	3,220.50	2,050.51	6,180.01
Unalaska.....	1	11	8	603	64	17	3,100.00	865.28	4,025.28
Chitina.....	2	6	5	702		40	2,627.70	908.01	3,605.71

Statistics of the medical service for year ending June 30, 1931—Continued

Station	Number of employees	Births	Deaths	Patients treated	Treatments for diseased eyes	Major and minor operations	Salaries	All other expenses	Total
<b>HOSPITALS</b>									
Akiak	6	5	5	515	7	227	\$8,781.12	\$0,013.84	\$18,394.96
Juneau	8	25	14	5,345	366	290	13,694.43	29,439.37	43,133.80
Kangkanak	7	7	8	3,254	142	27	8,834.56	8,978.70	18,813.11
Kotzebue	7	17	17	1,505	4	116	8,441.46	26,771.50	35,212.00
Mountain Village	1	7	4	1,425	62	84	2,724.98	21,156.42	23,881.40
Nulato	2	16	21	783			2,916.66	1,678.62	4,495.28
Tanana	1	10	4	3,431		433	10,134.40	11,698.13	21,802.53
Yukon medical boat	7			1,495		234	6,787.49	5,594.01	12,352.40
98-day school reports		335	303	16,082				4,791.62	4,791.62
<b>Total</b>	<b>67</b>	<b>645</b>	<b>597</b>	<b>66,545</b>	<b>3,014</b>	<b>1,469</b>	<b>101,987.36</b>	<b>135,627.03</b>	<b>237,614.39</b>

\* New buildings and major repairs.

† Items such as travel, destitution supplies are not included in above amounts.

**MISSION SCHOOLS**

In 1785 Chelikof, the first and greatest of the Russian colonizers in Alaska, established a school at Three Saints Bay, on Kodiak Island, so that the children could be instructed in "language, arithmetic, and the precepts of Christianity." Since that time there have been mission schools in Alaska, and the results of their influence are apparent in many localities. In fact, they were the only schools in the Territory until 1885, about 18 years after the transfer from Russia to the United States. With the advent of the public-school system, which was inaugurated by the Federal Government in 1885, supplemented in 1900 by schools maintained by incorporated towns, in 1905 by schools outside of incorporated towns supported by 30 per cent of moneys collected by the Federal Government from licenses, and in 1917 by the creation of the Territorial school system, the mission schools have gradually withdrawn from the field of education. However, several sectarian schools are still maintained and render most necessary service, especially in some of the more isolated regions.

During the past year schools of this class were conducted by the Presbyterian, Episcopalian, and Catholic Churches. The following table shows the schools and approximate enrollment of each denomination:

Denomination	Location	Kind of school	Number of pupils
Presbyterian	Sitka	Industrial boarding school (natives only)	180
Episcopalian	Anvik	Boarding school (natives only)	
	Nenana	do	150
	Kivallina	do	
	Minto	do	
	Alatna	do	
Catholic	Holy Cross	Boys' boarding school	
	do	Girls' boarding school	
	Akiak	Boarding school	700
	Pilgrim Springs	Boarding school (natives only)	
	Hoopers Bay	Day school	
	Kashunuk	do	
	Nulato	do	
	Palmute	Day school (natives only)	
	Juneau	Day school (whites)	
Total pupils (approximate)			980

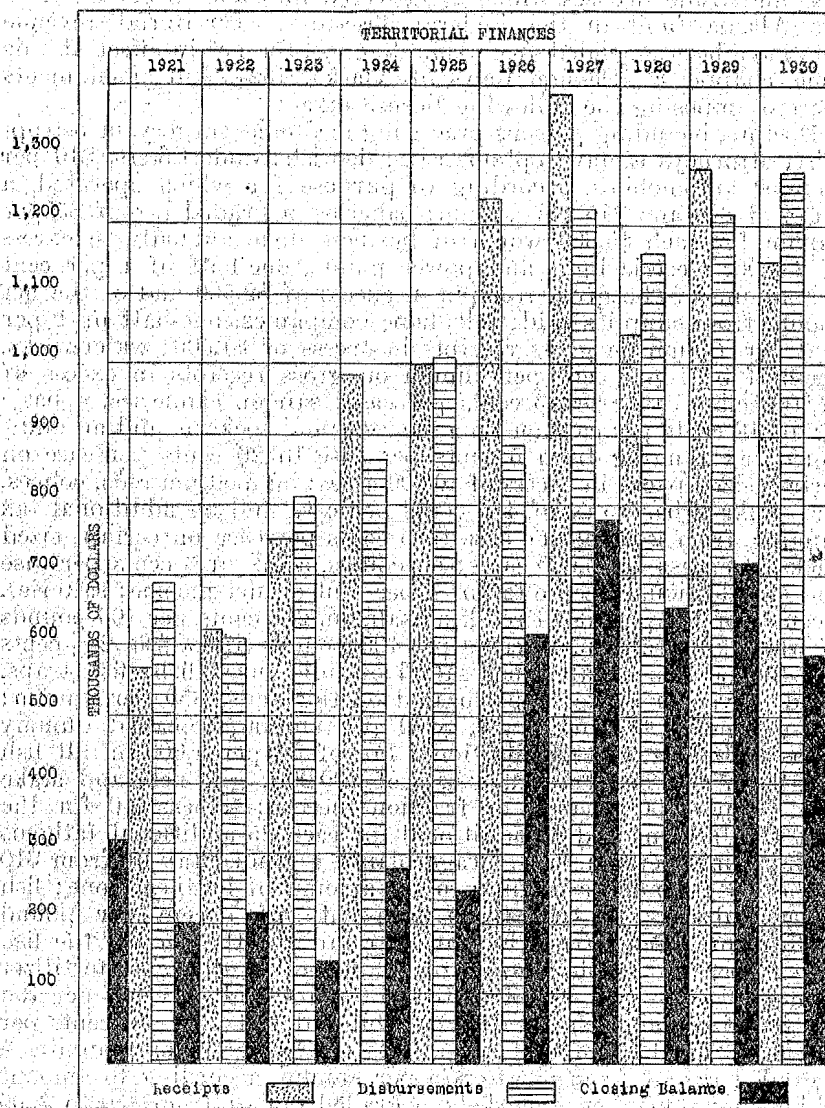


## TERRITORIAL FINANCES

The Territory has its own fiscal system, controlled by laws enacted by the Territorial legislature, which is entirely separate and apart from the revenues received by the Federal Government from business and trade licenses which are covered into and disbursed from the Alaska fund in the Federal Treasury. Territorial revenue acts have been amended from time to time, the act in effect at this time, chapter 31, Session Laws of Alaska, 1921, and amendments thereto, imposing the following license taxes:

Doctors, including persons practicing medicine, surgery, or osteopathy, attorneys at law, optometrists, dentists, undertakers, \$10 per annum; automobiles, according to purpose for which operated, a tax of \$10 and \$15 per annum; bakeries, a graded tax of \$5 per annum for each \$5,000 worth of business done annually in excess of \$3,000; electric light and power plants, one-half of 1 per cent per annum of the gross receipts in excess of \$2,500 and of the net profits from supplies sold; telephone companies, one-half of 1 per cent per annum on gross receipts in excess of \$1,500; waterworks, one-half of 1 per cent per annum on gross receipts in excess of \$2,500; clam canneries, 3 cents per case; salmon canneries, a basic tax of 10 cents per case on king, or reds, and sockeye, and an additional tax ranging from 5 cents per case to 20 cents per case on certain sized packs in excess of 10,000 cases; on medium reds, cohoes, and pinks a basic tax of  $4\frac{1}{2}$  cents per case and an additional tax ranging from 2 cents per case to 6 cents per case on certain sized packs in excess of 25,000 cases; on chums, a tax of 3 cents per case and an additional license tax of 1 per cent on net income; salteries, 5 cents per 100 pounds of red king salmon,  $2\frac{1}{2}$  cents per 100 pounds of white king salmon, 10 cents per 100 pounds of codfish,  $2\frac{1}{2}$  cents per 100 pounds on all other salted or mild-cured fish; fish traps, hand driven or stake traps located on tidelands, \$50 per annum; pile-driven or floating traps, \$200 per annum, so-called dummy traps included; and an additional tax of \$2 per 1,000 on all fish caught in any one trap in excess of 100,000; gill nets and stake nets, \$2 per 100 fathoms or fraction thereof; seines, \$10 for the first 150 fathoms and \$5 additional for each 25 additional fathoms or fractions thereof; cold-storage plants, a graded tax of from \$10 to \$500 per annum, according to the amount of business done; fish buyers' (dealers in fresh fish), one-tenth of 1 cent per pound on fish purchased, except for sale at retail, whether or not the fish buyer operates a cold-storage plant; fish-oil works and fertilizer plants, 40 cents per 50-gallon barrel for oil and 40 cents per ton for fertilizers and fish meal; whale oil and fertilizer, 50 cents per 50-gallon barrel for oil and 50 cents per ton for fertilizers; laundries, a graded tax of from \$25 to \$75 per annum, according to amount of business done; meat markets, a graded tax of from \$50 to \$500 per annum, according to amount of business done, and an additional \$50 imposed for each \$20,000 worth of business done in excess of \$100,000 per annum; mercantile establishments doing a business of more than \$100,000 per annum, \$50 per annum on each \$20,000 of excess; mining, 1 per cent of net income in excess of \$10,000 and not in excess of \$500,000,  $1\frac{1}{2}$  per cent of net income in excess of

\$500,000 and not in excess of \$1,000,000, 1¾ per cent of net income in excess of \$1,000,000; public messengers, \$25 per annum; dealers in nonalcoholic beverages, \$10 per annum; sawmills (lumber mills and shingle mills), 10 cents per 1,000 feet, board measure, of lumber produced per annum.



There is no general system of property taxation in effect in Alaska, but the Territory is in receipt of other revenues in addition to license taxes, railroads paying tax of 1 per cent of gross receipts, 25 per cent of the receipts of the national forests in the Territory accruing to it, and a poll tax act, levying for school purposes a tax of \$5 per annum on all men between the ages of 21 and 50 years, is in effect.

Estates of deceased persons without heirs escheat to the Territory. The legislature of 1919 passed inheritance and profits tax laws, but only small results have thus far been realized under these laws.

The 1923 session of the legislature enacted a revenue measure providing for the licensing of fishermen in the Territory of Alaska, this law being chapter 94, Session Laws of Alaska, 1923. By provisions of amendatory act by the 1929 legislature the following license fees became of effect on date of August 1, 1929, and thereafter: Resident fishermen of all classes, \$1; nonresident fishermen who use hook and line in trolling, \$2.50; nonresident fishermen who use gill nets, \$10; nonresident fishermen who use seines, \$25.

License taxes collected and other revenues accruing to the Territory are covered into and disbursed from the Territorial treasury, the fiscal year of the Territory corresponding to the calendar year. The condition of the Territorial treasury for the year ended December 31, 1930, was as follows:

Balance of cash on hand Jan. 1, 1930.....	\$720, 850. 41
Total receipts from all sources.....	1, 153, 237. 61
Total disbursements under appropriations made by Territorial legislature.....	1, 282, 604. 58
Balance of cash on hand, Dec. 31, 1930.....	591, 483. 44

### TERRITORIAL BANKS

At the close of the year covered by this report there were 13 Territorial and 4 national banks doing business in the Territory. The Territorial banks are located at Ketchikan, Wrangell, Petersburg, Juneau, Skagway, Cordova (2), Valdez, Seward, Anchorage, Flat, Nome, and Hyder. National banks are located at Ketchikan, Juneau, Anchorage, and Fairbanks. The number of banks remained the same during the year, no new ones having been organized nor were any suspended or liquidated.

The Territorial banking board, composed of the governor, the auditor, and the treasurer of the Territory, continued its supervision over the Territorial banking institutions. All such were examined during the year and reports made of condition and published statements under call, as required by law.

Combined deposits in the several Territorial banks at call of June 30, 1931, totaled \$6,984,851 as compared with total of \$7,624,291.24 at corresponding call of the year previous. At call of June 30, 1931, combined capital of all Territorial banks totaled \$640,000, the same as for the corresponding call of the year previous. On June 30, 1931, under call from the comptroller, the national banks of the Territory showed combined capital in total of \$275,000, surplus and net undivided profits of \$233,189.15, deposits \$4,290,210.51. Aggregate banking figures for the Territory on June 30, 1931, were approximately as follows: Capital, \$915,000; surplus and net undivided profits, \$826,800; deposits, \$11,275,000. Approximate totals for the year previous were: Capital, \$915,000; surplus and net undivided profits, \$935,300; deposits, \$12,252,300.

### ALASKA FUND

The Federal Government derives revenue from business and trade licenses issued outside of incorporated towns, which is collected by

the clerks of the district courts, deposited to the credit of the Treasurer of the United States, and by him credited to the Alaska fund, under the act of Congress approved January 27, 1905. Sixty-five per cent of the money paid into this fund is appropriated for the construction and repair of roads and trails outside of incorporated towns and expended under the direction of the Alaska Road Commission; 25 per cent is appropriated for the maintenance of schools outside of incorporated towns, expenditures being made upon requisitions by the Governor of Alaska upon the Treasurer of the United States through the Secretary of the Interior; and 10 per cent is appropriated for the relief of indigents, disbursed by Federal judges under the act of Congress approved March 3, 1913.

The sums collected during the fiscal year 1931 and a comparison with the previous fiscal year are shown in the following tabulation:

Division	1931	1930	Increase	Decrease
First.....	\$101,004.80	\$80,603.12	\$20,401.68	
Second.....	2,322.00	2,875.60		\$42.60
Third.....	75,553.58	128,443.59		52,940.01
Fourth.....	8,522.03	9,807.44		1,344.61
Total.....	187,943.31	221,780.75	20,401.08	54,323.12
Net decrease.....				23,836.44

The net amount of cash turned into the Treasury in the fiscal year 1931 for the account of the Alaska fund in the first division was, however, \$96,580.80; the difference of \$4,514 being the aggregate of rebates made and credited to certain salmon canneries for the release of salmon fry in lieu of cash payment of taxes on their output.

The act approved June 26, 1906, provides that the catch and pack of salmon in Alaska, by owners of private salmon hatcheries operated in Alaska, shall be exempt from all license fees and taxation of every nature at the rate of 10 cases of salmon to every thousand red or king salmon fry liberated; that is, a rebate of 40 cents is allowed on every thousand red or king salmon fry released.

The total revenues received from the taxes levied by the Federal Government within incorporated towns from business and trade licenses which were paid by the clerks of the district courts directly to the treasurers of the towns were as follows:

Division	1931	1930	Increase	Decrease
First.....	\$60,477.12	\$50,122.02	\$4,355.11	
Second.....	5,120.14	4,306.80	822.34	
Third.....	27,874.00	30,347.55		\$2,473.46
Fourth.....	5,848.46	6,336.75		488.30
Total.....	99,328.81	97,113.12	5,177.45	2,001.70
Net increase.....			2,216.09	

### CORPORATIONS

Three or more persons may unite to form a stock corporation under the general corporation laws of the Territory of Alaska for any lawful business purpose whose chief business shall be in the Territory of Alaska, except for the purpose of banking, insurance, brokerage or loan, trust and guaranty associations. Domestication

of banks and of trust companies and of social, fraternal, educational, and similar corporations is authorized by special laws pertaining thereto.

Foreign corporations (there being a special law applying to insurance companies) may qualify to do business in the Territory by filing in the offices of the Territorial auditor and of the clerk of the court in each of the judicial divisions of the Territory wherein business is contemplated being done (1) certified copy of articles of incorporation, (2) financial statement, and (3) appointment and consent of resident agent for the service of process, the agent to be a resident of the division for which he is appointed. Blank forms for the latter two may be procured from the auditor upon request. Actually engaging in business without authority so to do subjects a foreign corporation to a daily penalty of \$25, and renders all its contracts voidable at the option of the other contracting party. After being once qualified, a foreign corporation has the annual duties of paying the corporation tax mentioned in the following paragraph and filing an annual report and the further duty of keeping on file an effective appointment and consent of resident agent.

All corporations must pay to the Territorial auditor at the time of incorporation, if domestic, or at the time of qualifying to function in Alaska, if foreign, a tax of \$15, and the same amount each calendar year thereafter, on or before January 1 of the year concerned. If not then paid a penalty of \$2.50 attaches, and in case of tax delinquency for two consecutive years, dissolution or cancellation of authorized status automatically results.

Filing fees in the office of the Territorial auditor:

1. Filing certified copy of articles of incorporation, fee is controlled by amount of authorized capitalization:
  - (a) Authorized capitalization of \$100,000 or less..... \$25. 00
  - (b) Over \$100,000 to and including \$1,000,000 for each \$1,000 or fraction thereof an additional..... . 10
  - (c) Over \$1,000,000 for each \$1,000,000 or fraction thereof an additional..... 10. 00
2. Filing financial statement (not required of domestic corporation)---- (1)
3. Filing annual report of domestic corporation..... 2. 50
4. Filing annual report of foreign corporation..... 5. 00
5. Filing fees to each clerk of court, approximately:
 

Foreign.....	1. 00
Domestic, by folio, average approximately.....	0. 00

### AGRICULTURE

Progress has been made in agricultural settlement and development during the past year especially in the Matanuska Valley. Settlers are developing new homesteads and buying partly improved ones and clearing more land. This region is well adapted to dairying and farmers are planning to build barns for dairy cattle. The crop grown for ensilage consists of a mixture of peas and oats, which yields at the rate of about 6 tons of green forage per acre.

The cooperative projects between the agricultural experiment stations and the Alaska Railroad are being continued. The creamery at Curry, which is operated by the Alaska Railroad and supervised by the experiment stations, has made satisfactory progress.

<sup>1</sup> No fee.

Another cooperative project between the Alaska Railroad and the experiment stations was undertaken last year. An effort was made to find a market for all of the farm crops produced in the railroad belt, and as a result of this all the farmers who had potatoes, vegetables, hogs, and other crops for sale at market prices found a market for everything that was produced.

The cooperative project between the Alaska experiment stations and the Government industrial school at Eklutna is being continued. The dairy cattle furnished by the Matanuska station are in excellent condition, and the milk that is produced by these animals is used at the school.

A number of changes have been made in the organization of the experiment stations during the past year. The Fairbanks station, which has been in operation since 1907, was transferred to the Alaska Agricultural College and School of Mines on May 1, 1931. The Kodiak livestock station at Kalsin Bay was closed on June 30, 1931. Some of the cattle were transferred to the Matanuska station for further experimental work, and the remainder were sold at public auction. The headquarters office, which has been located at Sitka since 1898, will be moved to the new Federal and Territorial Building at Juneau before the close of the present calendar year. The Sitka station is being operated as in former years. Additional projects have been started at this station in pruning fruit trees; controlling insect pests, such as cabbage maggots; fertility experiments; strawberry breeding; and other projects. The Matanuska station is the largest one in the Territory. Additional land has been brought under cultivation, and new buildings have been erected.

One of the chief problems connected with the production of forage crops is to preserve it for winter use. The crop consists mainly of oats and vetch. That portion of the crop which is used for ensilage is harvested in the green condition and run through the ensilage cutter and placed in the silo. Little difficulty is found in preserving ensilage. Curing of hay is more difficult. The fall weather is cool and, unless adequate methods are employed, much difficulty is experienced in saving the forage. Experiments are now in progress at the Matanuska station to determine the best and most economic method of curing hay. Formerly racks were set up in the field, but it has been found less costly to employ stakes, setting them in the ground and placing the green forage in small cocks on the stakes and leaving it there until dry enough to be hauled into the barn.

The results of experimental work in horticulture indicate that small fruits like raspberries, gooseberries, and currants, as well as strawberries, can be grown with comparative ease, while only the most hardy tree fruits should be attempted. Although the temperature during the winter months does not fall much below 30° below zero, the trees winterkill because the condition of the wood of the previous season's growth is not matured enough to enable it to withstand the temperature.

The dairy herd has been improved and animals are now being bred to fix the type. In the last few years a number of cows have yielded more milk than the average amount produced by the Holstein herd which is kept at the station. This new breed of dairy

cattle is more hardy than the average dairy breeds, producing a large quantity of milk. Experiments in economic production of hogs, sheep, and poultry are also in progress.

The yak herd, consisting of pure yak and Galloway-yak hybrids, has been moved from the Fairbanks station to the vicinity of Healy. The animals were out on the open range throughout the winter and were in good condition in the spring of the year. They have an advantage over ordinary beef cattle, in that they can endure lower temperatures and thrive on scanty forage where common beef cattle would fail to thrive. They are being handled by a local herdsman, who follows them and takes daily notes on their behavior. The herd is small and additional animals are needed to carry on such experimental work as determining the number that can be ranged on a given area. It is important that data be obtained on the carrying capacity of the range. The yak and yak hybrids are under the supervision of the animal husbandman at the Matanuska station.

### FARM ASSOCIATIONS

Associations of farmers and others interested in the development of agrarian pursuits, improvement in home economics, and kindred subjects have been organized in the Tanana Valley at Fairbanks, southeastern Alaska at Juneau, southwestern Alaska at Anchorage, and northwestern Alaska at Nome. Each of these organizations promotes an annual fair, where products of the soil and industries of the district are displayed. The Territorial legislature contributes \$2,000 per annum to each association to help defray the expenses of the fair. The associations render assistance to the farmer and housewife and take an active part in all community enterprises. In Fairbanks members of the association have organized a company and erected a flour mill with a daily capacity of 25 barrels. They guarantee \$2.40 per bushel at the mill for wheat and produce in excess of 40 tons of flour annually, for which they receive \$15 per barrel.

### REINDEER SERVICE

Reindeer were introduced into Alaska in 1891 as a relief measure to provide food and clothing for the native people. The original herd, which was established near Teller, contained less than 1,500 deer. From this small herd the entire western part of Alaska has been supplied and it is estimated that there are 700,000 animals in the herds that are distributed from Point Barrow to Atka Island and in the Yukon Valley. There are a few places where the natives are not supplied with deer, but the Government owns between ten and twelve thousand animals and these will be used to supply new herds as rapidly as possible.

For many years the surplus deer were utilized by the natives for food and clothing, but the increase has been so great that the demand for these purposes consumes only a small fraction of each year's surplus, consequently, the industry can supply large quantities for commercial purposes.

While the herds were small and ranged in the vicinity of the villages the administrative problems were comparatively simple, but larger herds required greater ranges. Herding became difficult and the distribution of the deer among many individuals injected new factors which have been the cause of many controversies. Prior to last year the Office of Education combined the administration of the reindeer with the education and medical care of the natives. The teachers supervised the management of the herds in addition to their other duties and under the circumstances they achieved excellent results until the herds became so large that they could no longer devote the required time to the work and it became necessary to create a separate organization for this purpose.

In November, 1929, the administration of the reindeer service in Alaska was transferred from the Office of Education to the governor's office. In March, 1931, the Secretary of the Interior appointed a committee to consider questions involved in the organization of the industry and to make recommendations for its future administration. This committee met in Washington for several weeks, examined witnesses and considered records that were submitted by those interested in the inquiry. At the conclusion of the hearings the committee submitted its findings with recommendations to the Secretary of the Interior and they were transmitted to the governor with instructions to carry out the recommendations. The report suggested the creation of a council of six members as the administrative body in charge of the reindeer industry. (This council was directed to submit a plan of organization which will provide for an efficient control of the reindeer herds. Pursuant to the instructions from the Secretary of the Interior, the council assembled in Nome, Alaska, June 18, 1931. The representatives chosen by the natives in the Teller district were present, but those from Kotzebue Sound did not arrive. The meetings of the council extended over a period of nine days. A comprehensive set of range rules was adopted and a plan for organization of the reindeer service was prepared. Some conception of the problems may be had from the following estimates which are based on the best information available.

