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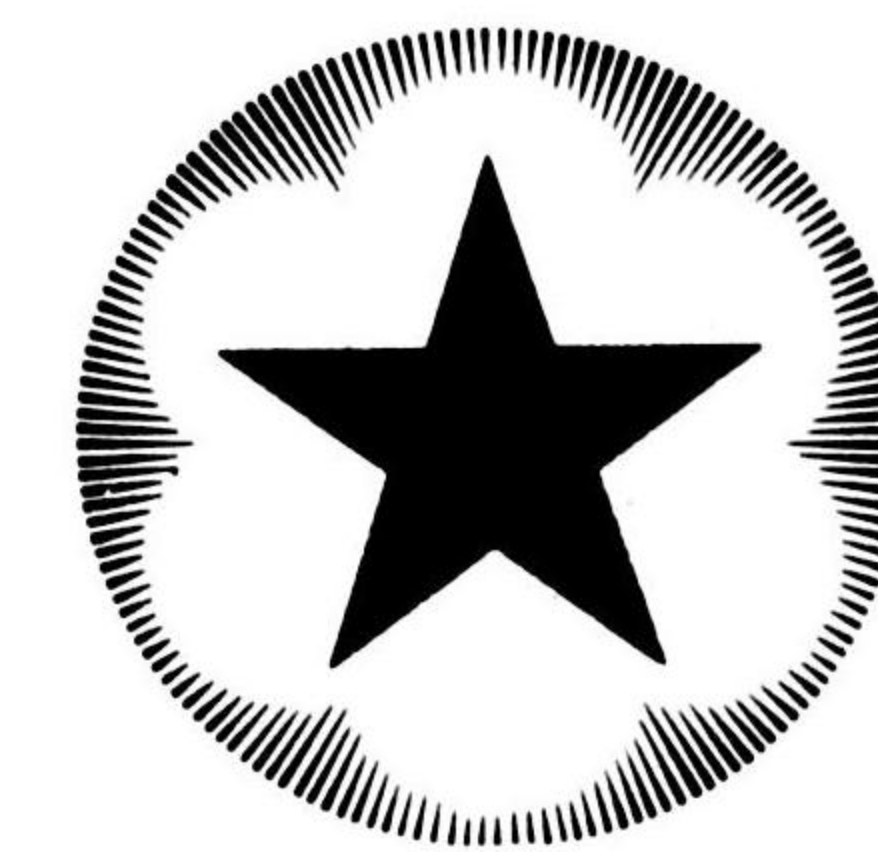
ARMY SERVICE FORCES MANUAL

M 354-24

CIVIL AFFAIRS HANDBOOK

JAPAN

SECTION 24: KUMAMOTO - KEN



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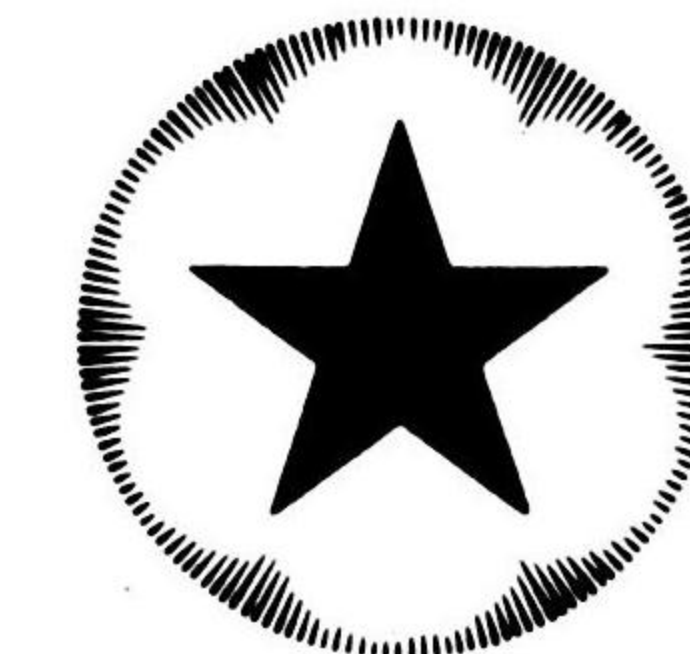
HEADQUARTERS, ARMY SERVICE FORCES

8 AUGUST 1945

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The main subject matter of each Army Service Forces Manual is indicated by consecutive numbering within the following categories:

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M100	- M199	Army Specialized Training Program and Pre-Induction Training
M200	- M299	Personnel and Morale
M300	- M399	Civil Affairs
M400	- M499	Supply and Transportation
M500	- M599	Fiscal
M600	- M699	Procurement and Production
M700	- M799	Administration
M800	- M899	Miscellaneous
M900	- up	Equipment, Materiel, Housing and Construction

* * * * *

HEADQUARTERS, ARMY SERVICE FORCES
Washington 25, D.C. August 1945

Army Service Forces Manual M354-24, Civil Affairs Handbook - Japan, Section 24, Kumamoto Ken, has been prepared at the Civil Affairs Holding and Staging Area with the cooperation of the CASA outpost of the Office of Strategic Services, and is published for the information and guidance of all concerned.

By Command of GENERAL SOMERVELL:

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Major General
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Major General, GSC
Chief of Staff

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 7. Agriculture
 8. Industry and Commerce
 9. Labor
 10. Public Works and Utilities
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THIS MANUAL IS ONE OF A SERIES OF KEN STUDIES AND HAS BEEN PREPARED
AT THE CIVIL AFFAIRS HOLDING AND STAGING AREA
WITH THE COOPERATION OF THE CASA OUTPOST
OF THE OFFICE OF STRATEGIC SERVICES

INTRODUCTION

This series of studies is designed to provide Military Government officers working on prefectural and local levels with a concise statement of available factual information.

Each manual covers one prefecture and includes information available at the Presidio of Monterey, California, on 1 August 1945.

Purposes of the Civil Affairs Handbooks

The basic purposes of civil affairs officers are (1) to assist the Commanding General by quickly establishing those orderly conditions which will contribute most effectively to the conduct of military operations, (2) to reduce to a minimum the human suffering and the material damage resulting from disorder and (3) to create the conditions which will make it possible for civilian agencies to function effectively.

The preparation of Civil Affairs Handbooks is a part of the effort to carry out these responsibilities as efficiently and humanely as is possible. The Handbooks do not deal with plans or policies (which will depend upon changing and unpredictable developments). It should be clearly understood that they do not imply any given official program of action. They are, rather, ready reference source books containing the basic factual information needed for planning and policy making.

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SUMMARY.

Kumamoto-ken, located on the west coast of Kyushu, is predominantly rural. Its largest city and capital, Kumamoto-shi, has a population of 210,000.

Over half of the population is engaged in agriculture. The prefecture is a food surplus producing area with the principal surpluses being in rice, wheat, naked barley and sweet potatoes. Fish production in the prefecture is normally sufficient for local needs. Coal is the only important mineral product as a result of mining in the famous Miike coal field. The prefecture has a low degree of industrialization with chemicals being the most important manufactured product.

The prefecture is served by main and secondary railroads and highways. Its electric power plants, all but two of which are hydro-electric, are connected to both the East and West Kyushu transmission grids.

Except in matters peculiarly local, the social organization and cultural institutions of the prefecture are similar to those existing in the rest of Japan. Kumamoto-ken is in the Kyushu Administrative Region with headquarters in Fukuoka-shi.

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Table of weights and measures

RESTRICTED

I. PHYSICAL BACKGROUND

A. LOCATION AND SIZE

Kumamoto-ken is located on the west side of the island of Kyushu at approximate latitude $32^{\circ} 30'N$, longitude $130^{\circ} 45'E$. It is bounded on the north by Fukuoka-ken and Oita-ken, on the east by Miyazaki-ken, on the south by Kagoshima-ken, and on the west by various bays of the South China Sea.

The prefecture has a maximum north-south extent of 80 miles and the same east and west. Its area is 7,433 square kilometers (2,869 square miles), comprising 1.9 percent of the total area of Japan proper. It is slightly larger than the state of Delaware.

B. TERRAIN REGIONS.

Kumamoto-ken is divided into 3 zones: the Central Kyushu Mountains, the Kumamoto Plain, and the Northwestern Kyushu Broken Lands.

There are 2 relatively important areas lying within the Central Kyushu Mountain region, namely: the Hitoyoshi Basin, an isolated fault basin in the south, and the Aso-dake region, a volcanic area in the north.

The Kumamoto Plain is the southern portion of the Northern Kyushu Lowlands and Highlands Region which is long and narrow, 100 by 25 miles, lying north and west of the large Central Kyushu Mountains and extending northeast to southwest from Shimono-~~seki~~kaikyo ($33^{\circ} 20'N$ and $130^{\circ} 26'E$) to the head of Yatsushiro-wan.

The off-shore islands included in Kumamoto-ken are part of the Northwestern Kyushu Broken Lands which also includes all of Nagasaki-ken and the western half of Saga-ken.

1. Central Kyushu Mountains.

Approximately $3/4$ of the area of Kumamoto-ken lies in the southwestern portion of the Central Kyushu Mountains. This zone consists of a belt of mountains averaging 3,000 to 4,000 feet in the uplands, and reaching a maximum of 5,648 feet at Ichibusa-yama ($32^{\circ} 13'N$ and $130^{\circ} 25'E$) located on the boundary between Miyazaki-ken and Kumamoto-ken.

a. The Hitoyoshi Basin. This area in southeastern Kumamoto, is an oblong depression which lies roughly east-west along the upper Kuma-gawa. It is 7 miles wide and 18 miles long, but

only the 3 or 4 mile belt south of the river is flat. Tributary streams have cut shallow valleys in the basin floor, dividing it into flat blocks measuring one to 2 miles across.

This basin is composed largely of ash and diluvial uplands in the form of piedmont terraces, portions of which have been reclaimed, principally for dry crops.

Hitoyoshi-shi (32° 13'N and 130° 45'E) and Taragi-machi (11 miles northeast of Hitoyoshi) are the principal settlements in this area.

With the exception of the Hitoyoshi Basin, level areas are infrequent and small stream valleys are crooked and narrow, with many commanding heights rising 1,000 to 1,600 feet above the valley floor.

b. The Aso-zan Region. This area, which runs across the northern end of Kumamoto-ken is an upland portion of the Central Kyushu Mountains. It is composed largely of the active Aso-zan cone and its lava, mud and ash uplands. Five new volcanic cones have risen from the crater floor, some of them active.

The grades of outer slopes of the volcano are nowhere more than 10 degrees and to the east often only 2 to 3 degrees. Radial drainage is conspicuous. Rivers have incised relatively steep walled valleys. Local relief is usually not over 300 to 400 feet. The higher portions of the ash uplands close to the crater, where showers of ash are frequent, are covered with coarse wild grasses. The valley floors have an intricate dendritic pattern of rice fields.

The Aso-zan-Ono-gawa passageway across the Central Kyushu Mountains in northern Kumamoto is the easiest route through the upland. The western part of the route, leading into and through the crater of Aso-zan, is level or gently sloping and is fairly wide. This section is well drained except for the rice fields on the crater floor. Many valleys are cut deeply into the ash slope of Aso-zan but are parallel to the route.

The seaward margin of the Central Kyushu Mountains, south of Hinagu (32° 26'N and 130° 35'E), consists of rugged hills rising over 1,000 feet 2 miles from the shore. The coastline is rocky and moderately indented. A highway and railway line follow the general contour of the coast at varying distances of one-quarter to 4 miles from the shore.

Chief settlements of the Central Kyushu Mountains, with the exception of those in the Hitoyoshi Basin, lie along

this coast and include Minamata-machi (32° 13'N and 130° 25'E), Sashiki-machi (10 miles northeast of Minamata-machi) and Hinagu-machi (20 miles northeast of Minamata-machi).

2. Kumamoto Plain.

The Kumamoto Plain, which lies in northwestern Kumamoto-ken, constitutes approximately 15 percent of the total area of the prefecture. It extends 45 miles north-south and is 11 to 12 miles wide in the north, narrowing to about 5 miles south of Uto-machi (32° 40'N and 130° 40'E) forming a coastal plain along the eastern side of Yatsushiro-wan. It extends 20 miles north of Kumamoto-shi (32° 48'N and 130° 43'E) but it is separated from Ariakeno-umi by a southern extension of the rugged lands between Saga and Kumamoto Plains. South of Kumamoto-shi the plain faces Ariakeno-umi for 6 miles but is again separated from Ariakeno-umi, southwest of Uto-machi, by a relatively rugged peninsula rising to 1,568 feet. This peninsula extends 12 miles and narrows from 5 to 2 miles in width. The coastal delta area southwest of Kumamoto-shi and the area near Yatsushiro-shi (20 miles southwest of Kumamoto-shi) are flat and covered with a grid of wet rice fields separated by streams and drainage ditches. Near Kumamoto-shi the streams are even more numerous and the flat areas are only $\frac{1}{2}$ to $1\frac{1}{2}$ miles across. The central section of the plain, north and east of Kumamoto-shi, is part of the long, gentle western slope of Aso-zan.

The only short and easily traversed gateway to the Kumamoto Plain is the multiple route north to the Saga Plain. This gateway consists of 3 alternate inland routes through rugged hills. The only other approaches to the Kumamoto Lowland are 2 mountain valley and basin routes across the rugged Central Kyushu Mountains.

3. Islands.

The Amakusa islands, lying 10 to 20 miles off-shore from Sashiki-machi (32° 18'N and 130° 30'E), comprise approximately 10 percent of the total area of Kumamoto-ken. This group of islands extends for 40 miles in a northeast-southwest direction, averaging from 5 to 12 miles in width. The Amakusa-jima and nearby islands are hilly throughout. In general the hills are rugged, 300 to 1,500 feet in elevation, with a few high peaks rising from 1,800 to 2,000 feet. Upland areas are covered with forests, broken up by a few grassy clearings.

The coastlines of the 2 largest islands, Shimo-jima and Kami-shima, are rocky and rise to peaks over 1,000 feet at a distance of 2 miles or less inland.

* Ariakeno-umi also known as Shimabara-kaiwan.