Approximately 13,000 natives are largely dependent on the reindeer industry; of this number 2,500 own deer. Fifty-nine herds, varying in size from a few hundred to 30,000, are owned by natives and 19 herds are owned by other than natives. Under the plan that has been prepared by the reindeer council the territory that is occupied by the herds has been divided into administrative units of a size that can be properly supervised by a field manager. These units will be in charge of a competent officer skilled in animal husbandry and administration. He will be in control of the herds in his unit under the direction of the general reindeer supervisor, who is a member of the reindeer council. When the proposed organization is complete the teachers in the Office of Indian Affairs schools will be relieved of their duties as reindeer supervisors, but until that time they must continue to function as in the past. The personnel in the reindeer service at present consists of five regular employees and increased appropriations are necessary to carry out the plan that has been suggested.



One of the principal problems that must be solved is the marketing of the surplus deer. The native owners are losing interest in their herds because they are unable to dispose of the animals. Present market conditions are not favorable, consequently only a limited quantity of meat will be shipped this season. Reindeer properly prepared is an excellent food and can be a factor in supplying the demand for meat.

Substantial progress has been made in the investigation of applications for grazing allotments. Agents of the General Land Office have been engaged in examining the areas that have been applied for and it is expected that reports will be submitted at the close of the field season.

### LABOR CONDITIONS

Conditions affecting labor in the Territory were generally satisfactory during the latter part of the 1930 season, but some unemployment was reported in the spring of 1931. Most of this unemployment was caused by an influx of laborers from the States where it was reported that labor conditions were generally unsatisfactory. The Alaskan fishery industry was also somewhat curtailed during the spring of 1931 which caused some unemployment among the fishing population. This situation was greatly relieved toward the middle of the summer, however, when a great many construction projects throughout the Territory, and the seasonal mining operations of the interior, got under way. No labor shortage was reported during the year from any district and no labor disturbances of any kind were reported. Wage schedules remained well stabilized and satisfactorily adjusted to living costs.

The number of men employed in the fisheries of Alaska is mentioned in this report under that section dealing with the Alaskan fisheries and for that reason is not repeated here. During 1930 there were approximately 3,820 men employed in the mining industry, which is a decrease of about 220 under the number employed during 1929. This decrease was due largely to the curtailment of operations at the copper mines. Of the men employed in the mining industry during 1930, approximately 2,220 were engaged in connection with placer mining, 98 in coal mining, and 1,502 in lode mining. In addition to the above, there were perhaps between 300 and 400 men engaged in prospecting for lode and placer deposits in the Territory. Some of the increased interest in prospecting is probably due to the fact that a number of men who usually work for wages during the season were unable to find employment and engaged in prospecting instead.

Employment in the fishing industry is of a seasonal nature, the working season lasting from four to eight months, depending upon the locality and the nature of the fishery. The fishing industry is confined almost wholly to the coastal regions of the first and third judicial divisions.

From 95 to 50 per cent of the labor employed in this industry in the first judicial division, which embraces all of southeastern Alaska, is secured locally from the resident population, about 10 per cent

of those so employed being native Indians. The balance of the employees are imported from the States for the fishing season only. Of those so imported approximately 45 per cent are engaged under what is known as the oriental-contract system.

Owing to the remoteness of many of the large canneries and the sparsity of the resident population in the third division, where the largest percentage of the fishery labor is employed, from 15 to 20 per cent of the total labor is secured locally, the balance being imported from the States. Of the labor secured locally in the third division, from 50 to 80 per cent are native Indians. From 35 to 45 per cent of the labor imported into the third division during the fishing season is contract labor.

#### WAGES

*Fishery.*—Wages paid general cannery labor secured locally in the first division range from \$2 to \$3.50 per day for women and from \$3.50 to \$5 per day for men. In the third division wages for women range from \$2 to \$4 per day and for men from \$2.50 to \$5 per day. All other labor is paid on a monthly or seasonal basis, according to the following scale, in addition to which in most instances board is furnished by the operators:

*Wages per month in the fishing industry*

	First divi- sion	Third divi- sion		First divi- sion	Third divi- sion
Foremen.....	\$225	\$230	Firemen.....	\$100	\$100
Outside foremen.....	200	180	Trappers.....	90	80
Boat captains.....	145	160	Cooks.....	115	120
Boat crews, deck hands, etc.....	100	80	Flunkys.....	80	70
Boat engineers.....	130	130	Iron-chink men.....	115	125
Machinists.....	175	175	Retort men.....	115	110
Machinists' helpers.....	100	95	Storekeepers.....	110	100
Carpenters.....	125	125	Pile-driver crews.....	90	90
Carpenters' helpers.....	90	85	Miscellaneous laborers.....	85	80
Blacksmiths.....	130	100			

*Mining.*—Labor employed in the mining industry of Alaska works under widely varying conditions that are controlled both by the location of the operation and the nature of the work. General statements as to wage scales are, therefore, difficult to make.

In the placer-mining industry wages for general labor range from 50 to 80 cents per hour and board. The hours of labor per shift range from the 8 to 10, and the cost of board per man per day ranges from \$1.50 in the Cook Inlet region to \$4 in remote districts such as Shushana and Koyukuk. The wages for skilled workmen range from \$5 per day and board for oilers in the Yentna district to \$13 per day and board for dredge masters in the Iditarod-Innoko district.

The wage scale for coal miners is quite uniform. Underground coal miners and timbermen receive \$8.00 per day; underground laborers, trammers, and rope riders, \$7.80 per day; and outside labor, \$5.50 per day. Fire bosses are paid \$250 per month and foremen from \$250 to \$300 per month. Deductions from the above wages are made for board at rates of from \$1.50 to \$2 per day.

Except for small winter drift-mining operations, prospecting, and development work, placer mining in Alaska is confined to the open season, which usually extends from May or June to the freeze-up in September or October. In the fall of 1930, however, some of the dredges in the Nome district were able to continue operations until November, and two of the dredges in the Fairbanks district operated until the middle of January, 1931.

The lode-mining industry is confined principally to the coastal regions of the first and third divisions, where it gives all-the-year employment to approximately 1,500 men.

The wage scales for an 8-hour shift at the larger lode mines of the coastal region range is as follows:

Machine-drill men-----	\$4. 60-\$6. 00	Blacksmiths-----	\$5. 75-\$7. 00
Machine helpers-----	4. 00- 5. 00	Carpenters' helpers-----	4. 00- 5. 00
Muckers-----	4. 10- 5. 25	Blacksmiths' helpers-----	4. 00- 5. 50
Timbermen-----	5. 00- 6. 00	Hoisting engineers-----	4. 00- 5. 75
Trackmen-----	4. 50- 5. 25	Cagers-----	4. 35- 5. 25
Pipemen-----	5. 00- 5. 50	Laborers-----	3. 50- 5. 00
Carpenters-----	5. 50- 7. 00		

From the above wages deductions are made for board and room and for hospital fees and medical attendance. Deductions for board range from \$1 to \$1.50 per day and for hospital and medical attendance from \$1.50 to \$2.40 per month.

At the larger lode mines and at the coal mines much of the underground work is done under contract.

### HEALTH CONDITIONS

The general health conditions throughout the Territory have been good during the fiscal year. One serious epidemic, reported from Point Barrow, was diagnosed as diphtheria. The disease first appeared in February, 1931, and extended over a period of approximately two months, with a total of 300 cases reported. The anti-toxin on hand at the hospital at Point Barrow was soon exhausted and one-half million units were dispatched by plane from Fairbanks. This was not sufficient and 500,000 units were later sent from the supply on hand in Fairbanks and Anchorage. Later reports indicate that this epidemic was not diphtheria, but a severe type of malignant sore throat. No deaths were reported.

Several cases of scarlet fever were reported in the first division and over 700 cases of influenza in the second division. Whooping cough and chicken pox in epidemic form were reported in and around Goodnews Bay, Nushagak, and various localities on Bristol Bay, with a total of over 200 cases, but no deaths.

Two million five hundred and eighty-one thousand units of anti-toxin have been distributed throughout the Territory during the year, an adequate supply sufficient to meet emergencies being kept in storage at Nome, Fairbanks, Anchorage, and Juneau.

The effect of the annual physical examinations made each year by the United States Public Health Service of all cannery employees coming to Alaska is apparent in the great decrease in venereal disease reported in the localities in which the canneries operate. It is to be hoped these examinations will be continued indefinitely.

	Chancroid	Chicken pox	Diphtheria	Gonorrhea	Influenza	Measles	Mumps	Scabies	Scarlet fever	Syphilis	Tuberculosis	Typhoid fever	Whooping cough
Anchorage				9									
Bristol Bay and Kuskokwim													120
Cordova		12									1	1	
Craig		20							2				
Fairbanks		14		6		1					1		
Juneau		23			60	1	6						
Ketchikan		1	1						2			1	
Klawock									4			3	
Lafouche											1		
Nome	1		300	14	725			11		2	0		
Sitka		6		4		1		1		1			
Total	1	70	301	30	785	3	0	12	8	3	9	5	120

### UNITED STATES PUBLIC HEALTH SERVICE

Medical relief stations are operated by the Public Health Service for sick and disabled merchant seamen and other legal beneficiaries in the following ports: Cordova, Juneau, Ketchikan, Nome, Petersburg, Seward, Sitka, Unalaska, and Wrangell.

Medical and dental officers serving on all United States Coast Guard vessels are detailed from the Public Health Service and have, when there was opportunity, furnished casual treatment to sick and disabled natives of Alaska in ports visited by the Coast Guard cutters.

The act approved April 9, 1930, authorizes the Public Health Service to advise and cooperate with the Secretary of the Interior, in his discretion and under his direction, to provide for the medical and sanitary relief of Eskimos, Aleuts, Indians, and other natives of Alaska.

The act of May 14, 1930, authorizes the Department of the Interior to pay out of its appropriation the compensation of a medical supervisor detailed from the Public Health Service, to supervise the care and custody of persons legally adjudged insane in Alaska.

### ALASKA INSANE

The legally adjudged insane from the Territory of Alaska have been cared for at Morningside Hospital under contract with the Department of the Interior for a period of 27½ years. During this period there have been admitted to Morningside Hospital a total of 1,366 patients. The following is an outline of the disposition of these patients:

	Jan. 1, 1904, to June 30, 1931	Fiscal year 1931
Received	1,300	61
Present	257	
Died	433	21
Recovered	438	30
Improved	101	2
Not improved	77	7
Total	1,366	60
Gain in population for fiscal year		1

Patients under care June 30, 1930, 218 males, 38 females.....	256
Patients received during fiscal year 1931, 51 males, 10 females.....	61
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## Fiscal year 1931:

Patients released on bond, 1 male.....	1
Patients discharged, 19 males, 11 females.....	30
Patients died, 18 males, 3 females.....	21
Patients deported, 5 males, 1 female.....	6
Patients transferred to other institutions, 2 males.....	2
Patients remaining under care on June 30, 1931, 224 males, 33 females.....	257
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## Patients admitted:

1927.....	46
1928.....	34
1929.....	42
1930.....	52
1931.....	61

Although a larger number of patients were committed during the past year the population of Morningside Hospital remained practically stationary due to an increased number of discharges and deportations.

## INCORPORATED TOWNS

There are at present 17 incorporated towns in Alaska. The total assessed property valuation for the fiscal year 1931 was \$26,745,956, an increase of \$1,233,293 over 1930. The rates of taxation range from 10 to 20 mills.

Town	Mayor	Assessed valuation	Rate of taxation	1930 census
Anchorage.....	Jas. J. Delaney.....	\$2,563,287	15	2,276
Cordova.....	W. H. Chase.....	1,004,221	13	979
Douglas.....	L. W. Kilburn.....	267,000	20	603
Eagle.....	Thos. King.....	80,000	10	52
Fairbanks.....	Mr. Bryant.....	3,044,200	20	2,009
Haines.....	J. B. Chisel.....	180,500	15	344
Juneau.....	Thos. B. Judson.....	5,062,147	18	4,037
Ketchikan.....	N. R. Walker.....	7,000,083	17	3,730
Klawock.....	Frank Peratrovich.....	( <sup>1</sup> )		437
Nenana.....	Henry S. Kaiser.....	293,075	10	201
Nome.....	Arthur F. Wright.....	1,000,000	20	1,213
Petersburg.....	Earl N. Ohmer.....	1,400,000	20	1,240
Seward.....	P. C. McMullen.....	1,014,532	20	832
Sitka.....	Fred F. Schroy.....	625,055	15	1,053
Skagway.....	W. J. Mulvihill.....	9,150	15	402
Valdez.....	Anthony J. Dimond.....	453,736	20	441
Wrangell.....	C. P. Kirtland.....	800,570	20	910

<sup>1</sup> No assessed valuation has been made in Klawock.

## ALASKA HISTORICAL LIBRARY AND MUSEUM

During the months of March and April, 1931, the Alaska Historical Library and Museum was moved to the new quarters provided in the Federal and Territorial Building, where the increased floor space and glass display cases permit the valuable museum specimens to be most advantageously displayed. The library and museum now affords an excellent opportunity for a wide range of study in Alas-

kan history, ethnology and geology, and information on these and related subjects is freely given to interested parties. Through the bequest of the late E. W. Merrill of Sitka, Alaska, the museum acquired some splendid specimens of early Thlingit life and art.

For the Alaska display at the International Exposition of Colonial and Overseas Countries, held in Paris, France, this year, the museum supplied a number of specimens of early Eskimo and Indian art, hunting and fishing implements and many other objects of interest.

Lectures on Eskimo and Indian aboriginal life and art were conducted for the benefit of the school students in Juneau and neighboring towns.

The decrease in tourist travel caused a decrease of approximately 17 per cent in the number of visitors at the museum in 1931. The following shows the number of visitors for the past 10 years:

1921	1,571	1927	7,668
1922	3,516	1928	8,891
1923	2,129	1929	8,788
1924	4,794	1930	9,230
1925	5,806	1931	7,621
1926	5,765		

### TERRITORIAL AUDITOR

All warrants for payment of allowed claims against the Territory are issued by the auditor's office. The auditor is registrar of vital statistics and keeps an accurate record of all births, deaths, and marriages as they are reported by the United States commissioners throughout the Territory.

Articles of incorporation, annual reports, financial statements, appointments, and consents of resident agents, and other documents required of corporations to be publicly filed and recorded in order that they may exist as corporations under the laws of Alaska, or do business in Alaska as required of corporations existing under other laws, are filed in this office. Annual corporation fee taxes are collected by the auditor's office.

Insurance companies operating in Alaska must file annually in this office qualification papers and keep on file effective powers of attorney to residents of the Territory to acknowledge service of judicial process on their behalf.

Declarations of candidacies for Territorial offices are required to be filed with the auditor.

The auditor's office records applications and issues brands for blue foxes and reindeer.

The auditor is a member of the banking board, the board of budget, and Alaska Historical Library and Museum Commission.

### RELIEF MEASURES

Very liberal provisions are made by the Territory for the relief of the aged and the indigent, for the rescue and relief of lost persons, for dependent children, and for the pioneers of Alaska. The legislature of 1931 appropriated the sum of \$480,400 for expenditure under the provision of the various relief measures.

The Pioneers' Home, located at Sitka, is entirely supported by the Territory. Any worthy pioneer who is incapable of self-support,

who is qualified by five years' residence in Alaska, may apply to the board of trustees for admission to the home. The residents of the home are well cared for, and the maximum of freedom is allowed them. A complete modern hospital is maintained in connection with the home.

The management of the Pioneer's Home is in a board of trustees, of which the governor is the chairman. This board also passes on applications for allowances, which are granted to indigent residents who are citizens of the United States and who have attained the age of 65 years in the case of men and 60 years in the case of women, and who have resided in Alaska continuously since January 1, 1906. The maximum allowance for women is \$45 and for men \$35 per month.

During the past fiscal year 150 persons were cared for at the home, 57 persons were admitted, 12 were discharged, and 36 died.

#### *RELIEF OF DESTITUTION*

The governor is vested with the superintendence of the poor, with authority to appoint an advisory board in each judicial division, composed of such officers charged with the administration and enforcement of the laws of the Territory as he may designate. Persons who are destitute and who are unable to earn a livelihood in consequence of bodily infirmity and who have no relatives of sufficient ability to assist them may receive limited relief from the Territory. When a person without means is sick within any division of the Territory and not able to pay his board, nursing, or medical attention, and who makes application with proper evidence of inability to the board, may receive such assistance as may be necessary. If the beneficiary dies the Territory must give him a decent burial.

#### *FURTHER RELIEF FOR NEEDY AND INDIGENT*

Further relief for the needy and indigent is provided through appropriation to be expended by the district judges of the four judicial divisions of the Territory and may be used by such judges for the purchase of food, clothing, or other necessary supplies, for hospital services, medical treatment, transportation, or in such other way as the district judge may direct.

#### *RESCUE AND RELIEF OF LOST PERSONS*

Funds are provided for the rescue and relief of persons who are lost while prospecting, boating, hunting, or otherwise in the Territory, and the United States commissioners throughout the several precincts are authorized and required, upon being notified that any person or party is lost or has been absent from his usual place of abode for such a period of time or under such circumstances as to have reasonable apprehension that the person or party may be lost, to order search under the guidance and direction of some person who is familiar with the surrounding country and who is competent to organize and supervise a party to search for such lost person or party.

*DEPENDENT CHILDREN*

A board of children's guardians in each judicial division—composed of the judge of the district court, the United States marshal, and one woman citizen appointed by the governor, all of whom serve without compensation and hold office for a period of three years—has power to conclude arrangements with persons or institutions for the care of dependent children at such rates as may be agreed upon and to appoint agents. This board is charged with the legal guardianship of all white children under 16 years of age committed to it by the juvenile court.

The juvenile court has the power to commit to a reform school or to an orphan asylum, or to any other suitable public or charitable institution, or to the board of children's guardians any child under 16 years of age—

(a) Who may be guilty of a misdemeanor under the laws of the Territory of Alaska.

(b) All children who are destitute of suitable homes and adequate means of earning an honest living.

(c) All children abandoned by the parents or guardians.

(d) All children of habitually drunken, vicious, or otherwise unfit parents or guardians.

(e) All children kept in vicious or immoral associations.

(f) All children habitually begging or receiving alms.

(g) All children known by their language or life to be vicious or incorrigible.

*RED CROSS*

During the past year the American Red Cross, as represented by the Juneau chapter, continued to be one of the outstanding organizations in the Territory and each succeeding year finds an increased number of members.

The result of the work carried on by the special committee in the Mississippi drought relief was very gratifying and within a short period Alaska's quota of the fund was oversubscribed, which clearly indicates the efficiency of the committee as well as the generosity of our citizens when the need is apparent.

The public health program of the chapter was carried on through the medium of a part-time graduate nurse who made periodical physical examinations of all children in the public schools.

*LIVESTOCK INSPECTION*

A Territorial veterinarian is employed to make periodical inspections of all dairy herds in Alaska, and during the last fiscal year all of the herds were visited and tested for tubercular infections, and where disease was found the animals were immediately destroyed and the barns and yards were sterilized. All owners of dairy cattle have shown their willingness to cooperate with the veterinarian in this work, and each year finds the Territory with less disease among the cattle and a much more sanitary condition prevails throughout the dairying industry. While the work of the Territorial veter-



inarian carries him to all portions of the country, he assists the fur farmers in their difficulties encountered in the production of fur-bearing animals. One hundred and fifty-five of these ranches were visited by him during the past year, where he performed amputations, attended animals that were sick, prescribed proper diet, and carried on experimental work where corrective methods were required. In addition to this printed leaflets of instruction were mailed to all interested parties.

During the next two years fur ranches, which are working under the close supervision of the Territorial veterinarian, should supply valuable information of an experimental nature necessary to the development of this important industry.

### *WARBLE FLY INVESTIGATION*

Serious damage has been done to the reindeer industry by the warble fly, nose fly, and other parasites peculiar to these animals, since the introduction of reindeer into Alaska.

For the purpose of studying these pests, the Territorial legislature has made appropriation of funds which are expended in cooperation with the United States Department of Agriculture. This department has detailed an experienced entomologist from the Bureau of Entomology to carry on the work in Alaska.

A comprehensive study and investigation is being made and considerable valuable knowledge has been gained, though not enough work has been done at this time to definitely decide on the best method of combating these parasites. It is hoped that some dipping preparation may be developed which will lead to the production of a reindeer hide free from flaws. This hide is very desirable in the manufacture of fine gloves.

Very respectfully,

Geo. A. Parks, Governor

To the Secretary of the Interior.



## APPENDIX A

### LIST OF GOVERNORS OF THE TERRITORY OF ALASKA, WITH DATES OF THEIR APPOINTMENT

July 4, 1884	John H. Kinkead, of Nevada.
May 7, 1885	Alfred P. Swineford, of Michigan.
Apr. 12, 1889	Lyman E. Knapp, of Vermont.
June 28, 1893	James Sheakley, of Alaska.
June 28, 1897	John G. Brady, of Alaska.
Mar. 2, 1906	Wilford B. Hoggatt, of Alaska.
May 20, 1909	Walter E. Clark, of Connecticut.
May 1, 1913	John F. A. Strong, of Alaska.
Apr. 12, 1918	Thomas Riggs, jr., of Alaska.
June 16, 1921	Scott C. Bone, of New York.
June 16, 1925	George A. Parks, of Alaska.
Oct. 2, 1929	Do.

## APPENDIX B

### REGISTER OF FEDERAL AND TERRITORIAL OFFICIALS

#### FEDERAL GOVERNMENT

##### GOVERNOR'S OFFICE, JUNEAU

Governor: George A. Parks.  
 Secretary to the governor: Harry G. Watson.  
 Secretary of the Territory: Karl Thelle.

##### PUBLIC SURVEY OFFICE, JUNEAU

Cadastral engineer in charge: E. C. Guerin.  
 United States cadastral engineer: Floyd G. Betts.  
 United States transitmen: Charles P. Seelye, Winston W. Spencer.  
 Draftsmen: John H. Hinrichsen, Daniel Ross.  
 Financial clerk: Charles E. Naghel.  
 Clerk: Mildred V. Morrison.  
 United States deputy surveyors: W. A. Anderson, Ketchikan; Arthur G. Blake, Nome; Lewis E. Grammer, Anchorage; Charles S. Hubbell, Seattle; Frank A. Metcalf, Juneau; Harold H. Waller, Seattle; F. W. Williamson, Lawing.  
 United States mineral surveyors: W. A. Anderson, Ketchikan; Arthur G. Blake, Nome; Asa C. Baldwin, Seattle; Lewis E. Grammer, Anchorage; Charles S. Hubbell, Seattle; Frank A. Metcalf, Juneau; Irving McK. Reed, Fairbanks; Harold H. Waller, Seattle; F. W. Williamson, Lawing.