Main settlements are along the coasts and include Noboritatenachi (32° 35'N and 130° 26'E) on Oyano-shima, Hondo-machi (32° 27'N and 130° 12'E) and Ushibuka-machi (32° 12'N and 130° 01'E) on Shimo-jima.

C. HYDROLOGY.

1. Lakes and Ponds.

No mapped lakes exist in Kumamoto-ken. The prefecture is almost entirely mountainous and water storage is mostly by means of power, flood control and irrigation dams located on the prefecture's numerous rivers.

2. Springs.

Kumamoto-ken is an area of hot springs. The following are approximate coordinates of known hot springs: Ryuganji 32° 55'W and 130° 34'E; Eta-machi, 32° 57'N and 130° 36'E; Yamaga-machi, 33° 1'N and 130° 41'E; Hirashima, 32° 57'N and 130° 43'E; Nakamatsu 32° 49'N and 131° 02'E; Kakino 32° 49'N and 131° 01'E; Tonoshita 32° 46'N and 130° 59'N; Hinagu-machi, 32° 26'N and 130° 33'E; and Hayashi, 32° 13'N and 130° 44'E.

Cold springs are located at Akase-mura, 32° 40'N and 130° 30'E and Misumi-machi, 32° 37'N and 130° 27'E.

3. Rivers.

The boundary between Kumamoto and Miyazaki prefectures is located along the north-south watershed divide of Kyushu island. As a consequence, all the rivers of Kumamoto-ken have their sources within the prefecture and flow in a westerly direction, draining into the Ariakeno-umi or one of its associated bays. The mountain rivers are comparatively short but turbulent. Precipitation in mountainous central Kyushu runs as high as 120 inches per year, thus providing an abundant river water supply. The rivers of the prefecture have many tributaries flowing in narrow valleys, and local watershed divides are numerous. The collecting areas of individual streams are small. The gradients are steep and the run-off is extremely rapid. Turbulent stretches are common. Some of the rivers form important agricultural delta plains in their lower reaches.

The lower reaches of the rivers lose their gradients rather suddenly and, as a consequence, are choked with sand and gravel. Rivers are commonly elevated slightly above the country-side and earthen dikes help channelize them. Drifting bars at the river outlets limit navigation possibilities. Drainage in the lowlands for irrigation has caused streams to run dry at times.

Prefectural rivers show consistent seasonal characteristics. Flash floods may occur at any time but are most prevalent during the peak flow months of July, August and September. November through February is a consistently low water period.

In 1936, 176 urban communities sustained river flood damage in Kumamoto-ken. The total flood zone covered 5,943 acres of which 289 were under cultivation while 148 acres were permanently eroded or inundated. Damage amounted to 314,807 yen, and 1,079,208 yen was expended on repairs and improvements.

The following rivers are important to the economy of the prefecture:

Kuma-gawa and its tributaries form the largest river system in Kumamoto-ken. With the aid of short coastal streams, it drains the entire south half of the prefecture. Its 3-stream delta outlet flows into the Yatsushiro-wan just below Yatsushiro-shi. It runs through a narrow gorge as far as Hitoyoshi-shi where the valley floor fans out, reaching a width of 4 to 7 miles for a distance of 18 miles. This valley, called the Hitoyoshi Basin, is an important rice-growing area. Tributaries joining the river in this vicinity have cut shallow valleys that divide the basin into flat rice paddy blocks. Velocity of the current is quite strong, allowing larger boats to go up stream only 16 miles. Lighter craft can penetrate for a distance of 55 miles which is 15 miles above Hitoyoshi-shi. The delta plain at its mouth, formed by the Kuma-gawa and 7 other streams over a coastal distance of about 15 miles, is an important agricultural area.

The Midori-gawa, with its outlet at 32° 41'N and 130° 38'E, empties into the Shimbara-kaiwan (sea). It flows through an important agricultural coastal plain just south of Kumamoto-shi and is navigable for a distance of 20 miles upstream.

The Kikuchi-gawa, with its outlet into the Shimbara-kaiwan at 32° 53'N and 130° 32'E, flows in a southerly direction and is navigable for a distance of 25 miles upstream.

The Shira-kawa, with its outlet into the Shimbara-kaiwan at 32° 47'N and 130° 38'E, flows through the prefectural capital of Kumamoto-shi about 7 miles from its mouth, and is navigable for a distance of about 20 miles upstream.

D. CLIMATE.

1. Seasons.

During the winter, when the Asiatic anticyclone is dominant, Kumamoto-ken has predominate overcast weather.

During the summer, when the Asiatic anticyclone is replaced by the lower pressure of the North Pacific anticyclone, the air

streams are heavily laden with moisture. Kumamoto-ken receives it heaviest precipitation in this season.

2. Temperatures.

The midsummer temperatures in Kumamoto-ken are comparable to the humid and sultry weather of the Atlantic seaboard from Washington, D.C., to Southern Georgia. The growing season is long and varies from 210 to 250 days.

Winters are relatively mild, the coldest months having a mean temperature above freezing. On sunny winter days midday temperatures are pleasant, but when the sky is overcast and a strong wind is blowing, the humid cold is raw and penetrating.

No complete temperature record is available for the prefecture, but the following information for Kumamoto-shi, in Fahrenheit degrees is typical. The mean temperature varies from 40.6 in January to 80.4 in August and the mean daily minimum varies from 31.1 in January to 70.5 in August.

3. Precipitation, Humidity, Fog.

Annual precipitation varies from 60 to 100 inches over the prefecture, being heavier during the summer than the winter. Humidity is high, but fog is not prevalent. Table 1 gives the record of precipitation at Kumamoto-shi which is assumed to be representative for the prefecture.

TABLE 1

Precipitation, Kumamoto-shi, Kumamoto-ken.

	J.	F.	M.	A.	M.	J.	J.	A.	S.	O.	N.	D.	Ann.
Mean Precip., In.	2.6	2.8	5.2	6.3	6.5	14.5	12.3	6.4	6.8	4.4	2.8	2.3	72.9
Mean No. Days with trace or more of snow- fall	3.9	4.1	1.2	0	0	0	0	0	0	0	0	2.1	11.4

Typhoons may cross southern Japan at any time during the typhoon season in summer and autumn, but September is the month of maximum frequency. Japan is affected, on the average, by 7 typhoons per year from July through October, but probably not more than 3 cause heavy damage. A fully developed typhoon may

exceed a speed of 150 miles per hour. Much of the damage resulting from the storms is caused by the very high tides which follow in their wake. Operations of all types must necessarily cease during the passage of a typhoon. Kumamoto-ken is located in the typhoon belt in the area subject to greatest damage.

4. Catastrophes.

a. Earthquakes. Japan has, on the average, about 1,500 earthquakes annually, or approximately 4 shocks per day. Since 1596 there have been more than 50 earthquakes resulting in loss of life. Twenty-one of these have each caused the deaths of more than 1,000 persons. Four of the principal earthquakes have affected Kumamoto-ken, the last being in 1889.

b. Volcanic Eruptions. Aso-zan, in the northeast portion of the prefecture in the middle of a National Park, is the largest and one of the most active volcanoes in Japan. Eruptions took place in 1884, 1889, 1894 and 1904 when immense amounts of ashes were ejected and carried as far as Kumamoto-shi. The volcano is now comparatively quiescent.

II. POPULATION AND SETTLEMENTS

A. POPULATION

In 1940 the population of Kumamoto-ken (including those listed in the armed forces) was 1,368,179, or 1.9 percent of the total population of Japan. It had a population density of 184 persons per square kilometer which was slightly below the national average of 191. Between 1935 and 1940, Kumamoto-ken, despite a natural increase of 5.2 percent, which was only slightly below the national average of 5.6 percent, showed a net loss through migration to other areas of 18,875 persons or 1.4 percent.

It is estimated that as of April 1945 the population of Kumamoto-ken (excluding armed forces) fell to 1,358,000, of which 120,000 persons came to the prefecture as a result of population dispersal. It is believed between 1940 and 1945 large numbers migrated from Kumamoto-ken to industrial centers, but that this trend has been counteracted as a result of the bombings of these centers.

The population of Kumamoto-ken is largely grouped in 3 geographical areas: the Kumamoto Plain, containing the largest population concentration, the Hitoyoshi-Taragi valley and the Uchinomaki area.

Kumamoto-ken is predominately rural with 82.2 percent of the population, or 1,124,555 persons, living in rural areas. There were only 2 cities (shi) in the prefecture in 1940, Kumamoto and Yatsushiro. However, after 1940 Hitoyoshi and Arao were incorporated as cities (shi). It showed only a moderate urban population increase of 33-1/3 percent over the 20-year period 1920-40. During the period 1935-40 it showed a loss of 0.7 percent in urban population. During the same 5-year period the rural population showed a loss of 1.7 percent.

The sex ratio in Kumamoto-ken was 95 males per 100 females. The females outnumbered the males in the 2 cities (shi), Kumamoto and Yatsushiro.

Table 2 shows the 1940 population of Kumamoto-ken and its minor civil sub-divisions.

TABLE 2*

Population, 1940, Kumamoto-ken.

<u>Divisions**</u>	<u>Total</u>
KUMAMOTO-SHI	210,038

YATSUSHIRO-SHI	36,943
HITYOYOSHI-SHI	32,890
ARA0-SHI	39,068
HOTAKU-GUN	67,674
Oshima-machi	3,638
Takahashi-machi	1,030
Tatsuta	3,163
Kawakami	4,020
Nishizato	4,835
Yoshino	2,514
Kawachi	5,237
Matsuo	3,160
Ikenoue	2,849
Fujidomi	1,656
Nakamidori	1,439
Nakashima	3,514
Hoji	2,827
Namitate	625
Hataguchi	647
Hamada	656
Shiroishi	350
Zendomo	997
Uchida	1,153
Okukoga	1,551
Ujiguchi	1,539
Kawaguchi	2,555
Hashirigata	1,531
Tomoai	2,869
Hirohata	2,630
Oyamatoshima	2,853
Tamukae	2,170
Miyuki	2,387
Joyama	3,479
UTO-GUN	44,835
Misumi-machi	6,486
Matsuyai-machi	4,081
Uto-machi	5,388
Tobase	2,048
Konoura	3,469
Otake	1,904
Shiranui	5,145
Hanazono	3,388
Todoroki	1,739
Midorigawa	2,928
Amitsu	3,533
Oda	4,726
TAMANA-GUN	101,510
Ohama-machi	2,680
Minaminoseki-machi	4,530
Ikura-machi	3,809

Eta-machi	3,332
Tamana-machi	9,948
Nagasu-machi	5,686
Ono	2,334
Tsukiyama	1,961
Mutsuai	1,891
Nabe	2,878
Takamichi	2,840
Nameishi	3,188
Toyomizu	1,680
Hachika	2,447
Yokoshima	5,546
Tamamizu	2,997
Oama	4,183
Yamakita	3,080
Konoha	2,702
Bairin	2,392
Oda	1,301
Hanamure	1,560
Togo	2,395
Kawazoe	1,937
Tsukise	1,318
Ishinuki	1,497
Yonedomi	1,855
Sakanoshita	2,517
Ohara	2,933
Kamio	3,206
Midori	2,579
Harutomi	2,623
Sakaki	3,778
Rokuei	2,166
Haraka	2,745
Kiyosato	3,206
Tamana	1,790
KAMOTO-GUN	79,056
Yamaga-machi	9,409
Kutami-machi	4,652
Ueki-machi	1,675
Kawabe	1,462
Yawata	3,401
Mitake	2,636
Hiromi	2,098
Iwano	2,698
Takema	2,147
Uchida	3,655
Rokugo	3,154
Inada	2,749
Mitama	2,520
Nakadomi	2,513
Chida	3,014
Menodake	2,350
Yamauchi	1,595

Yamamoto	2,967
Tabaru	2,241
Hishigata	2,687
Sakurai	2,778
Santo	2,075
Yoshimatsu	3,194
Tasoko	2,753
Omichi	2,965
Hirosa	2,243
Komeda	3,425
KIKUCHI-GUN	86,376
Waifu-machi	9,076
Kawaharu-machi	2,295
Asahino-machi	1,559
Ryumon	2,602
Hazama	2,810
Shirokita	3,972
Toride	1,714
Kamogawa	2,899
Kikuchi	3,564
Hanabusa	1,513
Tosaki	1,794
Kitagoshi	2,258
Morikawa	3,715
Hiramagi	1,762
Otsu-machi	6,612
Seta	2,470
Jinnai	2,900
Tsuda	3,880
Kyozumi	1,965
Haramizu	3,011
Goshi	6,846
Shisui	6,261
Nishigoshi	6,190
Tashima	1,511
Minamogo	3,197
ASO-GUN	89,888
Miyaji-machi	4,531
Uchinomaki-machi	5,093
Oguni-machi	12,336
Umamihara-machi	2,626
Takamori-machi	3,537
Sakanashi	1,650
Kurokawa	6,001
Nagamizu	2,035
Ogaishi	2,230
Yamada	2,316
Nakadori	1,708
Kojo	1,985
Minamioguni	6,065
Ubuyama	2,478

Namino	2,902
Nojiri	2,459
Kusakabe	2,568
Kashiwa	3,271
Sugeno	1,427
Omine	2,785
Shikimi	1,638
Kugino	3,095
Nishikino	2,381
Yamanishi	3,443
Nagakita	3,868
Shirami	5,460
KAMIMASHIKI-GUN	85,006
Mifune-machi	5,431
Kiyama-machi	2,559
Kosa-machi	5,023
Hama-machi	5,095
Nanataki	5,043
Kinokura	2,583
Takaki	1,230
Iino	3,784
Rokka	3,527
Toyoaki	561
Jin	369
Ozaka	572
Oshima	3,453
Akitsu	2,696
Hiroyasu	3,397
Fukuda	2,929
Tsumori	3,585
Kawaharu	1,720
Shirahata	2,906
Otome	3,716
Tatsuno	2,280
Miyauchi	1,389
Shimoyabe	2,613
Nakashima	3,449
Shiraito	3,343
Mitake	2,925
Narekawa	1,999
Asahi	2,575
Takimizu	2,330
Shirami	1,924
SHIMOMASHIKI-GUN	74,051
Kumanosho-machi	4,434
Matsubase-machi	3,065
Ogawa-machi	3,955
Tomochi-machi	6,607
Sugikami	4,687
Sugiai	3,871
Moritomi	4,804
Toyoda	4,579
Tono	3,914