##### UNITED STATES LAND OFFICES

Anchorage, embracing first and third judicial divisions: Register, J. Lindley Green; clerk, Florence L. Kolb.  
 Fairbanks, embracing fourth judicial division: Ex officio register, Robert W. Taylor; ex officio receiver, Lynn Smith; clerk, T. M. Hunt.  
 Nome, embracing second judicial division: Ex officio register, Thomas M. Jensen; ex officio receiver, Charles D. Jones.

## REPORT OF THE GOVERNOR OF ALASKA

## OFFICE OF CHIEF OF FIELD DIVISION, ANCHORAGE

Chief of field division: J. A. Ramsey.

Examiner: H. K. Carlisle.

Mining engineers: A. C. Kinsley, S. C. Price.

Clerk: Donna M. Davis.

Fire wardens: Hubert N. Oliver, Rolland Osborne, William F. Thompson.

## UNITED STATES GEOLOGICAL SURVEY

Acting Director: W. C. Mendenhall, Washington, D. C.

Chief Alaskan geologist: Philip S. Smith, Washington, D. C.

District office: Juneau, Alaska.

Branch office: Anchorage, Alaska.

Supervising mining engineer in charge of Alaska offices and ex officio Federal mine inspector: B. D. Stewart, Juneau.

## UNITED STATES OFFICE OF INDIAN AFFAIRS

Commissioner of Indian Affairs: C. J. Rhoads, Washington, D. C.

Assistant Commissioner of Indian Affairs: J. H. Scattergood, Washington, D. C.

Acting chief of Alaska division: Charles W. Hawkesworth, Juneau, Alaska.

Chief clerk and disbursing officer: J. E. Click, Juneau, Alaska.

Purchasing agent: J. R. Ummel, Seattle, Wash.

Superintendent southeastern district: N. Lester Troast, Juneau, Alaska.

Superintendent southwestern district: G. R. Gardner, Unalaska, Alaska.

Superintendent central district: Arthur H. Miller, acting, Anchorage, Alaska.

Superintendent western district: C. M. Garber, Akiak, Alaska.

Superintendent Seward Peninsula district: L. E. Robinson, Nome, Alaska.

Superintendent northwestern district: G. A. Morlander, Kotzebue, Alaska.

Physicians: R. E. Smith, Kotzebue; F. J. O'Hara, Nome; M. E. Corthell, Mountain Village; Morton Myers, Akiak; Walter A. Borland, Kanakanak; A. W. Wilson, Unalaska; M. P. Kaufman, Tanana; F. B. Gillespie, Chitina (summer only); W. H. Chase, Cordova; W. J. B. McAuliffe, Juneau.

## THE ALASKA RAILROAD

Headquarters: Anchorage.

General manager: O. F. Ohlson, Anchorage.

Chief engineer: C. H. Holmes, Anchorage.

Examiner of accounts: B. H. Barndollar, Anchorage.

Superintendent of transportation: J. T. Cunningham, Anchorage.

Superintendent of motive power and equipment: W. L. Kinsell, Anchorage.

General storekeeper: D. W. Metzdorf, Anchorage.

Chief of staff, Anchorage Hospital: Dr. J. H. Romig.

Agricultural development agent: M. D. Snodgrass, Anchorage.

General development agent: H. G. Ilderton, Anchorage.

Chief inspector: W. G. Culver, Anchorage.

General freight, passenger, and immigration agent: G. C. Dickens, 333 North Michigan Avenue, Chicago, Ill.

Purchasing office: Seattle, Wash.

## ALASKA REINDEER SERVICE

General reindeer supervisor: Benjamin B. Mozee, Nome.

Clerk-stenographer: Shirrie Forrester, Nome.

District reindeer supervisors: Albert Schmidt, Nome; J. Sidney Rood, Bethel.

## SPECIAL OFFICERS FOR SUPPRESSING TRAFFIC IN INTOXICATING LIQUORS AMONG THE NATIVES

Division No. 1: J. W. Wilson, Juneau; William Jackson, Yakutat.

Division No. 2: \_\_\_\_\_

Division No. 3: Phil O. Herriman, Anchorage (temporary); John Cook, Valdez (temporary).

Division No. 4: H. E. Seneff, Tanana.

## NATIONAL PARK SERVICE

*Mount McKinley National Park*

Superintendent: Harry J. Liek.  
Clerk: C. E. Richmond.  
Acting chief ranger: Louis Corbley.  
Park rangers: Wallace Anderson, Grant Pearson, John Rumohr, Lee Swisher.

*Sitka National Monument*

Custodian: Peter Trlirschield, Sitka.

## DEPARTMENT OF JUSTICE

## DIVISION NO. 1

Judge: Justin W. Harding, Juneau.  
Court librarian: Miriam McBride, Juneau.  
Court reporter: John H. Newman.  
Clerk of the court: John H. Dunn, Juneau.  
Deputy clerks: Norman B. Cook, J. W. Leivers, Venetia E. Pugh, Juneau;  
Joseph J. F. Ward, Skagway; L. B. Chisholm, Wrangell; C. Clausen, Petersburg; W. O. Arnold, Ketchikan; Charles F. Sandford, Hyder; R. W. DeArmond, Sitka.

United States marshal: Albert White, Juneau.

Chief deputy: J. F. Statter, Juneau.

Deputy marshals: Donald E. Martin, Thomas D. Newcombe, Flossie M. Doolin, Juneau; William Caswell, J. Coble, Ernest Jones, Ketchikan; Wm. F. Schnabel, Sitka; William B. Feero, Douglas; C. J. Sullivan, Haines; Warren S. Harding, Hyder; C. V. Brown and Hans Wick (special), Petersburg; J. A. Nelsen, Craig; Frank A. Nefsy, Skagway; C. J. Springer, Tenakee; H. D. Campbell, Wrangell; W. H. McCullough, Dall Island; George Jones (six months), Hoonah; George Jones (six months), Port Alexander; Frank D. Price, special deputy, launch *Helmar*.

United States district attorney: Howard D. Stabler, Juneau.

Assistant district attorneys: George W. Folta, Juneau; Walter B. King, Ketchikan.

Clerks to United States attorney: Ann Gaynor, Juneau; Dorothy Nunan, Ketchikan.

United States commissioners: Charles Sey, Juneau; vacancy, Douglas; Winston C. Arnold, Ketchikan; Joseph J. F. Ward, Skagway; L. B. Chisholm, Wrangell; C. Clausen, Petersburg; E. E. Zimmer, Haines; R. W. DeArmond, Sitka; Charles F. Sanford, Hyder; Samuel N. Chamberlin, Tenakee; W. H. Dugdell, Yakutat; Edwin V. Cooper, Hoonah; vacancy, Port Alexander.

## DIVISION NO. 2

Judge: G. J. Lomen, Nome.

Court stenographer: Bertha McKay, Nome.

Clerk of the court: Thos. D. Jensen, Nome.

Deputy clerk: Norvin W. Lewis, Nome.

United States marshal: Chas. D. Jones, Nome.

Chief deputy: A. O. Brown, Nome.

Deputy marshals: Julius Jensen, Luther Dunbar, W. E. H. Cremer, Nome; W. R. Anderson, St. Michael; George H. Wagner, Kotzebue; R. B. Merrill, Point Hope; Eric Johnson, Fortuna Ledge.

United States attorney: J. H. Hart, Nome.

Clerk to United States attorney: F. H. G. Gibson, Nome.

United States commissioners: C. W. Thornton, Nome; A. W. Johnson, Haycock; Herbert W. Johnston, St. Michael; George F. Marsh, Fortuna Ledge; Jacob I. Andersen, Teller; R. L. Gillis, Candle; J. W. Southward, Kiana; Frederic W. Goodman, Point Hope; Stanley R. Morgan, Point Barrow; Arthur J. Allen, Wainwright.

## DIVISION NO. 3

Judge: E. Coke Hill, Valdez.

Court stenographer: E. T. Wolcott, Valdez.

Clerk of the court: N. H. Oastle, Valdez.

Deputy clerks: Thomas S. Scott, Cordova; Charles L. Kemp, Anchorage; William H. Whittlesey, Seward; Anna May Dolan, Valdez; Lucretia S. Botsford, Valdez.

United States marshal: H. P. Sullivan, Valdez.

Chief deputy marshal: A. C. Dowling, Valdez.

Deputy marshals: J. M. Regan, George Warner, Valdez; H. G. Cloes, Cordova; Nels Sorby, Chitina; J. H. Reynolds, McCarthy; H. M. Conrad, Latouche; Ralph Reed, Seward; H. I. Staser, Anchorage; Milo Hulburt, Seldovia; E. H. Boyer, Kodiak; Charles Woberg, Unga; Dan Ross, Unalaska; J. B. Fleckenstein, Dillingham; W. N. Reed, Naknek; Charles A. Watson, Kenai.

Special deputy marshals: John Parsons, Walter G. Culver, Anchorage.

United States attorney: W. N. Cuddy, Valdez.

Assistant United States attorneys: Leroy M. Sullivan, Cordova; J. L. Reed, Seward.

United States commissioners: Durell Finch, Unalaska; Harry A. Peterson, St. Paul Island; Thomas C. Price, Anchorage; O. A. Nelson, Chitina; K. G. Robinson, Cordova; W. E. Duryea, Iliamna; W. F. Parish, Kenai; J. L. Waller, Kodiak; William B. Regan, Naknek; E. E. Chamberlin, McCarthy; W. A. Vinal, Seldovia; Curtis R. Morford, Seward; H. W. Nagley, Talkeetna; Gus E. Sjoberg, Unga; George J. Love, Valdez; H. W. Wilmoth, Wasilla; W. A. Borland, Dillingham.

## DIVISION NO. 4

Judge: Cecil H. Clegg, Fairbanks.

Court reporter: Louise Parcher, Fairbanks.

Clerk of the court: Robert W. Taylor, Fairbanks.

Chief deputy clerk: E. A. Tonseth, Fairbanks.

Deputy clerks: Anne F. Crites, Fairbanks; V. O. Green, Wiseman; Thomas H. Long, Ruby; F. C. Wiseman, Bethel.

United States marshal: Lynn Smith, Fairbanks.

Chief deputy marshal: M. O. Carlson, Fairbanks.

Deputy marshals: John J. Buckley, F. B. Parker, Pat O'Connor, Gladys Y. Abel, Fairbanks; James Hagan, Chatanika; S. E. Heeter, Tanana; Thomas H. Long, Ruby; Arthur J. Stockman, Nulato; Sam Kincaid, Flat; Stanley J. Nichols, McGrath; F. C. Wiseman, Bethel; William Butler, Fort Yukon; Thomas P. McLain, Circle; Robert E. Steel, Eagle; V. O. Green, Wiseman; H. I. Miller, Nenana; H. E. Seneff (unsalaried), Tanana.

United States attorney: Julien A. Hurley, Fairbanks.

Assistant United States attorney: E. B. Collins, Fairbanks.

Clerk to United States attorney: Mary Burglin, Fairbanks.

United States commissioners: M. R. Boyd, Fairbanks; Christian Bolgen, Ophir; C. W. Alexander, Circle; Charles M. Browning, Hot Springs; Charles E. M. Cole, Jack Wade; Chris Thyman, Rampart; C. C. Held, Nenana; George W. Hoffman, Napamute; Jessie M. Howard, Tanana; Lee F. Merry, Livengood; C. L. Carlson, Chandalar; William N. Growden, Ruby; Claude M. Link, Bethel; John B. Powers, Eagle; D. E. Browne, Flat; Charles A. Trundy, Kantishna; Charles Irish, Wiseman; W. T. Vanderpool, McGrath; Winifred M. Dalziel, Fort Yukon; George F. Towne, Nulato; John Hajdukovich, Big Delta.

## DEPARTMENT OF COMMERCE

## BUREAU OF FISHERIES

Agent at large: Dennis Winn, Juneau.

Assistant agents at large: M. J. O'Connor, Juneau; Shirley A. Baker, Wrangell; Frank W. Hynes, Ketchikan.

Junior administrative assistant: Harold L. Oliver, Seattle.

Inspector: Calvin F. Townsend, Fairbanks.

Wardens at large: Charles Petry, Chignik; Fred R. Lucas, Bristol Bay; Howard H. Hungerford, Kodiak; Roy L. Cole, Seldovia; Nathan O. Hardy,

Cordova; Clarence L. Olsen, Craig; Harry A. Pryde, Yakutat; John J. O'Donnell, Squaw Harbor.

Superintendent of the Pribilof Islands: H. J. Christoffers.

Agent and caretaker: Harry A. Peterson, St. Paul Island; Oscar H. Grandson, St. George Island.

Storekeepers: Lee C. McMillin, St. Paul Island; Andrew J. Messner, St. George Island.

Assistant to agent: Robert B. Payne, St. Paul Island.

Physicians: Dr. Albrecht O. Eckhardt, St. George Island; Dr. George H. Lescher, St. Paul Island; dentist, Robert H. Wilson, St. Paul Island.

Teachers: Erling H. Thorsen, Bernice Thorsen, St. Paul Island; Carl M. Hoverson, Geneva Hoverson, St. George Island.

Superintendents of fisheries stations: Harry J. Johnston, Afognak; A. T. Looff, Yes Bay.

Foreman fisheries station: Ray S. Wood, Afognak.

Masters of fisheries vessels: *Brant*, Earle L. Hunter, Juneau; *Orane*, John J. O'Donnell, False Pass; *Teal*, Roy L. Cole, Seldovia; *Penguin*, Elias Boe, Unalaska; *Kittiwake*, James R. Crawford, Cordova; *Elder*, Spencer L. West, Kodiak; *Blue Wing*, Victor Hilberg, Kodiak; *Sooter*, Lin Jorgensen, Naknek; *Widgeon*, Gregg Managan, Juneau; *Murre*, Frederick W. Oliver, Ketchikan; *Auklet*, L. J. Collins, Wrangell; *Petrel*, Clyde I. Dell, Sitka.

Scientific division: Chief, Willis H. Rich; junior aquatic biologist, George A. Rounsfell; assistants, Harlan B. Holmes, Seton Thompson, H. C. McMillan, Seattle.

Special disbursing agent: Bess E. O'Neill, Juneau.

Clerk: Bessie Yurman, Juneau.

#### STEAMBOAT INSPECTION SERVICE

##### JUNEAU DISTRICT

Local inspector of hulls: John M. Clark, Juneau.

Local inspector of boilers: John Newmarker, Juneau.

Clerk to local inspectors: Le Roy J. Vestal, Juneau.

##### ST. MICHAEL DISTRICT

Local inspector of hulls: Charles H. White, Seattle.

Local inspector of boilers: Sayne L. Craft, Seattle.

Clerk to local inspectors: James Trail, Seattle.

#### LIGHTHOUSE SERVICE

##### SIXTEENTH DISTRICT, KETCHIKAN

Superintendent: Walter C. Dibrell.

Assistant superintendent: Dwight A. Chase.

Assistant lighthouse engineer: Edward W. Laird.

Chief clerk: L. A. Fortney.

Voucher clerk: Margaret H. Duncan.

Clerks: Florence E. Tobin, Bernice L. Allen, Ruby I. Monson.

Depot keeper: B. J. Lervick.

Mechanician: \_\_\_\_\_.

Foreman: Michael Harris.

Lighthouse tenders: *Cedar*, John W. Leadbetter, captain; *Fern*, William H. Barton, master.

#### BUREAU OF MINES

Supervising mining engineer in charge: B. D. Stewart, Juneau.

Analytical chemist and mineralogist: Paul Hopkins, Fairbanks.

Senior foreman miner (first-aid and mine-rescue work): George H. Miller, Anchorage.

Coal sampler and analyst: Maurice L. Sharp, Anchorage.

## DEPARTMENT OF AGRICULTURE

## EXPERIMENTAL STATIONS

Director: H. W. Alberts, Ph. D., Sitka.  
 Assistants in charge, Matakuska station: F. I. Higgins, Ph. D., agronomist;  
 W. T. White, B. S., animal husbandman; F. B. Linn, assistant animal husband-  
 man; J. C. Wingfield, B. S., horticulturist. Sitka station: Clifford Cordy,  
 B. S., horticulturist.  
 Administrative officer: E. Hansen, Sitka.

## BIOLOGICAL SURVEY

In charge reindeer experiment station and grazing investigations: Lawrence  
 J. Palmer, College.  
 Associate, reindeer investigations: \_\_\_\_\_, Nome.  
 Field assistant, reindeer experiment station: J. W. Warwick, Fairbanks.

## ALASKA GAME COMMISSION

Commissioners: William H. Chase, M. D., chairman, Cordova; William R.  
 Selfridge, Ketchikan; Irving McK. Reed, Fairbanks; Frank P. Williams, St.  
 Michael.

Executive officer, fiscal agent, and secretary: H. W. Terhune, Juneau.

## EXECUTIVE OFFICE, JUNEAU

Executive officer and fiscal agent: H. W. Terhune.  
 Assistant to executive officer and game warden: E. M. Goddard.  
 Fiscal clerk: L. E. Iversen.  
 File clerk: Nell McCloskey.  
 Clerk-stenographers: Edna Scheibal, Margaret Kiloh, Inez Harris.

## GAME WARDENS

Frank Dufresne, Juneau; Sam O. White, Fairbanks; Oddie Hallson, Bethel;  
 Homer W. Jewell, Anchorage; George W. Taylor, Fort Yukon; Mark A.  
 Winkler, Kodiak; T. Eugene Tibbs, Kenai; Jack O'Connor, Holy Cross; George  
 B. Nelson, Anchorage; K. C. Talmage, captain *Sea Otter*, Juneau; John O.  
 Sellevold, captain *Seal*, Kodiak.

## WAR DEPARTMENT

## ALASKA ROAD COMMISSION, JUNEAU

President: Malcolm Elliott, major, Corps of Engineers, United States Army.  
 Engineer officer: L. E. Atkins, major, Corps of Engineers, United States  
 Army.  
 Secretary and disbursing officer: Leland B. Kuhre, first lieutenant, Corps  
 of Engineers, United States Army.  
 Chief clerk and assistant disbursing officer: G. H. Skinner.  
 Senior engineer: Ike P. Taylor.

## HAINES SUBDISTRICT

General foreman: Robert D. Walkley.

## SITKA SUBDISTRICT

General foreman: Peter Trierschield.

## EAGLE SUBDISTRICT

General foreman: D. F. Millard.

## VALDEZ DISTRICT

Superintendent: T. H. Huddleston.  
 Disbursing clerk: E. C. Simmons.



## CHITINA DISTRICT

Superintendent: R. J. Shepard.  
Assistant superintendent: Frank Shipp.  
Assistant engineer: William J. Niemi.  
Disbursing clerk: D. H. Kelsey.

## SOUTHWESTERN DISTRICT

Superintendent: M. C. Edmunds, Anchorage.  
Assistant superintendent: Anton Elde, Seward.  
Disbursing clerk: J. A. Borges, Anchorage.  
Assistant engineer: F. J. Spach.

## FAIRBANKS DISTRICT

Superintendent: Frank Nash.  
Assistant superintendent: Donald MacDonald.  
Assistant engineer: C. E. Burglin.  
Disbursing clerk: Peter Grandison.

## NENANA SUBDISTRICT

General foreman: Ed. Wilkinson, Ruby.

## KUSKOKWIM DISTRICT

Superintendent and disbursing clerk: Carl Lottsfeldt, Takotna.

## NOME DISTRICT

Superintendent: Ross J. Kinney.  
Assistant superintendent: E. F. Bauer.  
Disbursing clerk: A. F. Zimmerman.

## UNITED STATES ENGINEER OFFICE

## ALASKA DISTRICT, JUNEAU

District engineer: Malcolm Elliott, major, Corps of Engineers, United States Army.

Assistant district engineer: L. E. Atkins, major, Corps of Engineers, United States Army.

Chief clerk: G. H. Skinner.

Inspectors: Lance E. Hendrickson, Juneau; E. F. Bauer, Nome; Anton Elde, Seward.

Resident engineer: J. G. Truitt, Ketchikan.

## WEATHER BUREAU

## SECTION CENTER AND HEADQUARTERS AIRWAYS WEATHER SERVICE, JUNEAU

Associate meteorologist: Ralph C. Mize.

Assistant meteorologist: Harry W. Douglas.

Observer: Gilbert L. Prucha.

Second-order observers: Mrs. Beverly A. Morgan, Barrow; Robert Gierke, Bethel; Mrs. Vivian B. Farley, Dutch Harbor; C. B. Haraden, Eagle; Mrs. Myrtle E. Curlee, Fort Yukon; Mrs. Olga Weissinger, Kodiak; Mrs. Ethel Lovgren, Ketchikan; Orel V. Willett, Mile Seven (Cordova); Mrs. Ina D. Brown, St. Paul Island; Mrs. Jessie M. Howard, Tanana.

## CENTRAL ALASKA AIRWAYS WEATHER SERVICE

Associate meteorologist: Howard J. Thompson, Fairbanks.

Senior observer: Malcolm Rigby, Fairbanks.

## WESTERN ALASKA AIRWAYS WEATHER SERVICE

Assistant meteorologist: Clifford J. McGregor, Nome.

Senior observer: Lester Lundberg, Nome.

## FOREST SERVICE

## REGIONAL OFFICE

Regional forester: Charles H. Flory.  
 Assistant regional foresters: M. L. Merritt, B. F. Heintzleman.  
 Forest examiners: Wellman Holbrook, J. P. Williams.  
 Regional fiscal agent: H. L. Redlingshafer; W. C. Ellis, deputy.  
 Draftsman: Florence I. Shafer.  
 Chief clerk: Harry Sperling.  
 Clerks: Pearl Peterson, Irene Burke.

## CHUGACH NATIONAL FOREST, CORDOVA

Forest supervisor: W. J. McDonald, Cordova.  
 Executive assistant: L. O. Pratt.  
 Forest rangers: Charles H. Forward, Cordova; W. M. Sherman, Anchorage.  
 Pilot and gas engineer: E. M. Jacobsen, Cordova.

## TONGASS NATIONAL FOREST, KETCHIKAN

Forest supervisor: Robert A. Zeller, Ketchikan.  
 Technical assistant: R. F. Taylor, Juneau.  
 Junior forester: Wendell Moran, Juneau.  
 Executive assistant: O. W. Griffin, Ketchikan.  
 Clerks: Teresa V. Cordell, Viola M. Maloca, Ketchikan.  
 Forest rangers: J. M. Wyckoff, Ketchikan; C. M. Archbold, Petersburg; Harold E. Smith, George H. Peterson, Juneau; Charles G. Burdick, Sitka; W. A. Chipperfield, Craig.  
 Port engineer: Lyle W. Blodgett, Ketchikan.  
 Pilot and gas engineer: B. R. Aikens, Ketchikan.