Toyokawa	2,775
Toyofuku	3,100
Onobeta	1,996
Gonoe	4,016
Kaito	3,206
Toyono	6,468
Nakayama	4,831
Toshine	2,918
Higashito-mochi	4,825
YATSUSHIRO-GUN	76,841
Kagami-machi	8,060
Miyanohara-machi	3,928
Kongo	4,162
Koda	4,363
Kamimatsukuma	5,225
Shimomatsukuma	6,491
Miyaji	3,485
Yachiwa	3,949
Sencho	5,978
Showa	1,312
Ryuhō	2,240
Arisa	3,141
Bunsei	5,501
Wakashima	2,986
Yoshino	2,170
Nozu	1,966
Taneyama	2,819
Kawamata	1,927
Shimotake	1,733
Kakisako	2,313
Kurigi	1,530
Nitao	466
Kureko	249
Shiibaru	248
Hagi	233
Momiki	372
ASHIKITA-GUN	78,643
Hinagu-machi	5,709
Sashiki-machi	8,840
Minamata-machi	28,330
Futami	3,387
Tanoura	7,124
Yunoura	6,138
Tsunagi	6,653
Kugino	2,325
Ono	3,731
Yoshio	3,098
Kudaragi	3,308
KUMA-GUN	80,700
Menda-machi	4,487

Taragi-machi	6,858
Yunomae-machi	5,899
Nishi	3,414
Ichibu	2,971
Ue	5,364
Okabaru	3,130
Kume	4,168
Minakami	5,553
Kurohiji	3,827
Sue	1,741
Fukada	2,264
Kinoo	2,949
Kawa	4,083
Youra	2,286
Itsuki	6,179
Yamae	5,272
Watari	3,043
Isshochi	3,847
Konose	3,365
AMAKUSA-GUN	176,660
Noboritate-machi	6,148
Hondo-machi	12,218
Futae-machi	3,909
Tomioka-machi	3,098
Ushibuka-machi	13,441
Iwa	2,549
Kami	5,220
Naka	5,094
Yushima	1,394
A	2,362
Imatsu	4,289
Kyoragikawachi	2,139
Kusubo	1,280
Oura	1,098
Suji	968
Akasaki	1,582
Kotsura	1,619
Shimotsura	957
Shimago	2,071
Shigaki	2,162
Himedo	5,367
Takado	2,002
Hinoshima	2,228
Odo	2,311
Goshonoura	6,159
Ura	1,824
Tanasoko	2,042
Miyada	1,954
Sumoto	4,171
Shimoura	3,408
Kameba	1,888
Hajiuto	1,300
Kusuura	3,198

Miyaji	3,079
Otao	1,685
Nakata	758
Ikariishi	514
Hon	2,611
Saitsu	3,260
Goryo	4,352
Oninoike	2,821
Jogawara	1,877
Teno	1,906
Sakasegawa	2,729
Shiki	3,822
Tororo	2,328
Fukuregi	950
Takahama	3,452
Oe	2,792
Tomitsu	2,839
Itchoda	4,342
Shingo	1,495
Miyajidake	1,596
Miyanokawachi	2,099
Fukami	2,945
Hayaura	690
Kameura	826
Oniki	3,839
Kutami	3,865
Shimoda	1,738

* 1940 population census. In the case of incorporation and amalgamation of machi or mura into shi since 1940, the incorporated area is adjusted by the addition of the other areas on the basis of the 1940 census. The gun population is also corrected.

** All divisions not classified by suffix are mura.

B. CITIES AND TOWNS

1. Kumamoto-shi.

Kumamoto-shi, with a population of 210,038 (1940), is the fourth largest city in Kyushu and one of the largest inland cities in Japan. It is the capital of the prefecture and primarily a governmental center, as well as headquarters of the Sixth Army Division. Although the city is the commercial center for the lowland east of Shimabara-kaiwan (gulf), it has little industrial importance.

The city is on the western side of the island, approximately half way between Moji in the north and Kagoshima in the south and 5 miles east of the Shimabara-kaiwan on the Shira-kawa.

The plain surrounding the city extends inland to the margins of Aso-san, the great volcano dominating central Kyushu.

The main part of the city, including the castle grounds on the western edge, has the shape of a right triangle, with a north-south base and a hypotenuse along the Shira-kawa with projections along the main roads across the river and to the north. The urban area extends 2 miles north and south and 1-1/2 miles east and west. The most heavily built-up area is a strip 1/4 mile to 1/2 mile wide bordering the Shira-kawa on the northwest. There is no marked differentiation between commercial, residential and industrial areas. Most of the government buildings are between the castle grounds and the Shira-kawa, and the military buildings are within the castle grounds and on the eastern margin of the city. The city plan and the location of the principal buildings are shown on AMS map 138366.

A cross-island railroad line from Oita meets the main line from Moji to Kagoshima at Kumamoto. Short branches reach Tomochi, 18 miles southeast and Misumi, 20 miles southwest. Electric trains reach Kumamoto from Kawashiri, 4 miles south, Hyakkangoku, 4 miles west on the coast, and Waifu, 14 miles northeast. In addition, street car lines, supplemented by inter-urban lines previously noted, serve all important parts of the city.

2. Yatsushiro-shi.

Yatsushiro-shi, with a population of 33,586 (1940), is located on the west coast of Kyushu, 144 miles from Moji, in the northern part of the east shore of Yatsushiro-wan (bay). The city lies on the northern bank of the Mae-kawa, west of the divergence of that river from the Kuma-gawa. In addition to serving as a small port for coastal shipping the city has several industries of minor importance, including lumber, cement and paper. A rapid growth in population has occurred since 1935, when the population was listed as about 14,000.

The city is in the low, flat, rice plain which borders the east shore of the bay, extending at some points about 5 miles inland. About 6 miles to the north is Kagami-machi, site of the plant of the Nippon Mining Company, a sizeable fertilizer factory now reported making plastics and explosives. West of the city the Mae-kawa forms the small harbor. Lighter service is required.

The built-up section comprises less than one square mile and is most densely populated near the riverbank. The principal buildings, located in the center of the city, include the city office, police station, tax office, court house and postoffice. Telephone and telegraph facilities are available.

Prior to the war there was a substantial amount of cement and paper production in the region around the city. The Yatsushiro plant of the Asano Cement Company, near the coast west of the city, is a large factory with 4 rotary kilns. This plant produced nearly 300,000 tons of cement per year before the war. It is reported, however, that the plant is operating below capacity and that much of its equipment has been dismantled.

The area is also important for wood pulp production. East of the city is the plant of the Oji Paper Company, which has 2 other mills in Sakamoto, southeast of Yatsushiro. Also east of the city is the Kokoku Rayon Pulp Mill. Near the city, but not definitely located, is the Showa Brewing Company alcohol distillery. It is reported to produce nearly 4,000,000 gallons of alcohol per year and may have equipment for producing glycol and glycerine.

The Yatsushiro station, east of the city, is the junction for the Kagoshima Main Line RR and the Hisatsu Line (See A. Transportation).

The Kagoshima Highway, a national road, also runs east of the city. It is connected to the built-up section by several prefectural roads.

3. Hitoyoshi-shi.

Hitoyoshi-shi (1940 population 32,890) is the chief rail and road center of the interior of southern Kumamoto-ken and the commercial center of the fertile Hitoyoshi Basin. The city is on the north bank of the Kuma-gawa about 35 miles from its mouth near Yatsushiro-shi. The Hisatsu Line connects the city with Yatsushiro and with Kagoshima-shi to the south, and the Yunomae Line connects with points in the upper Hitoyoshi Basin; prefectural highways radiate in several directions from the city. Extensive logging operations are carried on in the neighboring mountains. Important buildings include the city office, a forestry office, a police station, and the postoffice.

III ECONOMY

A. LABOR

1. Occupation.

The main occupation in Kumamoto-ken is agriculture, which accounted for 61 percent of all occupied persons in 1930 and an estimated 56 percent in 1944. The prefecture has a large fishing population as well. (See Table 3).

TABLE 3

Occupation	Occupation, 1930, & 1944, Kumamoto-ken		1944 Estimates**	
	1930 Census			
	Number occupied (in thousands)	Percent	Number occupied (in thousands)	Percent
Agriculture	399	61.0	354	55.8
Manufacturing	77	11.9	115	16.7
Commerce	75	11.6	60	9.6
Government & professions	35	5.4	44	7.9
Domestic	19	2.9	11	1.8
Communication & transportation	18	2.8	22	3.5
Fishing*	18	2.7	14	2.3
Mining	4	.6	9	1.5
Others	7	1.1	6	.9
Total (1930)	652	100.0	635	100.0

* Fishing totals are corrected to 1938

** 1944 estimates are based on the changes in population between 1930 and 1944, taking into account the migration of laborers, the reallocation and redistribution of labor, and the number of men in the armed forces.

As indicated by Table 3, the principal occupational groups in Kumamoto-shi are commerce, manufacturing and government and professions. The proportion in commerce is higher than in most Japanese cities, and the presence of the prefectural seat of government and the headquarters of the Sixth Army Division in Kumamoto, causes the occupational group described as "government and professions" to be higher than in other Japanese cities.

TABLE 4

Occupation	Occupation, 1940, Kumamoto-shi, Kumamoto-ken	
	Number occupied (in thousands)	Percent
Government & professions	14.3	21.6

Occupation	Number occupied (in thousands)	Percent
Commerce	23.0	35
Manufacturing	16.5	25.1
Others	13.0	18.3
Total	66.8	100.0

The relatively high figures in commerce reflects the city's position as a port on the east coast of Kumamoto.

TABLE 5

Occupation, 1930, Yatsushiro-shi, Kumamoto-ken		
Occupation	Number occupied (in thousands)	Percent
Commerce	1.9	38.6
Manufacturing	1.4	27.8
Communications & transportation	.4	7.9
Government & professions	.5	9.8
Others	.8	15.9
Total	5.0	100.0

2. Industrial Employment.

In 1938 there were 750 factories in Kumamoto-ken employing 5 or more persons. These factories had a total employment of 17,820 people, 58 percent of whom were males. This was an increase over the 532 factories hiring 16,568 people (40 percent of whom were males) in operation in this prefecture in 1930. As indicated in Table 6 the most important industries in terms of employment in 1938 were textiles, particularly raw silk reeling, the manufacture of machinery and tools, the manufacture of industrial drugs, paper manufacturing and lumbering. (See Table 6).

TABLE 6

Industry	Factories	Employees		Total
		Male	Female	
TEXTILES				
Silk reeling (raw silk)	59	437	5526	5963
Woven goods (pure cotton fabric)	29	330	5277	5607
Other cotton fabric	9	54	179	233
Pure silk fabric	5	5	25	30
	4	2	15	17

Industry	Factories	Employees		Total
		Male	Female	
Knitted manufactured goods	2	3	9	12
Cotton refining	4	7	16	23
Other textiles	1	3	3	6
Dyeing & refining (textile printing)	5	33	2	35
METALS	22	331	13	344
Metal refining	2	154	12	166
Pig iron casting	11	141	1	142
Metal mfg.				
Springs	1	6	-	6
Metal plate goods	4	15	-	15
Construction & furniture	2	8	-	8
Plated goods	2	7	-	7
MACHINERY & TOOLS	75	1106	32	1138
Steam boilers	2	22	2	24
Prime movers				
Internal combustion, engines	7	54	-	54
Agricultural machinery & tools	9	143	10	153
Textile mach. & tools	1	2	-	2
Ceramics machinery	1	5	-	5
Paper manufact. mach.				
Printing & book mfg.	1	4	-	4
Other manufact. mach.	1	55	5	60
Pump manufacturing	1	9	-	9
Bicycles	2	4	-	4
Other mach. & tools	49	804	15	819
CERAMICS	36	747	184	931
Porcelain ware	4	148	47	195
Glass & glassware	3	118	98	216
Bricks & fireproofing	5	33	22	55
Roof tiles	2	9	1	10
Cement manufacturing	3	355	2	357
Cement products	6	45	6	51
Lime manufacturing	13	39	8	47
CHEMICAL	21	3754	317	4071
Medicine manufacturing	3	7	15	22
Industrial drugs	2	1757	59	1816
Paints & cosmetics	1	6	-	6
Vegetable oils & resins	2	91	1	92
Camphor manufacturing	2	7	2	9
Vegetable wax processing	1	27	9	36
Pulp manufacturing	1	5	-	5
Paper manufacturing	2	610	145	755
Fertilizer, mineral	1	309	10	319
Carbon products	1	400	29	429
Other chemicals	5	535	47	582

Industry	Factories	Employees		Total
		Male	Female	
LUMBERING & WOODENWARE	144	1225	265	1490
Lumbering	103	849	89	938
Furniture & fixtures	9	105	-	105
Wooden boxes, barrels	12	126	14	140
Other woodenwares	20	145	162	307
PRINTING	39	520	172	692
FOOD PRODUCTS	244	1501	530	2031
Native wines	49	613	3	616
Soy sauce & bean paste	31	258	49	307
Soft drinks	9	63	39	102
Milling industry	2	31	5	36
Starch manufacturing	10	211	103	314
Sweetmeats, breads	24	141	33	174
Canned goods	2	3	17	20
Marine products	96	81	231	312
Tea processing	1	8	-	8
Ice manufacturing	7	41	-	41
Wheat flour	7	27	33	60
Other food products	6	24	17	41
GAS & ELECTRICITY	15	169	6	175
OTHER INDUSTRIES	95	461	524	985
Paper products	13	68	179	247
Bamboo products	3	14	11	25
Straw products & hemp	13	12	87	99
Leather products	6	28	-	28
Lacquer products	1	4	-	4
Cotton & hemp lines	4	-	25	25
Sewing industry	37	194	161	355
Hat manufacturing	1	2	2	4
Fountain pen manufact.	1	4	-	4
Native style umbrella	3	11	-	11
Other products	13	124	59	183

3. Labor Exchanges.

There are 4 branches of the National Labor Exchange in Kumamoto-ken; in Kumamoto-shi, Yatsushiro-shi, Hondo-machi, (Motowatashi) and Arao-shi. These exchanges contain records of all employable persons, their present occupations, skills and history of employment. In cities, towns and townships which do not have labor exchanges, the same information is found in the government office or the city hall.