## BUREAU OF PUBLIC ROADS

District engineer: M. D. Williams, Juneau.  
 Office engineer: Ivan F. Winsor.  
 Assistant office engineer: O. F. Wyller.  
 Auditor: L. J. Jewett.  
 Property clerk: Keith G. Wildes.  
 Cost clerk: Leonard J. Holmquist.  
 File clerk: Laura P. Siemens.  
 Stenographer: Winnifred E. Carlson.  
 Messenger: Robert J. Siedler.  
 Resident engineers: R. C. Ingram, L. W. Turoff, W. J. Sisson, C. W. Wilson, F. E. Swartz, George E. Purser, V. M. Blackwell, A. H. Cohn, E. J. White, T. W. Sprake, B. M. French.  
 Maintenance foremen: Walter Anderson, Ketchikan; T. H. Evans, Hyder; Henry Frost, Seward; L. M. Jones, Juneau; J. A. King, Petersburg; John O. Ebing, Moose Pass; H. W. Nettleton, Wrangell; G. A. Vanborg, Cordova.  
 Shop foreman: Harry Stonehouse.  
 Mechanic: W. W. Roff.  
 Motorship pilot: N. H. Rogne.  
 Motorship engineer: S. O. Peterson.

## TREASURY DEPARTMENT

## CUSTOMS SERVICE

## District 31

Headquarters: Juneau.  
 Collector: John O. McBride.  
 Assistant collector: M. S. Whittier.  
 Deputy collectors: M. H. Sides, J. T. Petrich, G. M. Simpkins.  
 Clerk and acting deputy: Walter B. Heisel.  
 Cordova: G. E. Means, deputy collector in charge.  
 Craig: H. S. Bagley, deputy collector in charge.

Eagle: J. J. Hillard, deputy collector in charge.  
 Hyder: J. L. Abrams, deputy collector in charge.  
 Ketchikan: M. S. Dobbs, deputy collector in charge.  
 Ketchikan: G. W. Woodruff, M. L. Stepp, Leo E. Osterman, deputy collectors.  
 Hidden Inlet: Ben M. Brown, deputy collector.  
 Nome: E. R. Stivers, deputy collector in charge.  
 Petersburg: Paul R. Vernon, deputy collector in charge.  
 Prince Rupert, British Columbia: Frank N. Feero, deputy collector.  
 Seward: L. J. Chilberg, deputy collector in charge.  
 Sitka: N. E. Bolshanin, deputy collector in charge.  
 Skagway: F. J. Vanderwall, deputy collector in charge; G. G. Miller, deputy collector; O. G. Stadelman, D. R. Ingalls, inspectors for navigation season only.  
 Unalaska: Durell Finch, deputy collector in charge.  
 Wrangell: R. W. J. Reed, deputy collector in charge.

## CUSTODIAN SERVICE

Headquarters: Juneau, Federal and Territorial Building.  
 Custodian: John C. McBride.  
 Acting custodian: M. S. Whittier.  
 Assistant custodian-engineer: H. J. Fuller.  
 Engineer-helper: Lester Weiss.  
 Foreman of laborers: Harry J. Krane.  
 Fireman-laborer: Philip J. Horan.  
 Firemen-watchmen: Ollie A. Goff, Bert Bertholl, L. B. Peters.  
 Elevator conductors: Clarence C. Hill, O. F. Keller.  
 Elevator conductor-laborer: George D. Benson.  
 Telephone operator: Mrs. A. V. McKinnon.  
 Laborers: H. G. Goodwin, W. A. Savikko, E. C. Sweney, Carl W. Jensen, John Cashen, Steve Vukovich, W. F. Grinnell.  
 Charwomen: Mrs. J. E. Jensen, Mrs. Anna M. Hill, Mrs. Ida B. Stoltz, Ester Perkins, Mrs. K. McRoberts.  
 Wrangell, customhouse building: R. W. J. Rend, deputy collector in charge.  
 Sitka, customhouse building: N. E. Bolshanin, deputy collector in charge;  
 William Allard, charman.  
 Nome, customhouse building: E. R. Stivers, deputy collector in charge.

## INTERNAL REVENUE

Headquarters: Tacoma, Wash.  
 Collector of internal revenue: Burns Poe.  
 Periodical trips made through Alaska by deputy collectors: John A. Denny, Arthur Paulsen.

## PUBLIC HEALTH SERVICE

Acting assistant surgeons: Thomas G. Sutherland, Cordova; L. P. Dawes, Juneau; R. V. Ellis, Ketchikan; A. D. Haverstock, Seward; Hugh G. Nicholson, Sitka; H. C. Turner, Wrangell.  
 Contract dental surgeons: Charles P. Jenne, Juneau; Harry S. Hall, Ketchikan; R. G. Smith, Petersburg.

## UNITED STATES COAST GUARD

Cutter *Tallapoosa*, headquarters, Juneau: Commander C. H. Dench, commanding; Lieut. J. A. Hirshfield, executive; Lieut. B. E. Moodey; Lieut. (Junior Grade) R. H. French; Asst. Surg. H. M. Hand, United States Public Health Service; Ensign C. G. Bowman; Machinist Z. R. Shoen; Pay Clerk (Temporary) J. Black; 63 enlisted men.

Patrol boat *Alert*, headquarters, Ketchikan: Chief Boatswain Albert Nelson, officer in charge; Machinist W. L. Moyer; Boatswain (Temporary) O. B. Hanum; 20 enlisted men.

Cutter *Northland*, headquarters, San Francisco, Calif.: Commander E. D. Jones, commanding; temporarily performing duty in Bering Sea during summer months.

Cutter *Shoshone*, headquarters, San Francisco, Calif.: Commander R. L. Jack, commanding; temporarily performing duty in Bering Sea during summer months.

Cutter *Itasca*, headquarters, Honolulu, T. H.; Commander J. P. Pine, commanding; temporarily performing duty in Bering Sea during summer months.  
 Cutter *Chelan*, headquarters, Seattle, Wash.; Commander R. W. Dempwolf, commanding; temporarily performing duty in Bering Sea during summer months.

United States Coast Guard station, Nome, Alaska: Chief Boatswain T. A. Ross, officer in charge.

#### UNITED STATES COAST AND GEODETIC SURVEY

Magnetic observer: F. P. Ulrich, Sitka.

Assistant magnetic observer: R. G. Burke, Sitka.

Tide observers: Adolph Anderson, Ketchikan; Ida A. Leedom, Seward.

United States Coast and Geodetic ship *Surveyor*: Commander F. B. T. Siems, commanding.

United States Coast and Geodetic ship *Discoverer*: Lieut. Commander H. B. Campbell, commanding.

United States Coast and Geodetic ship *Explorer*: Lieut. Commander E. W. Eichelberg, commanding.

#### PROHIBITION ENFORCEMENT

Headquarters: Juneau, Alaska.

Prohibition agent in charge: Harry W. Raney.

Stenographer: Ada W. Sharples.

Prohibition agents: William R. Vinacke, Juneau; Samuel H. Colby, Ketchikan; Ralph C. Spalding, Anchorage; John L. Fletcher, Fairbanks.

### WASHINGTON-ALASKA MILITARY CABLE AND TELEGRAPH SYSTEM

Station	Operator in charge
Anchorage	Tech. Sergt. Robert L. Hardmen.
Bethel	Corpl. Lee S. Gardner.
Candle	Corpl. Lloyd B. Winship.
Circle	Pvt. Thomas H. Barton.
Cordova	Tech. Sergt. Walter M. Guthridge.
Craig	Pvt. (First Class) Otto T. McVey.
Fairbanks	Staff Sergt. Ralph R. Reeser.
Fort Egbert	Pvt. (First Class) William P. Knight.
Fort Gibbon	Sergt. Charles T. Toback.
Fort Yukon	Staff Sergt. James W. Curlee.
Chilkoot Barracks	Corpl. Arthur L. Goble.
Holy Cross	Pvt. (First Class) Max F. Huhndorf.
Hot Springs	Sergt. Harry Swarburg.
Iditarod	Pvt. (First Class) Lorne French.
Kanakanak	Sergt. Evald M. Hanson.
Juneau	Master Sergt. Harry W. Irvine.
Ketchikan	Master Sergt. Daniel M. Thompson.
Kodiak	Sergt. Charles B. Weissinger.
Kotzebue	Corpl. Walter J. Dowd.
Livengood	Pvt. (First Class) William R. Edwards.
Nome	Sergt. Winfield S. H. Wood.
Nulato	Sergt. Kenneth A. Van DeWater.
Petersburg	Sergt. Irvin H. Rose.
Point Barrow	Staff Sergt. Stanley R. Morgan.
Ruby	Sergt. William N. Growden.
St. Michael	Pvt. Kenneth K. Hillmon.
Seward	Master Sergt. Frank C. Winkler.
Sitka	Sergt. Frank H. Robinson.
Skagway	S. L. Helms.
Squaw Harbor	Corpl. Leo R. Braun.
Takotna	Corpl. John P. Taylor.
Teller	Pvt. (First Class) Charles L. Levan.
Valdez	Sergt. Elmer H. Thuesen.
Wiseman	Pvt. (First Class) Elmer J. Ulen.
Wrangell	Staff Sergt. Lee M. Bunnell.

## POST OFFICE DEPARTMENT

## PRESIDENTIAL POSTMASTERS

Anchorage, Henry S. Sogn.  
 Cordova, William J. Shepard.  
 Fairbanks, David J. Fairburn, acting.  
 Fort Yukon, Emil Bergman.  
 Hyder, Oren F. Hill.  
 Juneau, Josephine C. Spickett.  
 Ketchikan, Elbert B. Blackmar.  
 Kennecott, Stephen Birch.  
 Latouche, Earl T. Stannard.

Nenana, Martin J. Martin.  
 Nome, William Arthurs.  
 Petersburg, Jacob Otness.  
 Seward, Charles A. Sheldon.  
 Sitka, Elizabeth D. DeArmond.  
 Skagway, John J. Conway.  
 Valdez, George Warner.  
 Wrangell, John W. Stedman.

## FOURTH-CLASS POSTMASTERS

Afognak, Emellan Petellin.  
 Akiak, Mrs. Wencke Carlsen.  
 Akulurak, Alfred T. Murphy.  
 Akutan, Hugh McGlashan, jr.  
 Andreafsky, N. D. Sheppard.  
 Angoon, Vincent Soboleff.  
 Anyik, Henry H. Chapman.  
 Baranoff, Mrs. Clara A. Raymond.  
 Barrow, Charles D. Brower.  
 Beaver, Charles W. Shultz.  
 Belkofsky, Dmitry Hotovitsky.  
 Berry, Nell McDonald.  
 Bethel, Claude M. Link.  
 Bettles, William D. English.  
 Big Delta, Miss Rilka Wallen.  
 Candle, Ronald L. Gillis.  
 Cantwell, John E. Carlson.  
 Cape Fanshaw, William N. Abbes.  
 Central, Alf R. Erickson.  
 Chatanika, Robert John Cacy.  
 Chandalar, Carl L. Carlson.  
 Chatham, Andrew Gunderson.  
 Chichagof, Charles E. Perelle.  
 Chicken, Frank J. House.  
 Chignik, Ivor Wallen.  
 Chisana, Luella Johnson.  
 Chitina, Otto A. Nelson.  
 Chomly, Charles E. Keil.  
 Circle, Charles W. Alexander.  
 Circle Springs, Frank M. Leach.  
 Cleary, Agnes Skof.  
 Copper Center, Mrs. Florence Barnes.  
 College, Charles E. Bunnell.  
 Council, Edward C. Paffie.  
 Craig, Matie Whiting.  
 Crooked Creek, Al Walsh.  
 Curry, Arthur B. Cummings.  
 Dan Creek, John J. Price.  
 Deering, Boris Magids.  
 Denali, L. S. Wickersham.  
 Diamond, Lauritz C. Olsen.  
 Dillingham, Marguerite Lowe.  
 Douglas, Guy L. Smith.  
 Doyhof, Mrs. Burgitte Hofstad.  
 Eagle, Beatrice G. Steele.  
 Egegik, Elmar Olsen.  
 Eklutna, Charles R. Smith.  
 False Pass, William L. Brown.  
 Flat, Mrs. Anna M. Fullerton.  
 Fortuna Ledge, H. Roy Hunter.

Fox, Max Rede.  
 Franklin, John Roberts.  
 Funter, Raymond A. Perry.  
 Girdwood, Mrs. Alice E. Range.  
 Goddard, Mary C. Goddard.  
 Golovin, Almer Rydeen.  
 Gulkana, Hans Dittmanson.  
 Gustavus, Mrs. Jennie Mae Parker.  
 Haines, Mrs. Nellie Berry.  
 Hawk Inlet, P. E. Harris.  
 Haycock, Wallace Porter.  
 Healy Fork, Mrs. Alice Werner.  
 Holy Cross, Paul C. O'Conner.  
 Homer, Mrs. Mae Harrington.  
 Hoonah, Louise Kane.  
 Hope, Elmer E. Carson.  
 Hot Springs, Harry Swarburg.  
 Hydaburg, Robert Cogo.  
 Iliamna, Harold Foss.  
 Jack Wade, C. F. M. Cole.  
 Kake, B. Kirberger.  
 Kanakanak, Hans P. Nicholson.  
 Kanatak, Derick Lane.  
 Kantishna, Charles A. Trundy.  
 Karluk, Stuart Sandreuter.  
 Kasaan, John P. Nelson.  
 Kasilof, Mrs. Alice Hardy.  
 Katalla, Torger Asbjornsen.  
 Kenai, Mrs. Grace M. Watson.  
 Kiana, John Mallin.  
 Kimsham Cove, Daniel J. Williams.  
 King Cove, Oscar W. Brehmer.  
 Klawock, George Demmert.  
 Kobuk, Harry O. Brown.  
 Kodiak, Mrs. Lillian H. White.  
 Kokrines, Abe Collins.  
 Kotlik, John C. Fitzhugh.  
 Kotzebue, Henry Copple.  
 Lake Minchumina, Mrs. Winnifred White.  
 Livengood, William G. Mahan.  
 Long, Chauncey G. Walker.  
 Loring, Ellis Knutson.  
 McCarthy, Ben Jackson.  
 McCord, Jack McCord.  
 McGrath, Oliver Anderson.  
 McKinley Park, Maurice Morino.  
 Matanuska, Oliver O. Krogh.  
 Medfra, Miss Maybelle A. Berry.  
 Meehan, Daniel F. Egan.

Metlakatla, Ted E. Benson.  
 Mile Seven, Mrs. Lillian Mabel Dudley.  
 Miller House, J. F. Kelly.  
 Moose Pass, Mrs. Leora Roycroft.  
 Myers Chuck, Emil Lange.  
 Naknek, Mrs. Martha Monsen.  
 Napamute, George W. Hoffman.  
 Ninilchik, Mike Oskolkoff.  
 Nulato, Frank Lyons.  
 Nushagak, Mrs. Lubora Brankham  
 Hall.

Ophir, Christian Bolgen.  
 Ouzinkie, Oscar L. Grimes.  
 Perryville, Halfton Burgh.  
 Pilgrim Springs, Hubert A. Post.  
 Point Agassiz, Andrew Israelson.  
 Poorman, George Jessee.  
 Port Alexander, Harris H. Delamater.  
 Portlock, Adolph N. Nelson.  
 Quinhagak, Ferdinand Drebert.  
 Rampart, Aubrey S. Crane.  
 Richardson, A. J. Griffin.  
 Ruby, H. A. Clarke.  
 Russian Mission, Chris Betsch.  
 St. Michael, Herbert W. Johnson.  
 Sanak, S. A. G. Holmberg.  
 Sand Point, Arthur H. Mellick.  
 Seldovia, Mrs. Susan English.  
 Shageluk, George H. Turner.  
 Shakan, George M. Smith.  
 Shaktoolik, David Mazon.  
 Shishmaref, George R. Goshaw.  
 Shungnak, Frank R. Ferguson.  
 Sleetmute, John T. Smeaton.

Solomon, Peter Delutik.  
 Speel River, E. P. Kennedy.  
 Steel Creek, J. A. Kemp.  
 Stuyahok, Fred H. Kruger.  
 Sulzer, Vivian V. Walters.  
 Sumdum, Ed. R. Goldwait.  
 Susitna, Roland R. Healy.  
 Takotna, Mrs. Addie H. Rieck.  
 Talkeetna, Horace W. Nagley.  
 Taku Harbor, Thomas H. Paine.  
 Tanana, Theodore Diedrick.  
 Taylor, Thomas H. Chase.  
 Teller, Jack Warren.  
 Tenakee Springs, Edward Snyder.  
 Tetlin, John A. Singleton.  
 Thane, Charles C. Whipple.  
 Tigara, David Frankson.  
 Tofty, Daniel G. Scala.  
 Tokeen, T. H. Burns.  
 Tonsina, James J. Eckles.  
 Tyee, Henry Andrew Stephanus.  
 Unalakleet, Charles A. Traeger.  
 Unalaska, Durell Finch.  
 Unga, John O. Foster.  
 Uyak, Herbert T. Domenici.  
 Wacker, Eugene Wacker.  
 Wainwright, Ben F. Evans.  
 Wales, William M. Hemsing.  
 Wasilla, H. W. Wilmoth.  
 Windham, Sylvia H. Yates.  
 Windy, John Stephens.  
 Wiseman, Elmer J. Ulen.  
 Yakutat, Elnor M. Axelson.  
 Yentna, Albert A. Wolf.

#### RAILWAY MAIL SERVICE

Superintendent: W. C. Van DerVoort, Seattle, Wash.—southwestern Alaska and all direct service from Seattle.

Chief clerk: George M. Marchand, Seward—southwestern Alaska west of Sitka; Copper River & Northwestern Railroad and Government railroad; Seward Peninsula; Yukon River section; Tanana Valley and Iditarod district.

#### DEPARTMENT OF LABOR

##### IMMIGRATION SERVICE

District director: William G. Strench, Ketchikan.  
 Inspector in charge: Elphege L. St. Martin, Skagway.  
 Immigrant inspectors: Rowland F. Wyatt, Ketchikan; David J. Mulcare, Hyder.

##### CONGRESSIONAL

Delegate to Congress: James Wickersham.

#### TERRITORIAL GOVERNMENT, JUNEAU

##### OFFICE OF THE GOVERNOR

Governor: George A. Parks.  
 Secretary to governor and chief clerk in charge of Territorial work: Harry G. Watson.  
 Stenographer: Eva Kay Tripp.  
 Clerk: Florence B. Oakes.

##### OFFICE OF THE SECRETARY

Secretary of Alaska: Karl Theile.  
 Clerk: Elmer Reed.

## OFFICE OF THE AUDITOR

Auditor: Cash Cole.  
Chief clerk: Garrett N. Nostrand.  
Accountant: James K. McAlister.  
Assistant clerk: Agnes F. Adsit.  
Stenographer: Hazel D. Petrich.

## BUREAU OF VITAL STATISTICS

Registrar: Cash Cole.

## OFFICE OF THE TREASURER

Treasurer: Walstein G. Smith.  
Chief clerk: Charles E. Harland.  
Assistant clerk: May Sabin.

## OFFICE OF THE ATTORNEY GENERAL

Attorney general: John Rustgard.  
Clerk: Mrs. Vivienne Morrison.

## OFFICE OF COMMISSIONER OF EDUCATION

Commissioner of education: William K. Keller.  
Secretary to commissioner: Marie Drake.  
Clerk: Belva Williams.

## OFFICE OF COMMISSIONER OF HEALTH

Commissioner of health: Dr. Harry C. DeVighne, Juneau.  
Assistant commissioners: Dr. Floyd J. O'Hara, Nome; Dr. J. A. Sutherland, Fairbanks.  
Clerk: Mabel Sturrock.

## BOARDS AND COMMISSIONS AUTHORIZED BY TERRITORIAL LEGISLATURE

## BOARD OF EXAMINERS

Chairman: Gov. George A. Parks.  
Members: Walstein G. Smith, treasurer; John Rustgard, attorney general.

## BOARD OF BUDGET

Chairman: Gov. George A. Parks.  
Members: Cash Cole, auditor; Walstein G. Smith, treasurer.

## BOARD OF EDUCATION

President: Gov. George A. Parks.  
Members: Charles Benjamin, Wrangell; Richard N. Sundquist, Candle; Anthony J. Dimond, Valdez; Luther C. Hess, Fairbanks.

## BANKING BOARD

President: Gov. George A. Parks.  
Secretary: Walstein G. Smith.  
Member: Cash Cole.

## BOARD OF TRUSTEES, ALASKA PIONEERS' HOME

Chairman: Gov. George A. Parks.  
Secretary: Robert W. DeArmond.  
Treasurer: Lockie McKinnon, Juneau.  
Superintendent at home: Theodore Kettleson, Sitka.

## BOARD OF MEDICAL EXAMINERS

President: Dr. J. H. Romig, Fairbanks.  
 Secretary-treasurer: Dr. Harry C. DeVighe, Juneau.  
 Members: Dr. R. V. Ellis, Ketchikan; Dr. F. J. O'Hara, Nome; Dr. Frank R. de la Vergne, Fairbanks; Dr. A. D. Haverstock, Anchorage.

## BOARD OF DENTAL EXAMINERS

President: Dr. G. F. Freeburger, Juneau.  
 Secretary-treasurer: Dr. Wallace E. Peterson, Ketchikan.  
 Members: Dr. L. L. Huffman, Fairbanks; Dr. J. W. Bayne, Nome; Dr. L. H. Wolf, Cordova.

## BOARD OF PHARMACY

President: W. E. Britt, Juneau.  
 Vice president: R. T. Kubon, Fairbanks.  
 Members: Frank D. Sheldon, Nome; Leslie Elkins, Nome; F. M. Dunham, Fairbanks; N. R. Walker, Ketchikan; Ralph Kitzmiller, Anchorage; Elwyn Swetmann, Seward.

## BOARD OF REGENTS, AGRICULTURAL COLLEGE AND SCHOOL OF MINES

Members: Mrs. L. C. Hess, Fairbanks; John H. Kelly, Fairbanks; Andrew Nerland, Fairbanks; M. E. Stevens, Fairbanks; J. W. Gilson, Valdez; R. E. Robertson, Juneau; A. A. Shonbeck, Anchorage.

## BOARD FOR PROMOTION OF UNIFORM LEGISLATION

Members: Frank A. Boyle, Juneau; \_\_\_\_\_, Fairbanks; James S. Truitt, Anchorage.

## TERRITORIAL BOARD OF ROAD COMMISSIONERS

Chairman: Gov. George A. Parks.  
 Members: Walstein G. Smith, treasurer; William A. Hesse, highway engineer.

## BOARD FOR RELIEF OF DESTITUTION

Chairman: Gov. George A. Parks.  
 Advisory members: First division, Howard D. Stabler, Albert White, Juneau; second division, \_\_\_\_\_, Charles D. Jones, Nome; third division, W. N. Cuddy, H. P. Sullivan, Valdez; fourth division, Julien A. Hurley, Lynn Smith, Fairbanks.

## BOARD OF CHILDREN'S GUARDIANS

First division: Justin W. Harding, Albert White, Ruth Metcalf, Juneau.  
 Second division: G. J. Lomen, Charles D. Jones, Mrs. Bella Julian, Nome.  
 Third division: E. Coke Hill, Harvey P. Sullivan, Mrs. T. J. Donohoe, Valdez.  
 Fourth division: Cecil H. Clegg, Lynn Smith, Mrs. L. C. Hess, Fairbanks.

## BOARD OF ACCOUNTANCY

Members: Wallis S. George, Harley J. Turner, Juneau.

## BOXING COMMISSION

Secretary: K. J. Jessen.  
 Members: J. A. Talbot, Lawrence E. Erickson, Ketchikan.