B. AGRICULTURE.

1. Food Situation.

Including all food sources, this prefecture is a surplus producing area based on the estimated Japanese national intake of 2,150 calories per capita per day. The principal production surpluses are in rice, wheat, naked barley and sweet potatoes. Production of all foods provided a surplus of 200-1,000 calories per capita per day, in terms of average production for 1905, 1937 and 1939. The total surplus of foods produced in this prefecture, in terms of a caloric equivalent of brown rice, is estimated at 144 million pounds annually. Based on the national consumption estimate of 37½ pounds per capita per year, this prefecture has a normal estimated rice surplus of 40 pounds per capita per year.

The aggregate annual production of foodstuffs in the prefecture, on a caloric basis, is estimated at 1,445 billion calories.

2. Agriculture in Relation to Physical Factors.

This prefecture has a growing season of from 210 to 250 days.

(For information on temperature and rainfall, see Chapter I.)

3. Farm Organization and Methods.

a. Farm population. The number of farm households in Kumamoto-ken in 1939 was 140,116, which was 2.6 percent of the nation's total. The average amount of cultivated land was 2.8 acres per household.

b. Land utilization. In 1939, the total amount of cultivated land in this prefecture was 393,000 acres, of which 205,000 acres, or 52 percent were devoted to rice culture. Many areas of grass land and scrub are found among the forests in the northern part.

There is only one major rice growing area in this prefecture, which consists mainly of 2 solid blocks of rice land, both roughly rectangular in shape. The larger of these lies just south of Kumamoto-shi, and is about 7 miles wide at the coast and extends inland for a distance of about 13 miles.

Restricted

From Uto-machi, on the southern boundary of this area, a branch 3 miles wide reaches south to the mouth of the Ono-gawa. Minor branches also follow river valleys to the east and southeast of this area. The second rectangular area lies along the coast south of the Suna-gawa. This area is from 4 to 5 miles wide and about 15 miles long. Generally, this area occupies the area between the coast and the main road from Matsubase-machi to Ogawa-machi and Hinagu-machi.

There are a number of small rice areas in the northern part of the prefecture. These are generally near the larger settlements. A small area of about 3 square miles, lies just north of the railroad at Nagasu-machi. An area south of the highway connecting Nagasu-machi and Takase-machi, and lying in the valleys of the Kikuchi-gawa and the Tojin-gawa, occupies approximately 19 square miles. Just north and east of Takase-machi is an area of approximately 3½ square miles. An unbroken, elongated area lies adjacent to and south of Yamaga-machi, Kutami-machi, and Waifu-machi. This area is about 13 miles long and averages 2 miles in width. South of the railroad at Otsu-mura is another small area. In the valley of the Shiragawa, west of Takamori-machi, is a strip of rice land 6 to 7 miles long and averaging 1½ miles wide. About 8 miles north of this area, a similar area containing 18 square miles, lies in the valley of the Kuro-gawa.

A minor rice area in the southern part of the prefecture is located generally east and north of Hitoyoshi-machi, and includes Taragi-machi. This area follows the Yunomae RR Line from Hitoyoshi-machi to Taragi-machi, and extends beyond Taragi-machi for about 3 miles. This area is about 13 miles long and averages about 2½ miles in width.

c. Fertilizer requirements.

TABLE 7

Fertilizer Requirements, 1930, Kumamoto-ken.
(in pounds per acre)

Crop	Nitrogen (N)	Phosphoric Acid (P ₂ O ₅)	Potash (K ₂ O)
Rice, paddy	109	68	61
Rice, upland	71	75	71
Wheat	128	76	60
Soybeans	8	36	34
Irish potatoes	55	45	71

Figures for 1937 show a consumption of 454 tons of sulphate of potash. Consumption figures for phosphorus and nitro-

gen fertilizers are not available. There were 49,644 short tons of ammonium sulphate and 34,985 tons of superphosphate produced in the prefecture in 1938.

The allocation of fertilizers to prefectural fertilizer dealers and prefectural consumer cooperatives from 1 August 1939 to 31 July 1940 was as follows:

Ammonium sulphate	50,673	short tons
Superphosphates	49,273	short tons
Lime nitrogen	2,559	short tons
Potash	1,354	short tons

4. Crops.

a. Field crops. In 1939, rice occupied 205,000 acres, or 52 percent, of the cultivated land in Kumamoto-ken. Production in that year was 291,000 tons. Barley, rye, and wheat all are highly important grains in the prefecture. Their combined acreage far exceeds the rice acreage. These grains are generally grown as a winter crop on the paddy fields, but are also grown as a dry crop on non-rice land. Production figures for rye are not available, but this crop occupied 117,263 acres in 1937.

Soybeans are the most important legume in the prefecture, with a production of 9,993 tons in 1939. In 1939, all legumes, including soybeans, broadbeans, peas, kidney beans, and peanuts occupied a total of 28,690 acres, and produced a total of 12,878 short tons.

TABLE 8

Field Crops, Kumamoto-ken.

Crop	Average 1935-37-39		1939		Est. prod. 1943-44
	Production Short tons	Acreage	Production Short tons	Short tons	
Rice*	290,008.5	205,000	291,000.0	284,000	
Barley	76,251.0	118,675	101,726.0	74,000	
Naked	72,594.0	112,620	97,501.5	71,500	
Common	3,657.0	6,055	4,224.5	2,500	
Rye	-----	117,263***	-----	-----	
Wheat	27,790.0	93,985	80,734.0	52,500	
Millet	-----	27,847	22,383.5	-----	
Foxtail	-----	26,753	21,901.5	-----	
Proso	-----	829	324.0	-----	

Barnyard	-----	265	158.0	-----
Soybeans	10,999.0	24,168	9,993.0	12,750
Maize	-----	11,297***	-----	-----
Buckwheat	-----	8,023***	-----	-----
Broad beans	-----	3,300	2,150.0	-----
Peas	-----	999	630.0	-----
Oats	-----	534	247.0	-----
Kidney beans	-----	221	103.0	-----
Peanuts	2.2**	2	2.5	-----

* Rice production in 1942 was 264,292 tons or a decrease of 20,678.5 tons from a 5-year average (1937-41 inclusive).

** 1936 figure.

***1937 figures.

The yield per acre of rice in this prefecture is high and the quality is notable. Statistics for 1923 showed the Ban-saishinriki variety was planted about 5 May and harvested about 15 October, while the Shinriki variety was planted about 14 May and harvested about 23 October.