## HISTORICAL LIBRARY AND MUSEUM COMMISSION

Chairman: Gov. George A. Parks.  
 Members: William K. Keller, W. G. Smith, Cash Cole, John Rustgard,  
 Acting secretary: A. P. Kashevaroff.



## TERRITORIAL MINING INVESTIGATIONS

Supervising mining engineer and ex officio mine inspector: B. D. Stewart, Juneau.

Mining engineer conducting placer mining investigations: Irving McK. Reed, Fairbanks.

Mining engineer conducting lode mining investigations: Earl R. Pilgrim, Fairbanks.

## TERRITORIAL VETERINARIAN

Dr. Jule B. Loftus, Juneau.

## Notaries public

[Commissioned from June 30, 1930, to June 30, 1931. Appointment 4 years]

## FIRST DIVISION

Name	Address	Appointment	Name	Address	Appointment
William Gray	Yakutat	June 7, 1930	W. L. Paul	Ketchikan	Dec. 3, 1930
Percy G. Charles	Ketchikan	June 28, 1930	Frances L. Paul	do	Do.
L. W. Kilburn	Douglas	July 6, 1930	Ernest Bluc	Hyder	Dec. 15, 1930
Robert E. Coughlin	Juneau	July 22, 1930	K. Jessen	Ketchikan	Do.
Henry Roden	do	July 25, 1930	W. A. Bates	do	Do.
Lorene Ahlers	do	Aug. 2, 1930	A. W. Fox	Juneau	Jan. 12, 1931
Frank Dufresne	do	Aug. 7, 1930	B. A. Barnett	Haines	Jan. 30, 1931
Eugene Tibbs	do	Aug. 10, 1930	William Doucett	Juneau	Feb. 11, 1931
H. V. Williams	Ketchikan	Sept. 13, 1930	Emery F. Tobin	Ketchikan	Feb. 14, 1931
G. W. Nostrand	Juneau	Sept. 23, 1930	H. K. Shepard	Juneau	Feb. 24, 1931
G. W. Hinchman	Haines	Oct. 6, 1930	Allen Shattuck	do	Mar. 7, 1931
W. N. Williams	Punter Bay	Oct. 7, 1930	Ed. Locken	Petersburg	Apr. 14, 1931
Irene Haddon	Hyder	Oct. 14, 1930	Ruth E. Nelson	Juneau	Apr. 25, 1931
Hattie Bagley	Craig	Nov. 15, 1930	Chas. F. Sandford	Hyder	May 17, 1931
R. E. Hardecastle	Ketchikan	Dec. 22, 1930	Harry Sperling	Juneau	May 23, 1931
Jack Conway	Skagway	Nov. 28, 1930	J. J. Kennedy	Haines	June 10, 1931

## SECOND DIVISION

Eric Johnsson	Fortuna Lodge	Aug. 19, 1930	Elizabeth Magids	Deering	Aug. 27, 1930
A. O. Brown	Nome	July 7, 1930	J. W. Southward	Kiana	Sept. 27, 1930
Lewis Lloyd	do	Sept. 10, 1930	Arnold Umden	Golovin	Nov. 6, 1930
			R. B. Merrill	Tigara	Dec. 4, 1930

## THIRD DIVISION

Clyde R. Ellis	Cordova	June 11, 1930	R. E. Bergman	Egegik	Oct. 10, 1930
E. E. Carson	Hope	July 30, 1930	C. E. Anderson	Seward	Nov. 26, 1930
C. L. Cadwallader	Anchorage	Aug. 7, 1930	R. J. DeLeo	Cordova	Dec. 20, 1930
M. F. McLeod	Karluk	Sept. 3, 1930	W. B. Healey	do	Dec. 31, 1930
A. G. Thompson	Anchorage	Sept. 9, 1930	W. E. O'Malley	Anchorage	Jan. 10, 1931
Florence Barnes	Copper Center	Sept. 18, 1930	Luella Johnston	Chisana	Jan. 12, 1931
M. A. Winkler	Kodiak	Sept. 27, 1930	Agnes R. Scott	Matanuska	Jan. 21, 1931
B. E. Chamberlin	McCarthy	Oct. 2, 1930	Geo. B. Nelson	Anchorage	Jan. 22, 1931
Geo. J. Love	Valdez	Nov. 25, 1930	A. H. Humphries	Kennicott	Apr. 9, 1931
Ralph Reed	Seward	Nov. 8, 1930	C. W. Lloyd	do	Feb. 15, 1931
E. T. Wolcott	Valdez	Oct. 8, 1930	Donna M. Davis	Anchorage	Mar. 3, 1931

## FOURTH DIVISION

Chas. E. Taylor	Fairbanks	July 6, 1930	A. J. Stockman	Nulato	Oct. 14, 1930
F. J. Cunningham	do	June 23, 1930	John B. Bentley	Nenana	Nov. 20, 1930
E. E. Brentlinger	Hot Springs	July 10, 1930	T. M. Hunt	Fairbanks	Nov. 23, 1930
Amante T. Hanson	Tofty	Aug. 13, 1930	D. G. Preston	do	Dec. 28, 1930
Harry E. Pratt	Fairbanks	Aug. 9, 1930	F. C. Wiseman	Bethel	Jan. 31, 1931
Geo. W. Taylor	Fort Yukon	Aug. 7, 1930	O. Foster Jones	Nulato	Feb. 10, 1931
Sam O. White	Fairbanks	Do.	D. E. Stubbs	McKinley Park	Feb. 10, 1931
Jack O'Connor	do	Aug. 10, 1930	Frank J. Guskey	McGrath	Apr. 4, 1931
J. W. Hood	Wiseman	Sept. 8, 1930	J. Hill	Sunrana	Do.
John W. Dunn	Ruby	Sept. 20, 1930	John McW. Bourke	Eagle	Apr. 13, 1931
Morton E. Stevens	Fairbanks	Do.	Katherine Stewart	Ferry	June 1, 1931
John H. Kelly	do	Oct. 17, 1930			

## APPENDIX C

[Eight zone rate applies to all offices. The figures 1, 2, 3, or 4, after name of office, indicate the judicial division in which the office is located; the numbers following indicate parallel and meridian, respectively, leading to the approximate location of office. R indicates mail restricted during winter months]

No.	Post office	Division	Unit	No.	Post office	Division	Unit
05501	Afognak	3	58-153	05694	Station No. 1, Juneau		
05502	Akiak, R.	4	61-101	05560	Kake	1	87-134
05721	Akulurak, R.	2	63-164	05729	Kanakanak	3	59-159
05686	Akutan	3	54-166	05731	Kanatak	3	58-156
05687	Anchorage	3	61-150	05564	Kantishna	4	64-151
05680	Andreafsky, R.	2	62-164		Karluk	3	58-154
	Angoon	1	57-135	05562	Kassan	1	56-132
05504	Anvik, R.	4	63-160	05730	Kastlof, R.	3	60-151
05505	Baranoff	1	57-135	05563	Katalla	3	60-145
05509	Barrow, R.	2	71-157	05565	Kenai, R.	3	61-151
05702	Beaver, R.	4	66-147	05566	Kennebecott	3	61-143
05725	Belkofsky	3	55-162	05567	Ketchikan	1	55-132
05508	Berry	4	65-148		Station No. 1, Ketchikan		
05509	Bethel, R.	4	61-162	05713	Station No. 2, Ketchikan		
05510	Bettles, R.	4	67-152	05697	Kiana, R.	2	67-160
05507	Big Delta	4	64-146		Kimsnam Cove	1	58-136
05512	Candle, R.	2	66-162	05670	King Cove	3	55-162
05511	Cantwell	4	63-149	05698	Klawock	1	55-133
05513	Cape Fanshaw	1	57-134	05570	Kobuk	2	67-167
05674	Central, R.	4	66-145	05571	Kodiak	3	58-152
05665	Chandalar, R.	4	67-147	05572	Kokrine, R.	4	56-155
05667	Chatanika	4	65-147	05670	Kotlik, R.	2	63-164
05515	Chatham	1	57-135	05575	Kotzebue, R.	2	67-162
05641	Chichagof	1	58-136	05577	Latouche	3	60-148
05517	Chickem, R.	4	64-142		Lake Minohumina	4	64-152
05518	Chignik	3	56-158	05690	Livengood, R.	4	60-148
05675	Chisana, R.	3	62-142	05681	Long, R.	4	64-156
05689	Chitina	3	62-144	05578	Loring	1	56-132
05519	Chomly	1	55-132	05685	McCarthy	2	61-143
05520	Circle, R.	4	66-144	05673	McGrath, R.	4	63-155
05528	Circle Springs, R.	4	66-145	05775	McKinley Park	4	64-149
05521	Cleary	4	65-147	05685	Matanuska	3	62-149
05537	College	4	65-148	05733	Medfra, R.	4	63-155
05524	Copper Center, R.	3	62-145	05579	Meehan	4	65-147
05525	Cordova	3	60-146	05580	Medakata	1	55-132
05526	Council, R.	2	65-164	05581	Mill Seven	3	60-146
05601	Craig	1	55-133	05582	Miller House, R.	4	65-145
05723	Crooked Creek, R.	4	62-158	05735	Moose Pass	3	61-149
05600	Curry	3	63-150	05734	Myers Chuck	1	56-132
05647	Dan Creek, R.	3	61-143	05684	Naknek, R.	3	59-157
05529	Deering, R.	2	66-163	05739	Napamute, R.	4	61-150
05530	Diamond, R.	4	64-151	05586	Nenana	4	65-140
05698	Denali, R.	3	63-147	05740	Nimchik	3	60-152
05645	Dillingham, R.	3	59-158	05500	Nome, R.	2	65-165
05533	Douglas	1	58-134	05589	Nulato, R.	4	65-158
05527	Doyhof	1	57-138	05741	Nushagak, R.	3	59-158
05534	Eagle, R.	4	65-141	05617	Old Harbor	3	57-153
05535	Egegik	3	58-157	05591	Ophir, R.	4	63-156
05728	Eklutna	3	62-149	05743	Ouzinkie	3	58-152
05600	Fairbanks	4	65-148		Perryville	3	56-150
05539	False Pass	3	55-163	05593	Petersburg	1	57-133
05697	Flat, R.	4	63-158	05757	Pilgrim Springs, R.	2	65-164
05703	Fortuna Ledge, R.	2	62-162	05744	Point Agassiz	1	57-133
05541	Fort Yukon, R.	4	67-145	05692	Poorman, R.	4	64-150
05542	Fox	4	65-147	05745	Port Alexander	1	56-135
05543	Franklin, R.	4	64-142	05746	Portlock	3	59-152
05544	Funter	1	58-135	05596	Quinhagak, R.	4	60-162
05727	Girdwood	3	61-149	05597	Rampart, R.	4	65-150
05604	Goddard	1	57-135	05598	Richardson	4	64-146
05546	Golovin, R.	2	65-163	05651	Ruby, R.	4	65-155
05547	Gulkana, R.	3	62-146	05782	Russian Mission, R.	2	62-161
05545	Gustavus	1	58-136	05599	St. Michael, R.	2	63-162
05549	Haines	1	59-135	05602	Sanak	3	54-163
05600	Hawk Inlet	1	58-135	05603	Sand Point	3	55-161
05695	Haycock, R.	2	65-161	05605	Seldovia	3	59-152
05703	Healy Fork	4	64-149	05606	Seward	3	60-149
05573	Holy Cross, R.	4	62-160	05785	Shageluk, R.	4	63-160
05705	Homer	3	60-151	05607	Shakan	1	56-133
05552	Hoonah	1	58-135		Shaktolik	2	64-160
05553	Hope, R.	3	61-150	05787	Shishmaref, R.	2	66-166
05554	Hol Springs, R.	4	65-151	05609	Shungnak, R.	2	67-157
05662	Hydaburg	1	55-133	05610	Sitka	1	57-135
05689	Hyder	1	56-130	05611	Skagway	1	59-135
05555	Iliamna, R.	3	60-154	05711	Sleetmute, R.	4	62-157
05558	Jack Wade, R.	4	64-141	05613	Solomon	2	65-164
05559	Juneau	1	58-134	05708	Speel River	1	58-134

No.	Post office	Division	Unit	No.	Post office	Division	Unit
05614	Steel Creek, R.....	4	64-141		Tonsina.....	3	62-145
05710	Stuyahok, R.....	2	62-161	05628	Tyee.....	1	57-135
05615	Sulzer.....	1	55-133	05629	Unalakleet, R.....	2	64-161
05709	Sumdum.....	1	58-134	05630	Unalaska.....	3	54-137
05618	Susitna, R.....	3	62-160	05631	Unga.....	3	55-161
05683	Takotna, R.....	4	63-156	05632	Uyak.....	3	58-154
05642	Takeetna.....	3	62-160	05633	Valdez.....	3	61-146
05653	Taku Harbor.....	1	58-134	05663	Wacker.....	1	55-132
05619	Tanana, R.....	4	65-162	05696	Wainwright, R.....	2	71-100
05620	Taylor, R.....	2	60-165	05634	Wales, R.....	2	66-108
05621	Teller, R.....	2	65-166	05635	Wasilla.....	3	62-149
05622	Tenakee Springs.....	1	58-135	05636	Windham.....	1	58-133
	Tetlin.....	3	63-142	05716	Windy.....	4	63-149
05678	Thane.....	1	58-134	05588	Wiseman, R.....	4	67-150
05643	Tigara, R.....	2	68-167	05637	Wrangell.....	1	56-132
05623	Toft, R.....	4	65-151	05638	Yakutat.....	1	60-140
05624	Tokeen.....	1	56-134	05701	Yentna.....	3	63-151

## APPENDIX D

## COMMERCIAL BODIES IN ALASKA

Anchorage Chamber of Commerce.....	Anchorage.
Cordova Chamber of Commerce.....	Cordova.
Douglas Chamber of Commerce.....	Douglas.
Fairbanks Commercial Club.....	Fairbanks.
Haines Chamber of Commerce.....	Haines.
Hyder Chamber of Commerce.....	Hyder.
Juneau Chamber of Commerce.....	Juneau.
Ketchikan Chamber of Commerce.....	Ketchikan.
Northwestern Alaska Chamber of Commerce.....	Nome.
Petersburg Commercial Club.....	Petersburg.
Sitka Commercial Club.....	Sitka.
Seward Chamber of Commerce.....	Seward.
Skagway Chamber of Commerce.....	Skagway.
Valdez Chamber of Commerce.....	Valdez.
Wrangell Commercial Club.....	Wrangell.

## APPENDIX E

## NEWSPAPERS IN ALASKA

Anchorage: The Anchorage Times (daily and weekly).
Cordova: The Cordova Daily Times.
College: Farthest North Collegian.
Fairbanks: Fairbanks Daily News-Miner.
Hyder: Hyder Weekly Herald.
Juneau: Daily Alaska Empire; Stroller's Weekly.
Ketchikan: Ketchikan Chronicle (daily).
Nome: The Nome Nugget (weekly).
Petersburg: The Alaskan (weekly); Petersburg Press (weekly); The Alaska Fisherman (monthly).
Seward: Seward Daily Gateway.
Takotna: The Kusko Times (weekly).
Valdez: The Valdez Miner (weekly).
Wrangell: The Wrangell Sentinel (weekly).

## APPENDIX F

## FOREIGN CONSULAR OFFICERS IN AND FOR ALASKA

Austria: Michael G. Gärten, Chicago, Ill.  
 Belgium: G. J. Simon, San Francisco, Calif.  
 Brazil: Sebastiao Sampaio, New York, N. Y.  
 Colombia: Alvaro Rebolledo, San Francisco, Calif.  
 Czechoslovakia: Otokar Strizek, Seattle, Wash.  
 Egypt: M. S. Matar.  
 Denmark: Henning Plaum, Seattle, Wash.  
 Finland: Paavo Simelius, Seattle, Wash.  
 France: Leon Morand, Seattle, Wash.  
 Germany: Walther Reinhardt, Seattle, Wash.  
 Great Britain: Lewis H. Johnston, Skagway, Alaska.  
 Greece: Apostolos Macheros.  
 Hungary: Francis Protszl, Los Angeles, Calif.  
 Italy: Alberto Alfani, Seattle, Wash.  
 Japan: Suesmasa Okamoto, Seattle, Wash.  
 Latvia: \_\_\_\_\_, Seattle, Wash.  
 Luxemburg: Prosper Reiter, San Francisco, Calif.  
 Netherlands: A. van der Spek, Seattle, Wash.  
 Norway: Sir William Britt, Juneau, Alaska.  
 Poland: Wacław Lecki, Chicago, Ill.  
 Russia: Nikolai Bogoyavlensky, Seattle, Wash.  
 Spain: Sebastian Romero Radigales, San Francisco, Calif.  
 Sweden: Carl Edvard Wallerstedt, San Francisco, Calif.  
 Switzerland: Frederic Strasser, Seattle, Wash.  
 Yugoslavia: Slobodan Jovanovitch, San Francisco, Calif.

## APPENDIX G

## POPULATION—ALASKA, 1930

## Population of Judicial divisions: 1910 to 1930

[A minus sign (—) denotes decrease]

Judicial division <sup>1</sup>	Population				
	1930 <sup>2</sup>	1920	1910	Per cent of increase	
				1920 to 1930	1910 to 1920
Alaska.....	59,278	55,036	94,860	7.7	—14.5
First.....	19,304	17,402	15,210	10.9	14.4
Second.....	10,127	10,890	12,351	—7.0	—11.8
Third.....	16,309	18,231	20,078	0.5	—19.2
Fourth.....	13,538	10,513	16,711	28.8	—37.1

<sup>1</sup> Returned as districts in 1920.<sup>2</sup> Taken as of Oct. 1, 1929.<sup>3</sup> Parts of second and third judicial divisions annexed to fourth judicial division since 1920.

## Population of towns and villages: 1930 and 1920

[The population of these places in 1910 is given in table 3]

Place	Division		1930	1920
	Judicial	Recording		
Afognak village.....	Third	Kodiak.....	208	308
Aiakalik village.....	do	do.....	80	72
Akiak village.....	Fourth	Bethel.....	228	150
Akutan village.....	Third	Alutian Islands.....	71	68
Alatna village.....	Fourth	Koyukuk.....	131	32
Alitak village.....	Third	Kodiak.....	86	—
Anchorage town (Inc.).....	do	Anchorage.....	2,277	1,856
Angoon village.....	First	Juneau.....	319	114
Anvik village.....	Fourth	Nulato.....	79	140
Arctic village.....	do	Chandalar.....	40	—
Atka village.....	Third	Alutian Islands.....	103	56
Attu village.....	do	do.....	29	—
Baranof village.....	First	Petersburg.....	25	—
Barrow village.....	Second	Noatak-Kobuk.....	380	322
Beachy Point village.....	do	do.....	64	—
Beaver village.....	Fourth	Chandalar.....	103	—
Belkofski village.....	Third	Unga Peninsula.....	123	129
Bethal village.....	Fourth	Bethel.....	278	221
Bettles village.....	do	Koyukuk.....	23	—
Biorka village.....	Third	Alutian Islands.....	22	46
Buckland village.....	Second	Fairhaven.....	104	52
Candle village.....	do	do.....	85	91
Cape Halkott village.....	do	Noatak-Kobuk.....	83	—
Caro village.....	Fourth	Chandalar.....	25	—
Chandalar village.....	do	do.....	62	32
Chanega village.....	Third	Valdez.....	90	—
Charcoal Point village.....	First	Ketchikan.....	372	—
Chatanika River village.....	Fourth	Tolovana.....	63	—
Chichagof village.....	First	Sitka.....	60	172
Chickaloon village.....	Third	Anchorage.....	28	—
Chicken village.....	Fourth	Fortymile.....	20	—
Chilkoot Barracks.....	First	Skagway.....	234	186
Chisana village.....	Third	White River.....	13	148
Chitina village.....	do	Chitina.....	110	171
Christian village.....	Fourth	Chandalar.....	36	—
Circle village.....	do	Circle.....	50	96
Circle Hot Springs village.....	do	do.....	17	—
Clarks Point village.....	Third	Bristol Bay.....	25	—
College village.....	Fourth	Fairbanks.....	61	—
Company Harbor village.....	Third	Unga Peninsula.....	22	45
Copper Center village.....	do	Chitina.....	80	71
Cordova town (Inc.).....	do	Cordova.....	980	955
Coskatat village.....	Fourth	Hot Springs.....	46	—
Craig village.....	First	Ketchikan.....	231	212
Cripple village.....	Fourth	Innoko.....	24	—
Curry village.....	Third	Talkeetna.....	91	—
Deering village.....	Second	Fairhaven.....	183	73
Denali village.....	Third	Talkeetna.....	52	—
Dillingham village.....	do	Bristol Bay.....	85	182
Douglas town (Inc.).....	First	Juneau.....	598	919
Doyhof village.....	do	Petersburg.....	64	—
Dry Bay village.....	do	Juneau.....	10	30
Dutch Harbor village.....	Third	Alutian Islands.....	17	—
Eagle town (Inc.).....	Fourth	Eagle.....	54	98
Eagle village.....	do	do.....	78	60
Egegik village.....	Third	Kvichak.....	86	83
Eklutna village.....	do	Anchorage.....	168	—
Ekuk village.....	do	Bristol Bay.....	37	—
Ekwak village.....	do	do.....	40	—
Elm village.....	Second	Koyuk.....	97	162
English Bay village.....	Third	Seldovia.....	107	—
Eyak village.....	do	Cordova.....	366	320
Fairbanks town (Inc.).....	Fourth	Fairbanks.....	2,101	1,155
Fairview village.....	do	Innoko.....	37	—
Fishhook village.....	do	Circle.....	35	—
Fiat village.....	do	Otter.....	124	178
Fort Yukon village.....	do	Circle.....	304	319
Franklin village.....	do	Fortymile.....	10	—
Galsna village.....	do	Nulato.....	67	—
Gambell village.....	Second	Cape Nome.....	250	48
Garden Island village.....	Fourth	Fairbanks.....	54	93
Goddard village.....	First	Sitka.....	10	—
Golovin village.....	Second	Cape Nome.....	135	—
Grachi village.....	Fourth	Fairbanks.....	23	61
Haines town (Inc.).....	First	Skagway.....	844	314
Haycock village.....	Second	Koyuk.....	74	114

## Population of towns and villages: 1930 and 1920—Continued

Place	Division		1930	1920
	Judicial	Recording		
Healey Fork village	Fourth	Nenana	86	—
Healey village	do.	Fairbanks	16	—
Holy Cross village	do.	Nulato	387	—
Hoonah village	First	Sitka	514	402
Hooper Bay village	Second	Wade Hampton	208	—
Hope village	Third	Seward	15	44
Hot Springs village	Fourth	Hot Springs	45	20
Hydaburg village	First	Ketchikan	319	340
Hyder town	do.	Hyder	254	237
Iditarod town (Inc.)	Fourth	Oter	15	50
Igloo village	Second	Cape Nome	13	115
Iqushik village	Third	Bristol Bay	28	—
Ilamna village	do.	Ilamna	100	66
Jack Wade village	Fourth	Fortymile	13	—
Juneau town (Inc.)	First	Juneau	4,048	3,088
Kaguyak village	Third	Kodiak	52	62
Kake village	First	Petersburg	388	397
Kallad village	Fourth	Fort Gibbon	47	—
Kaltag village	do.	Nulato	137	—
Kanakanak village	Third	Bristol Bay	177	80
Kanatak village	do.	Kodiak	82	36
Karluk village	do.	do.	192	60
Kasaan village	First	Ketchikan	112	126
Kashoga village	Third	Aleutian Islands	38	61
Kashunuk village	Second	Wade Hampton	163	72
Kashof village	Third	Kenai	45	—
Katalla village	do.	Cordova	44	84
Keewalik village	Second	Fairhaven	12	—
Kenai village	Third	Kenai	286	322
Kennecott village	do.	McCarthy	217	494
Ketchikan town (Inc.)	First	Ketchikan	3,796	2,458
Kiana village	Second	Noatak-Kobuk	115	98
Killsnoo village	First	Juneau	3	256
Kivilina village	Second	Noatak-Kobuk	99	87
Klawock town (Inc.)	First	Ketchikan	437	19
Klukwan village	do.	Skagway	97	107
Knik village	Third	Wasilla	34	40
Kodiak village	do.	Kodiak	442	374
Kokrines village	Fourth	Fort Gibbon	74	80
Kotlik village	Second	Wade Hampton	14	83
Kotzebue village	do.	Noatak-Kobuk	201	230
Koyukuk village	Fourth	Nulato	143	124
Koyuk village	Second	Koyuk	110	—
Kulukuk village	Third	Bristol Bay	28	83
Latouche village	do.	Valdez	339	505
Little Squaw village	Fourth	Chandalar	8	—
Livengood village	do.	Tolovana	22	131
Long village	do.	Nulato	20	—
McCarthy village	Third	McCarthy	115	127
McGrath village	Fourth	Mount McKinley	112	90
McKinley Park village	do.	Nenana	49	—
Mansfield village	do.	Fairbanks	39	—
Medfra village	do.	Mount McKinley	24	—
Medlatka town	First	Ketchikan	466	574
Morzhovoi village	Third	Unga Peninsula	22	60
Mountain village	Second	Wade Hampton	76	136
Nabesna village	Third	White River	54	—
Naknek village	do.	Kyichak	173	111
Napelmuk village	Fourth	Kuskokwim	111	—
Nenana town (Inc.)	do.	Nenana	201	634
Nikolski village	Third	Aleutian Islands	100	83
Ninilchik village	do.	Kenai	124	87
Noatak village	Second	Noatak-Kobuk	212	164
Nome town (Inc.)	do.	Cape Nome	1,213	852
Nondalton village	Third	Ilamna	24	60
Noorvik village	Second	Noatak-Kobuk	198	281
North Fork village	Fourth	Tolovana	26	—
Nulato village	do.	Nulato	204	258
Nunachuk village	Third	Bristol Bay	32	—
Nushagak village	do.	do.	43	16
Old Harbor village	do.	Kodiak	84	64
Old Rampart village	Fourth	Chilo	30	—
Opbir village	do.	Imoko	10	22
Ouzinkie village	Third	Kodiak	168	96
Payloft Harbor village	do.	Unga Peninsula	52	92
Perryville village	do.	do.	93	85
Petersburg town (Inc.)	First	Petersburg	1,252	879
Pilot Station village	Second	Wade Hampton	87	145
Point Barrow village	do.	Noatak-Kobuk	82	94

## Population of towns and villages: 1930 and 1920—Continued

Place	Division		1930	1920
	Judicial	Recording		
Port Alexander village.	First.	Petersburg.	107	—
Port Heiden village.	Third.	Unga Peninsula.	51	30
Pymute village.	Fourth.	Nulato.	38	80
Quinhagak village.	do.	Bethel.	230	103
Rampart village.	do.	Rampart.	103	121
Ruby village.	do.	Nulato.	132	128
Russian Mission village.	Second.	Wade Hampton.	54	90
St. Michael village.	do.	St. Michael.	147	371
Salmon village.	Fourth.	Circle.	30	—
Sand Point village.	Third.	Unga Peninsula.	60	90
Savoonga village.	Second.	Cape Nome.	139	—
Saxman village.	First.	Ketchikan.	112	103
Selawik village.	Second.	Noatak-Kobuk.	227	274
Seldovia village.	Third.	Seldovia.	370	258
Seward town (inc.)	do.	Seward.	335	652
Shageluk village.	Fourth.	Otter.	88	130
Shakan village.	First.	Ketchikan.	19	23
Shaktolik village.	Second.	St. Michael.	104	73
Shishmaref village.	do.	Port Clarence.	223	131
Shungnak village.	do.	Noatak-Kobuk.	146	95
Sitka town (inc.)	First.	Sitka.	1,050	1,176
Skagway town (inc.)	do.	Skagway.	492	494
Sleightut village.	Fourth.	Kuskokwim.	133	—
South Fork village.	do.	Koyukuk.	19	29
Stephens village.	do.	Rampart.	48	103
Suntrana village.	do.	Nanana.	61	—
Susitna village.	Third.	Talkeetna.	39	—
Susitna Station village.	do.	Wasilla.	52	48
Tacotna village.	Fourth.	Mount McKinley.	65	—
Talkeetna village.	Third.	Talkeetna.	89	70
Tanana town.	Fourth.	Fort Gibbon.	185	213
Tanana (Mission of our Savior) village.	do.	do.	96	99
Tanana Crossing village.	do.	Fairbanks.	80	101
Tatitlek village.	Third.	Valdez.	70	187
Teller village.	Second.	Port Clarence.	76	60
Tenakee village.	First.	Sitka.	210	174
Thane village.	do.	Juneau.	68	421
Tigara village.	Second.	Noatak-Kobuk.	139	141
Togiak village.	Third.	Bristol Bay.	71	91
Tokelung village.	do.	do.	39	—
Toklat village.	Fourth.	Kantishna.	44	—
Treadwell village.	First.	Juneau.	19	325
Tuluksak village.	Fourth.	Bethel.	96	73
Tyonek village.	Third.	Wasilla.	75	58
Ugashik village.	do.	Kvichak.	84	—
Unalakleet village.	Second.	St. Michael.	261	285
Unalaska village.	Third.	Aleutian Islands.	220	299
Unga town.	do.	Unga Peninsula.	150	313
Unimak village.	do.	Aleutian Islands.	59	—
Upper Niekayville village.	First.	Ketchikan.	92	—
Uzavgiakamut.	Third.	Bristol Bay.	93	—
Valdez town (inc.)	do.	Valdez.	442	460
Wacker City village.	First.	Ketchikan.	57	—
Wainwright village.	Second.	Noatak-Kobuk.	107	90
Wales village.	do.	Port Clarence.	170	130
Wasilla village.	Third.	Wasilla.	51	—
West Petersburg village.	First.	Petersburg.	45	—
White Mountain village.	Second.	Cape Nome.	205	198
Wiseman village.	Fourth.	Koyukuk.	58	—
Wood Island village.	Third.	Kodiak.	116	104
Wood River village.	do.	Bristol Bay.	55	—
Wrangell town (inc.)	First.	Wrangell.	948	821
Yakutat village.	do.	Juneau.	285	165

## APPENDIX H

## LAWS RELATING TO ALASKA, PASSED AT THE THIRD SESSION OF THE SEVENTY-FIRST CONGRESS

Excerpts from the act making appropriations for the Department of the Interior for the fiscal year ending June 30, 1932, and for other purposes. Approved, February 14, 1931 (Public, No. 666, 71st Cong.).

Natives in Alaska: To enable the Secretary of the Interior, in his discretion and under his direction, to provide for support and education of the Eskimos, Aleuts, Indians, and other natives of Alaska, including necessary traveling expenses of pupils to and from industrial boarding schools in Alaska; erection, purchase, repair, and rental of school buildings; textbooks and industrial apparatus; pay and necessary traveling expenses of superintendents, teachers, physicians, and other employees; repair, equipment, maintenance, and operation of the United States ship Boxer; and all other necessary miscellaneous expenses which are not included under the above special heads, including \$350,000 for salaries in the District of Columbia and elsewhere, \$24,000 for traveling expenses, \$170,000 for equipment, supplies, fuel, and light, \$25,000 for repairs of buildings, \$146,000 for purchase or erection of buildings, \$76,000 for freight, including operation of United States ship Boxer, \$4,500 for equipment and repairs to United States ship Boxer, \$1,500 for rentals, and \$2,000 for telephone and telegraph; total \$709,000, to be immediately available: *Provided*, That not to exceed 10 per centum of the amounts appropriated for the various items in this paragraph shall be available interchangeably for expenditures on the objects included in this paragraph, but no more than 10 per centum shall be added to any one item of appropriation except in cases of extraordinary emergency and then only upon the written order of the Secretary of the Interior: *Provided further*, That of said sum not exceeding \$10,000 may be expended for personal services in the District of Columbia.

For completing the construction at Shoemaker Bay, Alaska, of the necessary buildings for the establishment of an industrial boarding school for natives in Alaska, \$100,000.

Medical relief in Alaska: To enable the Secretary of the Interior, in his discretion, and under his direction through the Bureau of Indian Affairs, with the advice and cooperation of the Public Health Service, to provide for the medical and sanitary relief of the Eskimos, Aleuts, Indians, and other natives of Alaska; erection, purchase, repair, rental, and equipment of hospital buildings; books and surgical apparatus; pay and necessary traveling expenses of physicians, nurses, and other employees, and all other necessary miscellaneous expenses which are not included under the above special heads, \$319,000, to be available immediately.

Mount McKinley National Park, Alaska: For administration, protection, and maintenance, \$28,000; for construction of physical improvements, \$3,100; in all, \$31,100.

## GOVERNMENT IN THE TERRITORIES

## TERRITORY OF ALASKA

Governor, \$7,000; secretary, \$3,800; in all, \$10,800.

For incidental and contingent expenses of the offices of the governor and of the secretary of the Territory, clerk hire, not to exceed \$5,700; janitor service for the governor's office and the executive mansion, not to exceed \$3,000; traveling expenses of the governor while absent from the capital on official business and of the secretary of the Territory while traveling on official business under direction of the governor; repair and preservation of governor's house and furniture; for care of grounds and purchase of necessary equipment; stationery, lights, water, and fuel; in all, \$14,800, to be expended under the direction of the governor.

Reindeer for Alaska: For support of reindeer stations in Alaska and instruction of Alaskan natives in the care and management of reindeer, including salaries of necessary employees in Alaska, subsistence, clothing, and other necessary personal supplies for apprentices with Government herds, traveling ex-



penses of employees, purchase, erection, and repair of cabins for supervisors, herders, and apprentices, equipment, and all other necessary miscellaneous expenses, \$26,900, to be available immediately.

**Insane of Alaska:** For care and custody of persons legally adjudged insane in Alaska, including compensation of medical supervisor detailed from Public Health Service; transportation, burial, and other expenses, \$152,000; *Provided*, That authority is granted to the Secretary of the Interior to pay from this appropriation to the Sanitarium Company, of Portland, Oregon, or to other contracting institution or institutions, not to exceed \$564 per capita per annum for the care and maintenance of Alaskan insane patients during the fiscal year 1932; *Provided further*, That so much of this sum as may be required shall be available for all necessary expenses in ascertaining the residence of inmates and in returning those who are not legal residents of Alaska to their legal residence or to their friends, and the Secretary of the Interior shall, so soon as practicable, return to their places of residence or to their friends all inmates not residents of Alaska at the time they became insane, and the commitment papers for any person hereafter adjudged insane shall include a statement by the committing authority as to the legal residence of such person.

**Traffic in intoxicating liquors:** For suppression of the traffic in intoxicating liquors among the natives of Alaska, to be expended under the direction of the Secretary of the Interior, \$16,200.

**The Alaska Railroad:** For every expenditure requisite for and incident to the authorized work of the Alaska Railroad, including maintenance, operation, and improvements of railroads in Alaska; maintenance and operation of river steamers and other boats on the Yukon River and its tributaries in Alaska; operation and maintenance of ocean-going or coastwise vessels by ownership, charter, or arrangement with other branches of the Government service, for the purpose of providing additional facilities for the transportation of freight, passengers, or mail, when deemed necessary, for the benefit and development of industries and travel affecting territory tributary to the Alaska Railroad; stores for resale; payment of claims for losses and damages arising from operations including claims of employees of the railroad for loss and damage resulting from wreck or accident on the railroad, not due to negligence of the claimant, limited to clothing and other necessary personal effects used in connection with his duties and not exceeding \$100 in value; payment of amounts due connecting lines under traffic agreements; payment of compensation and expenses as authorized by section 42 of the Injury Compensation Act approved September 7, 1916 (U. S. C., title 5, sec. 793), to be reimbursed as therein provided, \$1,000,000, in addition to all amounts received by the Alaska Railroad during the fiscal year 1932, to continue available until expended; *Provided*, That not to exceed \$6,000 of this fund shall be available for personal services in the District of Columbia during the fiscal year 1932, and no one other than the general manager of said railroad shall be paid an annual salary out of this fund of more than \$6,000; *Provided further*, That not to exceed \$10,000 of such fund shall be available for printing and binding; *Provided further*, That not to exceed \$250,000 of this fund shall be available for continuation of the investigation of mineral and other resources of Alaska to ascertain the potential resources available which will affect railroad tonnage; *Provided further*, That \$250,000 of such fund shall be available only for such capital expenditures as are chargeable to capital account under accounting regulations prescribed by the Interstate Commerce Commission, which amount shall be available immediately.

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[PUBLIC—No. 547—71ST CONGRESS]

[H. R. 10198]

An Act To repeal obsolete statutes, and to improve the United States Code

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That the following obsolete sections

and parts of sections of the Revised Statutes and Statutes at Large are hereby repealed:

STATUTES (Stat. or R. S.)	U. S. CODE
R. S. 162	Title 5, sec. 26
R. S. 196	Title 5, sec. 107
12 Stat. 505, sec. 6, Act of July 2, 1882, c. 180	Title 7, sec. 306
R. S. 1156	Title 10, sec. 182
R. S. 1243, first sentence	Title 10, sec. 941
39 Stat. 303, fifth complete paragraph, Act of July 1, 1916, c. 200	Title 16, sec. 42
34 Stat. 832, sec. 3, Resolution of June 11, 1906, No. 87	Title 16, sec. 50
39 Stat. 303, third complete paragraph, Act of July 1, 1916, c. 200	Title 16, sec. 56
40 Stat. 152, fifth paragraph, Act of June 12, 1917, c. 27	Title 16, sec. 106
40 Stat. 152, seventh paragraph, Act of June 12, 1917, c. 27	Title 16, sec. 116
40 Stat. 152, twelfth paragraph, Act of June 12, 1917, c. 27	Title 16, sec. 135
32 Stat. 765, secs. 3 and 4, Act of January 9, 1903, c. 63	Title 16, secs. 143, 144
36 Stat. 1421, second sentence of seventh complete paragraph, Act of March 4, 1911, c. 285	Title 16, sec. 180
R. S. 2463	Title 16, sec. 597
20 Stat. 470-471 secs. 1 and 2, Act of March 3, 1879, c. 189	Title 16, secs. 598, 599
28 Stat. 814, Act of March 2, 1905, c. 182	Title 16, sec. 600
R. S. 2061	Title 25, sec. 38
35 Stat. 71, first complete paragraph, except the second proviso, Act of April 30, 1908, c. 153	Title 25, sec. 94
35 Stat. 73, third proviso, Act of April 30, 1908, c. 153	Title 25, sec. 103
37 Stat. 496, Act of August 24, 1912, c. 867	Title 30, secs. 111-113
R. S. 3482	Title 31, sec. 208
24 Stat. 402, sec. 3, Act of February 12, 1887, as amended by 34 Stat. 450, sec. 3, Act of June 22, 1906, c. 3515	Title 32, sec. 32
30 Stat. 1007, sec. 11, Act of March 3, 1899, c. 418	Title 34, sec. 391
34 Stat. 554, second complete paragraph, Act of June 29, 1906, c. 3590	Title 34, sec. 392
35 Stat. 753, last paragraph, Act of March 3, 1909, c. 255	Title 34, sec. 393
33 Stat. 849, last paragraph, Act of April 27, 1904, c. 1622	Title 34, sec. 682
34 Stat. 554, third complete paragraph, Act of June 29, 1906, c. 3590	Title 34, sec. 683
R. S. 2469	Title 43, sec. 19
R. S. 2470	Title 43, sec. 20
R. S. 461, as amended by 25 Stat. 76, Act of April 2, 1888, c. 54, and 35 Stat. 469, sec. 15, Act of May 29, 1908, c. 220; 25 Stat. 557, Act of October 12, 1888, c. 1098	Title 43, sec. 21
R. S. 2230	Title 43, sec. 61
R. S. 2231	Title 43, sec. 62
R. S. 2232	Title 43, sec. 63
31 Stat. 270, sec. 3, except the proviso, Act of June 5, 1900, c. 716	Title 43, sec. 181
34 Stat. 1248, Act of March 2, 1907, c. 2568	Title 43, sec. 262
40 Stat. 676, thirteenth complete paragraph, Act of July 1, 1918, c. 113	Title 43, sec. 380
32 Stat. 389, sec. 5, third sentence, Act of June 17, 1902, c. 1093	Title 43, sec. 476
R. S. 2353	Title 43, sec. 672
R. S. 2356	Title 43, sec. 677
R. S. 2364	Title 43, sec. 683
R. S. 2358	Title 43, sec. 684
R. S. 2359	Title 43, sec. 685
19 Stat. 221, sec. 2, Act of January 12, 1877, c. 18	Title 43, sec. 686
R. S. 2360	Title 43, sec. 687
R. S. 2398	Title 43, sec. 754
R. S. 2399, as amended by 26 Stat. 650, Act of October 1, 1890, c. 1262, 28 Stat. 285, Act of August 15, 1894, c. 288, and 32 Stat. 120, Act of April 26, 1902, c. 592	Title 43, sec. 755
R. S. 2400	Title 43, sec. 756
R. S. 2404	Title 43, sec. 764
R. S. 2405	Title 43, sec. 765
R. S. 2407	Title 43, sec. 767
R. S. 2411	Title 43, sec. 771
37 Stat. 687, Act of February 27, 1913, c. 85	Title 43, sec. 860
R. S. 4205	Title 46, sec. 99
34 Stat. 1162, both provisos, Act of March 2, 1907, c. 2511	Title 48, sec. 4
36 Stat. 248, thirteenth paragraph, Act of March 23, 1910, c. 115	Title 48, sec. 5
31 Stat. 328, sec. 17, Act of June 6, 1900, c. 786	Title 48, sec. 28
31 Stat. 333, sec. 32, except the first two sentences, Act of June 6, 1900, c. 786, as amended by 33 Stat. 1266, sec. 2, Act of March 3, 1905, c. 1497	Title 48, sec. 42
33 Stat. 1266, sec. 3, Act of March 3, 1905, c. 1497	Title 48, sec. 65
33 Stat. 391, Act of April 27, 1904, c. 1623	Title 48, secs. 331-337
40 Stat. 604, Act of June 13, 1918, c. 97	Title 48, sec. 618
25 Stat. 489, sec. 1, Act of September 22, 1888, c. 1028	Title 50, sec. 11
26 Stat. 769, last paragraph, Act of February 24, 1891, c. 283	Title 50, sec. 12
31 Stat. 910, second proviso, Act of March 2, 1901, c. 803	Title 50, sec. 13
27 Stat. 461, proviso, Act of February 18, 1893, c. 136	Title 50, sec. 14
25 Stat. 491, first two complete paragraphs, Act of September 22, 1888, c. 1028	Title 50, sec. 15

SEC. 2. Rights or liabilities existing under the foregoing statutes or parts thereof on the date of the enactment of this Act shall not be affected thereby.

Approved, December 16, 1930.

[PUBLIC—No. 574—71st Congress]

[S. 196]

An Act To provide for uniform administration of the national parks by the United States Department of the Interior, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That hereafter no permit, license, lease, or other authorization for the prospecting, development, or utilization of the mineral resources within the Mesa Verde National Park, Colorado, or the Grand Canyon National Park, Arizona, shall be granted or made.

Sec. 2. That hereafter the Secretary of the Interior shall have authority to prescribe regulations for the surface use of any mineral land locations already made or that may hereafter be made within the boundaries of Mount McKinley National Park, in the Territory of Alaska, and he may require registration of all prospectors and miners who enter the park: *Provided*, That no resident of the United States who is qualified under the mining laws of the United States applicable to Alaska shall be denied entrance to the park for the purpose of prospecting or mining.

Sec. 3. That hereafter no permit, license, lease, or other authorization for the use of land within the Glacier National Park, Montana, or the Lassen Volcanic National Park, California, for the erection and maintenance of summer homes or cottages shall be granted or made: *Provided, however*, That the Secretary of the Interior may, in his discretion, renew any permit, license, lease, or other authorization for such purpose heretofore granted or made.

Sec. 4. That hereafter the acquisition of rights of way for steam or electric railways, automobile or wagon roads, within the Lassen Volcanic National Park, California, under filings or proceedings under laws applicable to the acquisition of such rights over or upon the national-forest lands of the United States is prohibited.

Sec. 5. That hereafter the acquisition of rights of way through the valleys of the north and middle forks of the Flathead River for steam or electric railways in the Glacier National Park, Montana, under filings or proceedings under the laws applicable to the acquisition of such rights over or upon the unappropriated public domain of the United States is prohibited.

Sec. 6. That the provisions of the Act of March 2, 1899 (Thirtieth Statute, page 993), granting rights of way, under such restrictions and regulations as the Secretary of the Interior may establish, to any railway or tramway company or companies for the purpose of building, constructing, and operating a railway, constructing and operating a railway or tramway line or lines, so far as the same relate to lands within the Mount Rainier National Park, Washington, are hereby repealed: *Provided, however*, That nothing herein shall be construed so as to prohibit the Secretary of the Interior from authorizing the use of land in said park under contract, permit, lease, or otherwise for the establishment and operation thereon of a tramway or cable line, or lines, for the accommodation or convenience of visitors and others.

Sec. 7. That the provision of the Act of January 26, 1915 (Thirty-eighth Statute, page 798), authorizing the Secretary of the Interior, in his discretion, and upon such conditions as he may deem wise, to grant easements or rights of way for steam, electric, or similar transportation upon or across the lands within the Rocky Mountain National Park, is hereby repealed.

Approved, January 26, 1931.

[Public—No. 582—71st Congress]

[H. R. 12121]

An Act To provide for a survey of the Salmon River, Alaska, with a view to the prevention and control of its floods

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Secretary of War is hereby authorized and directed to cause a survey to be made of the Salmon River, Alaska, with a view to preparing plans and estimates of the cost of such work as may be necessary for the prevention and control of its floods in accordance with the provisions of section 3 of an Act entitled "An Act to provide for the

control of the floods of the Mississippi River and of the Sacramento River, California, and for other purposes," approved March 1, 1917, and the recommendations of the Chief of Engineers, United States Army, contained in House Document Numbered 346, Seventy-first Congress, second session; and the sum of \$800 is hereby authorized to be appropriated for this purpose.

Approved, January 31, 1931.

[PUBLIC—No. 664—71st Congress]

[H. R. 11285]

An Act To amend the Alaska game law

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That section 2 of the Act entitled "An Act to establish an Alaska Game Commission to protect game animals, land fur-bearing animals, and birds in Alaska, and for other purposes," approved January 13, 1925 (43 Stat. 739), is amended under the definition "game animals" following the comma after the word "bears" by adding the words "and such other animals as have been or may hereafter be introduced," and under the definition "game birds" following the comma after the word "ptarmigan" by adding the words "and such other birds as have been or may hereafter be introduced."

SEC. 2. That section 3 of the Act is amended by striking out in line 3 thereof the words "not less than one year," and following the comma in line 4 thereof by adding the words "for not less than one year immediately preceding his claim for resident privileges."

SEC. 3. That section 5 of the Act is amended by striking out the sentence beginning with the word "Any" in line 23 thereof and ending in line 29, and by inserting in lieu thereof the following: "Any officer or employee empowered to enforce this Act shall have authority without warrant to search any camp, camp outfit, pack or pack animals, automobile, wagon, or other vehicle, sled, or any boat, vessel, or other craft, in the Territorial waters of the United States, or any boat, vessel, or other craft of the United States on the high seas when such officer or employee has reasonable cause to believe that such camp, camp outfit, pack or pack animals, automobile, wagon, or other vehicle, sled, boat, vessel, or other craft has therein or thereon any of the animals or birds, or parts thereof, protected by this Act, taken, possessed, sold, intended for sale, or transported contrary to law."

SEC. 4. That section 8 of said Act is amended by inserting after the word "owners," in line 15 thereof, the words "in accordance with regulations prescribed by the Secretary of Agriculture."

SEC. 5. That section 10 of said Act is amended by striking out in line 25 thereof the words "or other commercial mess house." That section 10 is further amended by adding at the end of said section the following: "*Provided*, That no person shall knowingly disturb, injure, or destroy any notice, sign-board, seal, boat, vessel, sled, dog, or dog team, paraphernalia, or equipment, building, or other improvement or property of the United States used by the commission in the administration and/or enforcement of the provisions of this Act, or as a notice to the public concerning the provisions of this Act or any regulation adopted pursuant thereto, or as a marker of the boundary of any area closed to hunting, trapping, or other special use under the provisions of this Act, or to destroy, remove, tamper with, or imitate any metal seal or seals issued by the commission and attached to any skin, portion, or specimen of a wild animal or bird or other article for purposes of identification under its authority, in accordance with the provisions of this Act or any regulation thereunder."

SEC. 6. That subdivision B of section 11 of said Act is amended to read as follows:

"SUBDIVISION B. RESIDENT EXPORT LICENSE AND PERMIT.—That no resident of the Territory shall transport therefrom any game animal, bird, or part thereof, unless he has (a) a resident export and return license, which will entitle him to transport out of the Territory for mounting and return to him in the Territory within one year such game animal, bird, or part thereof, as shall have been legally acquired by him and which shall be specifically identified in license, or (b) a resident export permit, which may be issued by the commission in its

discretion, and which will entitle him to export from the Territory for other than return, but not for sale, such game animal, bird, or part thereof as shall have been legally acquired by him and which shall be specifically identified in the permit."

Sec. 7. That subdivision C of section 11 of said Act is amended by striking out "\$2" where it first occurs therein and by inserting in lieu thereof "\$1," and by adding after the word "franchise" in line 10 thereof a colon, and the words "or of residents under the age of sixteen: *Provided*, That a licensed trapper shall be entitled to the privilege of hunting without a hunting license," and by striking out the words "sixty" and "adoption" in line 11 thereof and by inserting in lieu thereof the words "ninety" and "publication," respectively.

Sec. 8. That subdivision D of section 11 of said Act is amended by striking out in lines 5 and 6 thereof the words "in a book which it shall keep" and insert in lieu thereof the words "on a form which it shall provide."

Sec. 9. That subdivision F of section 11 of said Act is amended to read as follows:

"SUBDIVISION F. RECORDS, REPORTS.—Each person to whom a license is issued to take animals or birds, or to deal in furs, shall keep records which shall show the kind and number of each species of animals or birds so taken, purchased, or otherwise procured under such license, the persons from whom they were purchased and to whom they were sold, date of purchase or sale, name of the trapper, and the number of the trapper's license, and shall, on or before thirty days after the expiration of his license, make a written report to the commission on a form prepared and furnished by it setting forth in full the data herein required to be recorded. Such records shall at all reasonable times be subject to inspection and examination by a member of the commission and any of its employees and by any marshal or deputy marshal. Any licensee who shall fail correctly to keep such records or who shall fail to submit such report or who shall in any such report knowingly falsely state any such data or who shall refuse to exhibit his records for inspection and examination as herein required shall be punished as prescribed in section 15 of this Act."

Sec. 10. That, effective July 1, 1931, subdivision H of section 11 of said Act is amended by inserting after the word "franchise" in line 8 thereof the following: "or of cooperative stores operated exclusively by and for native Indians, Eskimos, or half-breeds, or of stores operated by missions exclusively for native Indians, Eskimos, or half-breeds: *Provided*, That the stores exempted from procuring licenses as herein provided shall, on or before thirty days after the expiration of each license year as specified in this Act, make a written statement to the commission on a form prepared and furnished by it setting forth such material facts concerning the management and operation of such store as the commission may by such form require and in addition thereto shall keep the records, make the reports, incur the penalties, and in all other respects be subject to the requirements of subdivision F of Section 11 to the same extent as licensed fur dealers," and by striking out all after the colon in line 14 thereof and inserting in lieu thereof the following:

"(a) If the applicant is a resident of the Territory, \$10; or is an association or copartnership composed exclusively of residents of the Territory, organized under the laws of the Territory, for each member, \$10.

"(b) If the applicant is a nonresident of the Territory who is a citizen of the United States, or is a corporation composed exclusively of citizens of the United States, organized under the laws of the Territory or of a State of the United States, or is an association or copartnership composed exclusively of citizens of the United States, organized under the laws of the Territory or of a State of the United States, any member of which is a nonresident of the Territory, \$100.

"(c) If the applicant is an alien, or is a corporation, association, or copartnership, not organized under the laws of the Territory or of a State of the United States, or is a corporation, association, or copartnership, any stockholder or member of which is an alien, \$500.

"(d) If the applicant is a resident of the Territory and an agent in charge of a station of a fur dealer of either of the classes (a), (b), or (c), or a resident itinerant agent of such dealer, \$10.

"(e) If the applicant is a nonresident of the Territory but a citizen of the United States and an agent in charge of a station of a fur dealer of either of the classes (a), (b), or (c), or a nonresident citizen itinerant agent of such dealer, \$100.

"(f) If the applicant is an alien and an agent in charge of a station of a fur dealer of either of the classes (a), (b), or (c), or an alien itinerant agent of such dealer, \$500: *Provided*, That no license shall be issued to any agent whose principal has not procured a license in accordance with (a), (b), or (c)."

Sec. 11. That, effective July 1, 1931, Subdivision I of section 11 of said Act is amended to read as follows:

"SUBDIVISION I. FEES AND APPLICATIONS FOR, AND ISSUANCE OF LICENSES AND PERMITS.—Licenses and resident export permits shall be issued by the commission through its members, game wardens, and other persons authorized by it in writing to sell licenses. Resident export licenses and permits may also be issued by customs officers. Application blanks for licenses and permits shall be furnished by the commission and shall be in such form as the commission may by regulation determine. Each application shall be subscribed and sworn to by the applicant before an officer authorized to administer oaths in the Territory. Members of the commission and its game wardens and other persons authorized in writing by it to issue licenses, and postmasters and customs officers, are hereby authorized to administer such oaths. The applicant for a license or resident export permit shall accompany his application with a license or permit fee as follows: Nonresident general hunting and trapping license, \$50; nonresident small-game hunting license, \$10; resident export and return license, \$1 for each trophy; resident export permit, if removing residence, \$1 for each animal, \$1 for each bird, if otherwise, \$5 for each animal, \$1 for each bird; registered guide license, \$10; alien special license, \$100; and fur-farm license, \$2."

Sec. 12. Section 13 of said Act is amended by adding at the end thereof the following: "*Provided*, That no action in rem shall be required with respect to any wild animal or bird, or part thereof, or any gun, net, trap, or other device possessed or used in or in aid of a violation of this Act and legally seized when the claimant thereof releases such article or articles to the United States by a voluntary release in writing witnessed by two disinterested parties, in which case such articles shall be disposed of by the commission and if sold the proceeds shall be disposed of as provided in this section."

Sec. 13. Section 15 of said Act is amended by striking out all the words between the semicolons in lines 7 and 10 thereof and by inserting in lieu thereof the following: "and, in addition thereto, any person convicted of a violation of any provision of this Act who is the holder of any form of license issued thereunder shall thereupon forfeit said license and shall surrender it upon demand of any person authorized by the commission to receive it, and upon a second conviction he shall not be entitled to, nor shall he be granted, a license of such form for a period of one year from date of such forfeiture, and upon a third or successive conviction, for a period of five years from the date of such forfeiture; and any cooperative store operated exclusively by and for native Indians, Eskimos, or half-breeds, or any store operated by missions exclusively for native Indians, Eskimos, or half-breeds, without a license as provided in this Act, upon a second or third conviction for violation of this Act, shall not be entitled to engage in the business of dealing in furs for such time as the court before whom such conviction is had may decide: *Provided*, That such prohibition shall not be imposed for the first conviction, nor for a period in excess of one year from date of the second conviction, nor for a period in excess of five years from date of the third or any subsequent conviction."

Sec. 14. Section 16 of said Act is amended to read as follows:

"SEC. 16. ADMINISTRATION OF OATHS FOR PURPOSES OF PROSECUTION—COORDINATION OF FISCAL BUSINESS.—That such officers, agents, or employees of the Secretary of Agriculture or the Alaska Game Commission as may be designated in writing by said Secretary or commission for the purpose are hereby authorized and empowered to administer to or take from any person, an oath, affirmation, or affidavit whenever such oath, affirmation, or affidavit is for use in any prosecution or proceeding under or in the enforcement of this Act; and, in order to coordinate the fiscal business of the United States Department of Agriculture and the Alaska Game Commission in Alaska, the ex officio commissioner of said department in Alaska designated by the Secretary of Agriculture pursuant to the authority contained in the Act of February 10, 1927 (44 Stat. pt. 2, p. 1068), with the approval of said commission, may assign a bonded disbursing officer of said department stationed in Alaska to perform and discharge, without additional compensation, so much of the duties imposed

and conferred upon the executive officer of said commission by this Act as consist of the disbursement and receipt of public funds; and during the continuation of such assignment the bond of such executive officer required by section 6 of this Act shall be reduced to \$1,000, and the bond of the disbursing officer so assigned shall be increased by the amount of \$20,000, the premium for such additional amount to be paid as provided for in said section 6 of this Act."

Approved, February 14, 1931.

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[PUBLIC—No. 776—71ST CONGRESS]

[H. R. 9599]

An Act To authorize the Secretary of Agriculture to carry out his ten-year cooperative program for the eradication, suppression, or bringing under control of predatory and other wild animals injurious to agriculture, horticulture, forestry, animal husbandry, wild game, and other interests, and for the suppression of rabies and tularemia in predatory or other wild animals, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Secretary of Agriculture is hereby authorized and directed to conduct such investigations, experiments, and tests as he may deem necessary in order to determine, demonstrate, and promulgate the best methods of eradication, suppression, or bringing under control on national forests and other areas of the public domain as well as on State, Territory, or privately owned lands of mountain lions, wolves, coyotes, bobcats, prairie dogs, gophers, ground squirrels, jack rabbits, and other animals injurious to agriculture, horticulture, forestry, animal husbandry, wild game animals, fur-bearing animals, and birds, and for the protection of stock and other domestic animals through the suppression of rabies and tularemia in predatory or other wild animals; and to conduct campaigns for the destruction or control of such animals; *Provided,* That in carrying out the provisions of this Act the Secretary of Agriculture may cooperate with States, individuals and public and private agencies, organizations, and institutions.

SEC. 2. That in order to carry out the provisions of this Act there is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, for the fiscal year 1932, a sum not to exceed \$1,000,000, including the amount appropriated in the annual appropriation Act for the Department of Agriculture, and for the succeeding nine fiscal years from 1933 to 1941, inclusive, not to exceed \$1,000,000 each year, in accordance with the ten-year program for the eradication, suppression, or bringing under control of predatory and other injurious wild animals as outlined in House Document Numbered 496, second session, Seventieth Congress.

SEC. 3. That the Secretary of Agriculture is authorized to make such expenditures for equipment, supplies, and materials, including the employment of persons and means in the District of Columbia and elsewhere, and to employ such means as may be necessary to execute the functions imposed upon him by this Act.

Approved, March 2, 1931.

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[PUBLIC—No. 787—71ST CONGRESS]

[S. 4080]

An Act To provide books for the adult blind

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That there is hereby authorized to be appropriated annually to the Library of Congress, in addition to appropriations otherwise made to said Library, the sum of \$100,000, which sum shall be expended under the direction of the Librarian of Congress to provide books for the use of the adult blind residents of the United States, including the several States, Territories, insular possessions, and the District of Columbia.

SEC. 2. The Librarian of Congress may arrange with such libraries as he may judge appropriate to serve as local or regional centers for the circulation

of such books, under such conditions and regulations as he may prescribe. In the lending of such books preference shall at all times be given to the needs of blind persons who have been honorably discharged from the United States military or naval service.

Approved, March 8, 1931.

[PUBLIC—No. 802—71st CONGRESS]

[H. R. 980]

An Act To permit the United States to be made a party defendant in certain cases

*Be it enacted by the Senate and House of Representatives of the United States America in Congress assembled,* That, upon the conditions herein prescribed for the protection of the United States, the consent of the United States be; and it is hereby given, to be named a party in any suit which is now pending or which may hereafter be brought in any United States district court, including those for the districts of Alaska, Hawaii, and Porto Rico, and the Supreme Court of the District of Columbia, and in any State court having jurisdiction of the subject matter, for the foreclosure of a mortgage or other lien upon real estate, for the purpose of securing an adjudication touching any mortgage or other lien the United States may have or claim on the premises involved.

SEC. 2. Service upon the United States shall be made by serving the process of the court with a copy of the bill of complaint upon the United States Attorney for the district or division in which the suit has been or may be brought and by sending copies of the process and bill, by registered mail, to the Attorney General of the United States at Washington, District of Columbia. The United States shall have sixty days after service as above provided, or such further time as the court may allow, within which to appear and answer, plead or demur.

SEC. 3. Any such suit brought against the United States in any State court may be removed by the United States to the United States district court for the district in which the suit may be pending. The removal shall be effected in the manner prescribed by section 29 of the Judicial Code (title 28, sec. 72, U. S. C.): *Provided*, That the petition for removal may be filed at any time before the expiration of thirty days after the time herein or by the court allowed to the United States to answer, and no removal bond shall be required. The court to which the cause is removed may, before judgment, remand it to the State court if it shall appear that there is no real dispute respecting the rights of the United States, or all the other parties shall concede of record the claims of the United States.

SEC. 4. Except as herein otherwise provided, a judicial sale made in pursuance of a judgment in such a suit shall have the same effect respecting the discharge of the property from liens and encumbrances held by the United States as may be provided with respect to such matters by the law of the State, Territory, or District in which the land is situated, provided that a sale to satisfy a lien inferior to one of the United States shall be made subject to and without disturbing the lien of the United States, unless the United States, by its attorneys, consents that the property may be sold free of its mortgage or lien and the proceeds divided as the parties may be entitled: *And provided further*, That where a sale is made to satisfy a lien prior to that of the United States, the United States shall have one year from the date of sale within which to redeem. In any case where the debt owing the United States is due, the United States may ask, by way of affirmative relief, for the foreclosure of its own lien or mortgage and in any case where property is sold to satisfy a first mortgage or first lien held by the United States, the United States may bid at the sale such sum not exceeding the amount of its claim with expenses of sale, as may be directed by the chief of the department, bureau or other agency of the Government which has charge of the administration of the laws in respect of which the claim of the United States arises.

SEC. 5. If any person shall have a lien upon any real or personal property, duly filed of record in the jurisdiction in which the property is located, and a junior lien (other than a lien for any tax) in favor of the United States attaches to such property, such person may make a written request to the



officer of the United States charged with the administration of the laws in respect of which the lien of the United States arises, to have the same extinguished. If after appropriate investigation, it appears to such officer that the proceeds from the sale of the property would be insufficient to satisfy, in whole or in part, the lien of the United States, or that the claim of the United States has been satisfied, or by lapse of time or otherwise has become unenforceable, such officer shall so report to the Comptroller General who thereupon may issue a certificate of release, which shall operate to release the property from such lien.

Sec. 6. No judgment for costs or other money judgment shall be rendered against the United States in any suit or proceeding which may be instituted under the provisions of this Act. Nor shall the United States be or become liable for the payment of the costs of any such suit or proceeding or any part thereof.

Approved, March 4, 1931.

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[PUBLIC—No. 863—71st CONGRESS]

[H. R. 11368]

An Act To fix the annual compensations of the secretary and the Governor of the Territory of Alaska

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That from and after the date of passage of this Act the salary of the secretary of the Territory of Alaska is fixed at \$5,600 per annum, and that of the governor at \$10,000 per annum.

Approved, March 4, 1931.

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[PRIVATE—No. 506—71st CONGRESS]

[H. R. 644]

An Act For the relief of Casey McDannell

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That the Secretary of the Interior be, and he is hereby, authorized to allow and pay to J. Casey McDannell from the funds of the Alaska Railroad the sum of \$500 in full settlement of his claims in connection with his contracts for buffet and dining car service on said railroad, and such settlement shall be effective to relieve him of any counterclaim by the Alaska Railroad against said J. Casey McDannell for hospital service up to January 11, 1930.

Approved, March 5, 1931.

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[PUBLIC RESOLUTION—No. 121—71st CONGRESS]

[S. J. Res. 183]

Joint Resolution Authorizing the Secretary of Agriculture to cooperate with the Territories of the United States under the provisions of sections 1 and 2 of the Act of Congress entitled "An Act to provide for the protection of forest lands, for the reforestation of denuded areas, for the extension of national forests, and for other purposes, in order to promote the continuous production of timber on lands chiefly suitable therefor"

*Resolved by the Senate and House of Representatives of the United States of America in Congress assembled*, That the Secretary of Agriculture be, and he is hereby, authorized to cooperate with the Territories of the United States on the same terms and conditions as with States under sections 1 and 2 of the Act of Congress entitled "An Act to provide for the protection of forest lands, for the reforestation of denuded areas, for the extension of national forests, and for other purposes, in order to promote the continuous production of timber on lands chiefly suitable therefor," approved June 7, 1924.

Approved, February 20, 1931.

## APPENDIX I

TREASURY DEPARTMENT,  
UNITED STATES CUSTOMS SERVICE,  
OFFICE OF THE COLLECTOR,  
Juneau, Alaska, December 31, 1930.

According to statistics compiled by this office and the Department of Commerce at Washington, the total commerce of Alaska for the past year amounted to \$90,232,413. Of this total amount of trade, \$57,187,146 represents merchandise, gold, and silver shipped from Alaska, while \$33,045,267 represents the value of like commodities shipped to Alaska during the same period. The balance of trade in favor of Alaska for the year 1930 amounts to \$24,141,879.

An increase of \$403,548 in shipments of gold and silver is noted for the year. The fourth division, with mining activities centered around Fairbanks, showed the greatest increase in gold production, having a total of \$3,234,786, or an increase of \$1,334,274 over 1929. The other three divisions showed a slight decline from 1929. The total domestic gold and silver shipments from all divisions amounted to \$7,842,493 for the year.

Copper-ore shipments for 1930 amounted to 37,774,969 pounds and \$5,341,035 in value. This represents a decrease of 6,123,787 pounds and \$3,356,940 in value. The decline in the production of minerals in Alaska during 1930, other than gold, is well explained in a statement issued by the Geological Survey, which states that the "general industrial conditions similar to those of the United States, and of practically all other countries of the world, prevailed in Alaska in 1930 and are reflected in the decreased value of its mineral output. The prices paid for the mineral commodities, other than gold, were so abnormally low as compared with 1929 that more than \$2,000,000 of the decrease was due to this cause alone. The low prices, however, had perhaps an even greater effect in deterring development of mines whose ores carry principally the base metals, so that their output was either curtailed or altogether stopped. Obviously this is a temporary condition that will disappear in time, and there is nothing in the general condition of the Alaska mining industry to indicate a permanent decline."

Total shipments of fish and fish products for 1930 amounted to \$36,719,429, which is a decrease of \$9,933,356 from 1929. This decline in both pounds and value of fish shipments during 1930 is due to almost a complete failure of the run of red fish in Bristol Bay, together with adverse market conditions which affected the price of fish. The detailed tables on the following pages give a complete analysis of the year's business.

JOHN C. McBRIDE,  
Collector of Customs.

*Merchandise and gold and silver shipped from Alaska to United States*

Articles	Unit	1929		1930	
		Quantity	Value	Quantity	Value
<b>Fish:</b>					
Fresh and frozen—					
Halibut.....	Pound.....	14, 049, 733	\$1, 900, 218	11, 530, 350	\$1, 402, 260
Salmon.....	do.....	6, 085, 259	817, 678	3, 349, 075	756, 014
All other.....	do.....	610, 897	50, 053	801, 149	59, 117
Canned: Salmon.....	do.....	253, 137, 280	88, 608, 105	239, 208, 020	30, 084, 228
Cured or preserved—					
Cod.....	do.....	1, 345, 017	75, 885	1, 107, 313	60, 410
Herring.....	do.....	0, 677, 440	943, 038	8, 832, 020	727, 878
Salmon.....	do.....	5, 600, 871	1, 437, 859	5, 538, 461	1, 410, 046
All other.....	do.....	1, 056	105		
Shellfish—					
Clams.....	do.....	642, 704	184, 752	813, 312	204, 288
Crabs.....	do.....	136, 400	74, 312	86, 154	34, 927
Shrimps.....	do.....	516, 530	208, 070	500, 356	201, 359
Other fish products—					
Fertilizer.....	Ton.....			179	10, 000
Meal.....	do.....	11, 900	828, 523	11, 208	676, 446
Oil.....	Gallon.....	3, 409, 814	1, 370, 012	3, 608, 408	978, 697
All other fish and fish products.....	Pound.....	795	70	110	50
<b>Total fish.....</b>			<b>40, 607, 725</b>		<b>36, 615, 429</b>

*Merchandise and gold and silver shipped from Alaska to United States—Con.*

Articles	Unit	1920		1930	
		Quantity	Value	Quantity	Value
Whale oil.....	Gallon.....	948, 376	\$375, 330	982, 305	\$400, 806
Live blue foxes.....	Number.....	788	60, 830	078	09, 000
Other live animals.....	do.....	2, 846	86, 805	1, 090	75, 921
Curios.....	do.....	4, 063	13, 108	1, 908	8, 471
Furs and fur skins: †					
Seal.....	do.....	41, 114	784, 500	43, 305	650, 305
Blue fox.....	do.....	9, 290	870, 608	7, 446	504, 700
Silver of black fox.....	do.....	1, 110	138, 027	1, 821	82, 644
Red fox.....	do.....	20, 026	1, 055, 068	15, 009	555, 609
White fox.....	do.....	11, 293	638, 230	4, 824	208, 853
Mink.....	do.....	26, 848	637, 882	26, 299	252, 935
Muskrat.....	do.....	272, 405	282, 608	337, 450	188, 121
Beaver.....	do.....	1, 306	36, 633	182	3, 760
All other.....	do.....	35, 018	825, 742	27, 138	689, 019
Manufactured furs.....	do.....	87	7, 684	70	18, 022
Ore, matte, and regulus:					
Copper.....	(Gross ton.....	67, 806	.....	50, 823	.....
Lead.....	(Gross ton.....	43, 808, 758	8, 097, 975	37, 774, 099	5, 341, 035
.....	(Gross ton.....	2, 170	.....	2, 355	.....
.....	(Gross ton.....	2, 502, 320	177, 512	2, 300, 068	139, 884
.....	do.....	118, 760	52, 020	51, 424	12, 900
Reindeer meat.....	do.....	1, 384, 075	141, 195	1, 500, 455	157, 018
Stone (including marble).....	Ton.....	142, 740	109, 640	200, 847	105, 982
Trophies, specimens, etc.....	Number.....	235	19, 090	264	31, 840
Wood, timber, and lumber.....	M feet.....	2, 405	140, 031	5, 120	178, 114
All other articles.....	.....	.....	140, 228	.....	174, 407
Total value of products of Alaska.....	.....	.....	61, 763, 350	.....	46, 460, 546
Products of United States returned.....	.....	.....	1, 584, 734	.....	1, 510, 271
Total value of foreign products.....	.....	.....	210, 003	.....	1, 020, 146
Total value of shipments of merchandise.....	.....	.....	63, 567, 177	.....	48, 000, 962
Domestic gold.....	.....	.....	7, 126, 724	.....	7, 681, 737
Domestic silver.....	.....	.....	281, 771	.....	180, 806
Foreign gold and silver.....	.....	.....	470, 049	.....	30, 450
Grand total.....	.....	.....	71, 454, 721	.....	56, 880, 455

† Includes fur shipped by mail; and furs from Pribilof Islands.

In the preceding table of merchandise and gold and silver shipped from Alaska to the United States there appears an item "All other articles." This item comprises the following products which, as they increase in value, will be added to the itemized list of that table.

Articles	Unit	1920		1930	
		Quantity	Value	Quantity	Value
Seal oil.....	Gallon.....	.....	.....	1, 200	\$600
Reindeer hides.....	Pound.....	108, 638	\$18, 314	205, 744	35, 205
Reindeer offal.....	do.....	43, 077	5, 051	72, 026	7, 434
Reindeer meal.....	Ton.....	.....	.....	42	4, 711
Sheep hides.....	Pound.....	.....	.....	1, 783	385
Wool.....	do.....	89, 332	47, 025	69, 557	16, 520
Ivory.....	do.....	6, 043	4, 701	8, 068	5, 082
Hair seal skins.....	Number.....	2, 217	4, 012	815	1, 398
Whale meal.....	Ton.....	252	8, 360	238	6, 302
Whale fertilizer.....	do.....	945	31, 758	841	30, 982
Whale tail.....	Pound.....	20, 800	608	67, 852	868
Whale bone.....	do.....	19, 175	727	14, 382	6, 214
Paintings.....	Number.....	53	18, 122	37	9, 240
Platinum.....	Ounce.....	.....	.....	1, 156	49, 654
Miscellaneous.....	.....	.....	1, 500	.....	.....
Total.....	.....	.....	140, 228	.....	174, 407

To arrive at the total value of Alaska products shipped out of the Territory, the following products shipped to foreign countries should be added to the corresponding items on the preceding page, headed "Merchandise and gold and silver shipped from Alaska to the United States."

*Alaska merchandise shipped to foreign countries*

Articles	Unit	1926		1930	
		Quantity	Value	Quantity	Value
Canned salmon.....	Pound.....	204	\$49	550	\$100
Salted salmon.....	do.....	20,145	2,687	0,282	1,032
Salted codfish.....	do.....	1,240	127		100
Salted herring.....	do.....	22,942	712	14,917	353
Other salted fish.....	do.....	225	25		
Fresh salmon.....	do.....	743,020	43,041	542,819	54,014
Other fresh fish.....	do.....	804,010	93,031	570,479	47,098
Pickled salmon.....	Barrel.....	8	148	20	636
Other pickled fish.....	do.....	1	19	3	74
Other fish and fish products.....	Pound.....	144	36	318	165
Canned shellfish.....	do.....	588	285	1,320	523
Total fish and fish products.....			145,080		104,000
Spruce boards.....	M feet.....	85	2,538	88	2,053
Douglas fir lumber.....	do.....	54	1,428	55	1,275
Other softwood boards.....	do.....	12	274		
Hemlock boards.....	do.....			153	3,203
Other sawed lumber.....	Board feet.....	12,251	468	22,991	1,412
Piling.....	Linear feet.....	480	24		
Shingles.....	M feet.....	15	60	15	52
Undressed fox furs.....	Number.....	12	780	4	300
Undressed muskrat furs.....	do.....	165	275	1,214	841
Other undressed furs.....	do.....	2	250		
Live animals (mink, etc.).....			3,999		150
Copper ore.....	Pound.....	62,080	112,592		
Fresh milk and cream.....	Gallon.....	1,208	937	641	510
Total.....			168,745		113,802

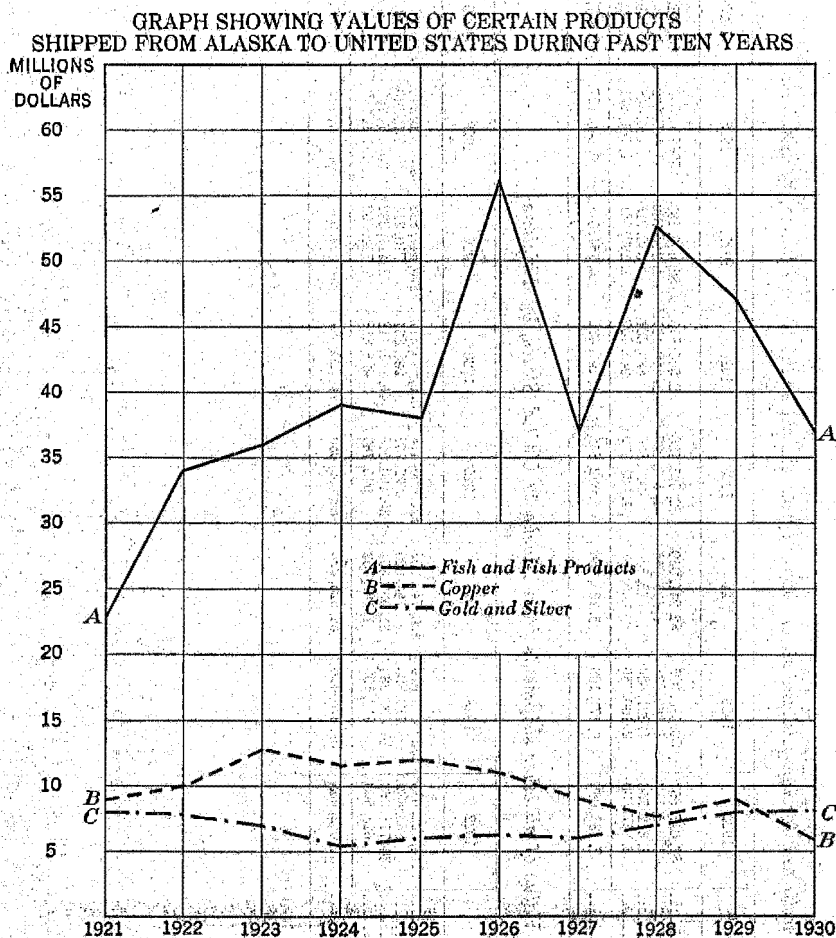
	Merchandise shipped from United States to Alaska	Merchandise imported into Alaska from foreign ports	Gold and silver imported into Alaska from foreign ports	Merchandise shipped from Alaska to United States	Domestic gold and silver shipped from Alaska to United States	Foreign gold and silver shipped from Alaska to United States	Merchandise and gold and silver exported from Alaska to foreign ports
1906.....	\$18,368,145	\$1,004,047	\$6,140,466	\$12,052,114	\$18,471,451	\$3,086,342	\$1,405,430
1907.....	17,273,945	980,669	3,389,461	10,770,381	10,774,127	2,561,510	2,128,157
1908.....	15,066,318	663,939	2,425,186	12,255,255	18,044,533	3,043,264	857,675
1909.....	18,928,887	605,080	4,023,791	13,522,137	18,278,963	3,845,705	1,120,218
1910.....	17,917,083	669,614	3,452,703	13,690,594	15,195,954	3,441,834	1,110,910
1911.....	15,169,149	519,221	3,520,170	19,318,819	14,699,694	3,353,361	1,174,393
1912.....	21,092,761	925,034	3,840,540	24,793,889	16,031,705	3,704,173	1,630,780
1913.....	21,689,690	751,173	4,320,985	22,252,942	12,959,266	4,306,591	1,248,873
1914.....	21,610,860	682,994	3,576,090	25,427,873	14,729,905	3,450,400	1,047,740
1915.....	23,293,168	600,519	4,223,620	34,245,272	16,090,411	3,296,012	1,225,120
1916.....	30,834,798	1,544,182	2,936,018	62,507,311	16,332,117	3,909,590	1,873,013
1917.....	39,838,165	1,196,195	2,397,237	70,651,968	14,939,440	2,008,864	3,008,590
1918.....	40,412,258	1,175,701	37,605	75,026,578	8,997,655	83,360	1,815,975
1919.....	37,476,232	1,440,362	31,665	60,473,623	8,636,139	6,332	1,678,986
1920.....	36,876,855	1,512,118	29,500	60,920,241	7,413,751	28,695	1,530,735
1921.....	19,274,215	935,013	0	36,916,624	7,350,142	0	1,479,272
1922.....	26,777,806	870,927	1,190	51,082,995	7,431,875	1,190	1,371,490
1923.....	30,731,206	514,466	4,769	54,878,426	6,599,139	1,069	1,325,773
1924.....	32,050,433	629,018	0	54,525,026	5,188,656	0	1,351,840
1925.....	32,352,530	846,981	0	55,639,050	5,632,842	0	901,483
1926.....	31,587,337	543,683	30,014	74,720,587	6,160,942	30,530	522,502
1927.....	35,604,093	766,302	0,000	51,323,950	5,744,838	0,180	483,679
1928.....	32,037,335	592,428	7,070	67,587,207	6,633,249	6,873	622,534
1929.....	33,219,865	955,273	480,885	63,567,177	7,408,495	479,049	607,052
1930.....	31,308,291	1,709,086	32,340	48,996,962	7,812,043	30,450	347,691

*Value of domestic and foreign gold and silver shipped from Alaska to the United States, by divisions*

Judicial divisions	1922	1923	1924	1925	1926	1927	1928	1929	1930
First.....	\$2,647,667	\$2,088,395	\$2,244,959	\$2,665,730	\$2,564,870	\$2,666,439	\$3,296,846	\$3,951,304	\$3,241,315
Second.....	1,215,112	1,160,931	1,185,955	1,131,937	1,848,151	1,347,783	1,117,362	1,694,286	1,175,980
Third.....	1,312,756	1,221,626	902,584	849,836	833,304	540,215	464,448	341,442	190,412
Fourth.....	2,257,530	2,100,156	805,158	1,035,339	945,147	1,199,581	1,761,471	1,900,512	3,234,786
Total.....	7,433,065	6,571,108	5,138,656	5,682,842	6,191,472	5,754,018	6,640,127	7,887,544	7,842,493

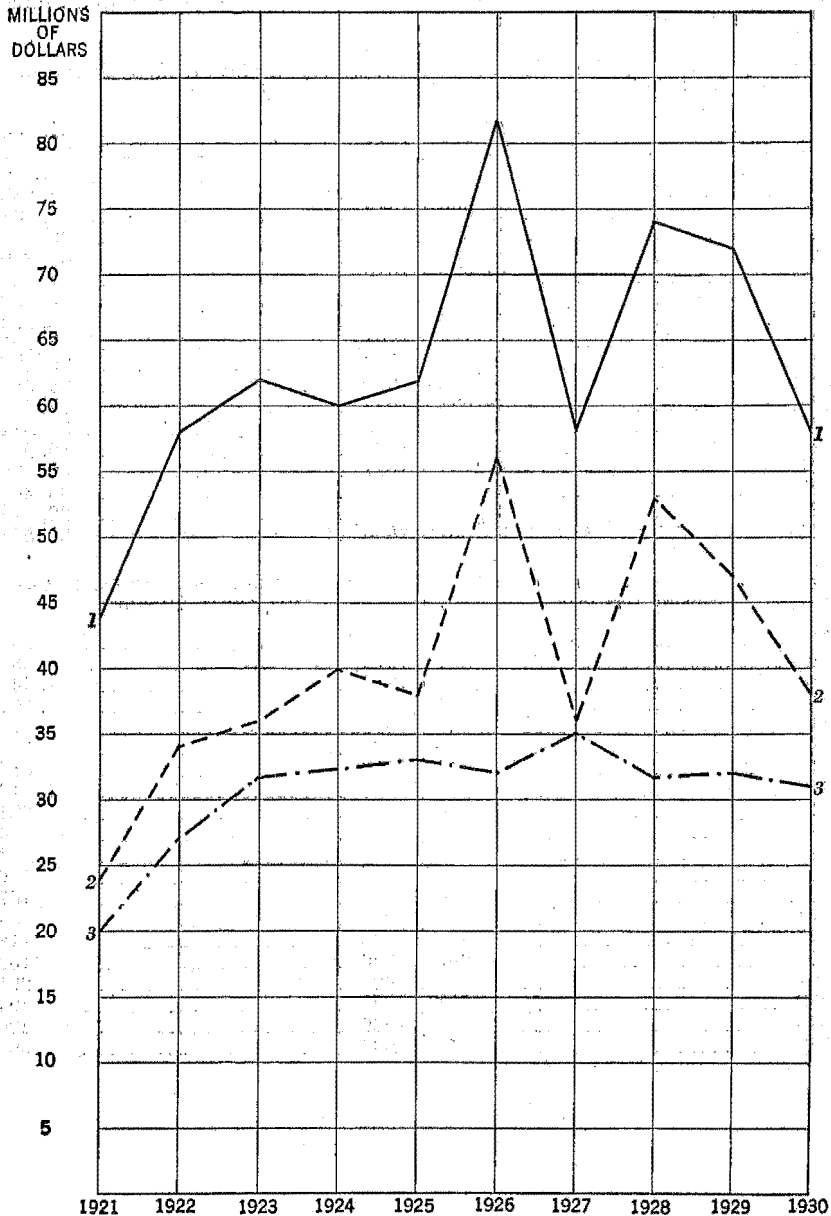
*Value of all other shipments from Alaska to United States, by divisions*

Judicial divisions	1922	1923	1924	1925	1926	1927	1928	1929	1930
First.....	\$14,822,633	\$20,656,674	\$20,749,202	\$23,400,473	\$24,999,317	\$16,447,822	\$28,210,245	\$21,831,237	\$23,201,950
Second.....	858,489	713,326	764,020	892,757	908,834	710,214	972,160	1,356,471	1,137,367
Third.....	34,778,373	32,692,233	31,995,051	30,400,040	45,817,118	32,411,222	36,635,760	38,727,504	23,470,975
Fourth.....	623,500	816,198	1,404,753	945,780	995,318	1,754,692	1,769,042	1,651,965	1,186,670
Total.....	51,082,995	54,878,426	54,825,026	55,639,050	74,720,587	51,823,950	67,587,207	63,567,177	48,996,962



## GRAPH SHOWING

- 1 TOTAL SHIPMENTS OF ALL COMMODITIES, ALASKA TO UNITED STATES
- 2 SHIPMENTS OF FISH & FISH PRODUCTS, ALASKA TO UNITED STATES
- 3 TOTAL SHIPMENTS OF ALL COMMODITIES, UNITED STATES TO ALASKA



The following tables of passenger movements for 20 years indicate the travel by regularly established routes to and from the District of Alaska.

The Eagle and Dawson table shows the local frontier travel, which must not be confused with the general account, as the greater number of these passengers arrived at or departed from some other port in the district and have been accounted for in the figures of arrivals and departures from the United States and British Columbia, shown below.

Arrivals from the United States and British Columbia		Departures to the United States and British Columbia	
1911	22, 127	1911	21, 266
1912	22, 712	1912	21, 877
1913	23, 758	1913	24, 350
1914	25, 313	1914	24, 538
1915	27, 003	1915	21, 407
1916	28, 606	1916	26, 859
1917	27, 030	1917	31, 259
1918	19, 040	1918	27, 732
1919	24, 273	1919	23, 902
1920	26, 170	1920	26, 153
1921	17, 157	1921	17, 301
1922	19, 867	1922	20, 275
1923	23, 330	1923	24, 542
1924	28, 021	1924	27, 444
1925	29, 777	1925	30, 871
1926	30, 974	1926	30, 934
1927	32, 221	1927	32, 709
1928	32, 506	1928	33, 345
1929	31, 594	1929	32, 378
1930	30, 231	1930	29, 541

Arrivals at Eagle, Alaska, from Dawson, Yukon Territory		Departures from Eagle, Alaska, to Daw- son, Yukon Territory	
1911	1, 107	1911	808
1912	594	1912	935
1913	914	1913	1, 448
1914	785	1914	1, 102
1915	1, 066	1915	873
1916	1, 182	1916	727
1917	759	1917	674
1918	387	1918	1, 217
1919	688	1919	681
1920	738	1920	524
1921	504	1921	401
1922	128	1922	129
1923	116	1923	107
1924	154	1924	84
1925	299	1925	118
1926	355	1926	162
1927	542	1927	291
1928	551	1928	401
1929	523	1929	426
1930	418	1930	308



*Statement of number and tonnage of vessels entered and cleared for the years 1928, 1929, and 1930*

**COASTWISE TRADE**

Port	1928				1929				1930			
	Entered		Cleared		Entered		Cleared		Entered		Cleared	
	Number	Tonnage	Number	Tonnage	Number	Tonnage	Number	Tonnage	Number	Tonnage	Number	Tonnage
Cordova.....	7	12,758	10	21,312	3	6,322	11	29,689	7	11,152	12	24,884
Craig.....	12	4,000	30	3,101	7	518	30	4,167	18	5,707	46	13,163
Hyder.....	4	2,494			3	1,726	1	768	12	7,427		
Juneau.....	103	17,447	225	15,060	149	4,387	233	10,078	115	8,456	152	14,206
Ketchikan.....	1,409	489,544	1,772	476,660	1,483	504,083	1,900	466,552	1,428	527,399	1,939	504,812
Nome.....	3	3,995	6	9,264	2	5,150	3	9,190	1	1,391	3	3,743
Petersburg.....	71	842	819	9,729	145	1,856	315	6,592	123	3,219	310	7,407
Seward.....	116	11,429	128	27,720	122	8,073	135	29,714	143	5,098	153	25,856
Sitka.....	95	2,165	135	6,531	121	2,415	218	5,497	151	3,406	189	4,449
Skagway.....					1	768	1	2,300				
Unalaska.....	14	23,426	17	23,100	24	39,692	13	21,085	36	36,207	34	44,629
Wrangell.....	12	156	8	1,126	14	178	5	3,396	5	51	14	240
Total.....	1,846	568,256	2,650	593,653	2,074	575,118	2,865	589,028	2,039	609,513	2,852	643,389

**FOREIGN TRADE**

Craig.....	45	3,965	13	697	28	410	8	384	46	1,248	17	879
Eagle.....	13	5,941	13	5,941	12	5,744	12	5,744	13	5,780	12	5,963
Hyder.....	69	50,870	66	49,912	30	18,438	30	18,917	6	6,775	7	7,227
Juneau.....	36	953	19	520	119	807	87	370	55	1,047	7	142
Ketchikan.....	1,163	281,845	367	203,898	1,188	270,433	337	189,592	1,154	276,409	320	215,950
Nome.....	2	218	3	703	5	396	4	798	2	538	2	736
Petersburg.....	152	2,427	8	210	108	1,829	3	34	169	2,888	13	162
Seward.....	5	122	4	88	6	4,813	2	4,616	6	218	3	121
Sitka.....	10	1,410	9	187	22	514	14	309	13	231	13	234
Skagway.....			6	4,962			5	4,135			5	4,135
Taku Inlet.....									84	1,250	56	1,442
Unalaska.....	6	9,974	5	11,572	9	8,704	10	12,072	6	3,721	4	1,778
Wrangell.....	34	2,118	34	2,268	52	2,823	42	2,054	61	3,088	34	2,432
Total.....	1,535	359,843	547	280,958	1,579	314,911	504	239,025	1,615	303,143	493	241,201

*Recapitulation of customs business, by ports, for the year ended December 31, 1930*

Ports	Vessels entered		Total	Vessels cleared		Total	Vessels documented	Entries taken
	Foreign	Coast-wise		Foreign	Coast-wise			
Cordova		7	7		12	12		5
Craig	46	18	64	17	46	63		3
Deale	13		13	12		12		38
Hyder	6	12	18	7		7		211
Juneau	55	115	170	7	152	159	95	117
Ketchikan	1,154	1,428	2,582	320	1,939	2,259	171	119
Nome	2	1	3	2	3	5	4	3
Petersburg	169	123	292	13	310	323	23	5
Seward	6	143	149	3	153	156	92	14
Sitka	13	151	164	13	199	202	25	11
Skagway				5		5	1	810
Taku Inlet	84		84	56		56		34
Unalaska	6	36	42	4	34	38		2
Wrangell	61	5	66	34	14	48	55	149
Total	1,615	2,039	3,654	493	2,852	3,345	466	1,521

*Comparative statement of customs business for the district during the past 20 years*

Years	Vessels entered		Total	Vessels cleared		Total	Vessels documented	Entries taken
	Foreign	Coast-wise		Foreign	Coast-wise			
1911	367	514	681	331	495	826	276	1,200
1912	318	770	1,088	282	643	925	349	1,292
1913	365	812	1,177	327	770	1,096	530	1,315
1914	378	805	1,183	340	810	1,159	576	1,089
1915	602	792	1,394	535	817	1,402	587	1,129
1916	860	1,051	1,917	539	1,290	1,829	581	1,669
1917	888	1,151	2,039	532	1,389	1,914	643	1,389
1918	793	1,331	2,124	465	1,441	1,906	610	1,168
1919	872	1,130	2,002	530	1,367	1,897	704	1,163
1920	1,130	1,191	2,321	573	1,625	2,199	697	1,239
1921	1,140	748	1,888	538	1,289	1,827	268	1,483
1922	1,241	839	2,080	502	1,502	2,004	214	1,087
1923	1,325	1,234	2,559	433	1,958	2,441	342	1,410
1924	1,255	1,647	2,902	464	2,211	2,675	387	1,408
1925	1,498	1,406	2,904	534	2,256	2,790	443	1,096
1926	1,204	1,666	2,870	494	2,282	2,776	405	1,545
1927	1,219	1,868	3,087	511	2,377	2,888	441	1,824
1928	1,535	1,846	3,381	547	2,650	3,197	355	1,702
1929	1,579	2,074	3,653	504	2,865	3,369	523	1,642
1930	1,615	2,039	3,654	493	2,852	3,345	466	1,521