The 1942 rice production of 528,584 tons, showed a decline of 20,678.5 tons from the 5-year average (1937-41). Stocks of rice in storage decline rapidly from spring to fall, as shown by the following figures for 1939:

Date	Rice in storage (short tons)
1 March	188,971.5
1 May	148,741.0
1 July	95,446.0
1 September	40,489.5
1 November	5,782.0

b. Vegetables. As shown by Table 9, sweet potatoes were by far the most important vegetable, both in acreage and production. The 33,919 acres devoted to this crop in 1939 produced a total of 135,547.5 short tons. This was more than double the production of any other vegetable, in spite of the fact that sweet potatoes showed an enormous decrease in production (nearly 80,000 short tons) between 1936 and 1939. White radishes ranked second with a production of 46,533.5 tons in 1939. Other vegetables of major importance are taro, water-melons, rape cabbage, Irish potatoes, pumpkins, egg plant, burdock and cucumbers.

TABLE 9

Vegetables, 1936 & 1939, Kumamoto-ken.

Vegetable	1936		1939	
	Production (short tons)	Acreage	Production (short tons)	Acreage
Sweet potatoes	215,330.9	33,919	135,547.5	
White radishes	51,536.9	6,583	46,533.5	
Taro	30,986.7	5,371	22,302.5	
Watermelons	23,003.8	4,061	20,662.5	
Rape cabbages	-----	2,914	15,899.0	
Irish potatoes	12,147.3	2,554	10,314.5	
Pumpkins	15,019.9	1,882	10,074.0	
Egg plant	9,741.0	1,799	9,141.0	
Burdock	8,317.0	1,549	7,837.0	
Cucumbers	5,202.5	1,070	5,269.5	
Mixed onions	3,623.2	719	3,854.5	
Tomatoes	-----	742	3,133.0	
Carrots	3,161.4	678	2,674.5	
Green onions	2,465.8	518	2,483.0	
Turnips	-----	460	2,171.0	
White cucumbers	-----	382	1,918.5	
Cabbage	1,404.3	242	1,519.0	
Cantaloupe	-----	279	1,160.5	
Lotus root	-----	132	660.0	

c. Fruit. Oranges and persimmons are the most important fruits in the prefecture. In 1939, oranges ranked first with a total production of 16,793 tons. Over 90 percent of the oranges produced in 1939 were of the mandarin type. Between 1933 and 1939 the production of mandarins increased by nearly 5,000 tons. Persimmons ranked second in 1939, with a production of 7,869 tons. This compares unfavorably with production figures for 1933, when the yield of persimmons exceeded 21,000 tons. (See Table 10.)

TABLE 10

Fruits, 1933 & 1939, Kumamoto-ken.

Fruit	1933		1939	
	Production (short tons)	Acreage	Production (short tons)	Acreage
Oranges	11,766.9		16,793.0	
Mandarin	10,147.7		15,069.5	
Bitter (Natsumikan)	972.2		971.5	
Navel	647.0		752.0	

Crop	1936		1939	
	Production (short tons)	Acreage	Production (short tons)	Acreage
Persimmons	21,526.8		7,869.0	
Japanese pears	3,656.3		5,390.0	
Plums	-----		1,195.0	
Citrus fruit**	-----		1,109.0	
Grapes	748.4		673.5	
Loquats	-----		644.5	
Peaches	413.3		346.0	
Foreign pears	20.9		9.5	
Apples	7.7		5.0	
Cherries	-----		0.5	

* Does not include dried persimmons, of which there were 654.7 short tons produced in 1933.

**Exclusive of oranges.

d. Industrial crops. Mulberry is the leading industrial crop of this prefecture. In 1939, this crop occupied 38,158 acres and produced 12,422 tons of cocoons. This production is noteworthy since it represents 3.3 percent of the national production of cocoons, whereas the acreage is only 2.9 percent of the national total. There were 59,634 families engaged in silkworm production in 1936.

Rape seed production occupied 4,080 acres in 1937. Production figures are not available for 1939, but in 1936 production was 48,337 hectoliters.

The 3,717 acres of tea in 1939 represented 3.8 percent of the national acreage, but the production of 1,153 tons was only 1.8 percent of the national output.

The 6,698.6 tons of rush produced in 1936 indicates that this is an important crop, but no acreage information is available.

Tobacco, sugar cane, and peppermint are produced in limited quantities. (See Table 11).

TABLE 11

Industrial Crops, 1936 & 1939, Kumamoto-ken.

Crop	1936		1939	
	Production (short tons)	Acreage	Production (short tons)	Acreage
Mulberry	11,973.7***	38,158	12,422***	

Rape seed	48,337**	4,080****	-----
Tea	-----	3,717	1,153
Rush	6,698.6	-----	-----
Sugar cane	4,443.5*	-----	-----
Tobacco	747.3	1,257****	-----
Peppermint	693.3	-----	-----

* 1935-37-39 average production figure.

** Hectoliters.

*** Cocoons.

****1937 figures.

5. Livestock.

As shown in Table 12, cattle increased in number by more than 7,000 from 1933 to 1939. Only a small percentage of the cattle are kept for milk production. In 1936, there were 611 milk cows in the prefecture. Of this number, 508 were kept on the 113 dairy farms and 103 were kept by other households.

Horses decreased in number by more than 3,000 from 1933 to 1936, but no figures are available for 1939.

The remarkable increase in the number of rabbits, (from 16,641, in 1936, to 97,184, in 1939), indicates the suitability of this animal as a source of food to the Japanese farmer.

Poultry numbered over 1,000,000 head in 1933 and only slightly less in 1935.

TABLE 12

Livestock, Kumamoto-ken

Type	1933	Production (in no. of head)	
		1936	193
Chickens	1,013,847	957,706	-----
Cattle, total	69,387	74,309	76,447
Cows	-----	-----	58,568
Milk cows	554	611	-----
Oxen	-----	-----	17,879
Horses	64,777	61,725	-----
Hogs	7,214	7,402	8,898
Sheep	968	1,225	1,782

Goats	769	868	961
Rabbits	-----	16,641	97,184
Ducks	17,011	12,363	-----

6. Meat, Eggs, and Dairy Products.

The production of over 60 million eggs in 1936 made this the most important animal product in the prefecture.

Meat production is of minor importance. Only 1,669 tons of meat were produced in 1936.

See Table 13.

TABLE 13

Meat, Eggs & Dairy Products, Kumamoto-ken.

Product	1936	
	Head Slaughtered	Quantity (Short tons)
Horses	6,305	876
Cows	3,490	510
Hogs	3,068	192
Calves	1,033	89
Milk	-----	13,343
Condensed milk	-----	-----
Butter	-----	2
Eggs (chicken)	-----	60,428,000

7. Economic Position of the Farmer.

In 1939, of the total land cultivated in the prefecture, 191,000 acres, or 48.6 percent, were farmed by tenants. The average farm is small as shown by the fact that 28.9 percent were of less than ½ hectare (1.235 acres), and 63.2 percent were of less than one hectare (2.471 acres) each in size, while only 0.4 percent or 630 farms, were larger than 5 hectares (12.3 acres). In 1936, out of 196,649 acres under paddy rice production, 111,755 acres, or 56.8 percent, were cultivated by tenants. The situation with regard to dry crops was more favorable. Of a total 191,149 acres of dry land crops, 79,069 acres, or 41.3 percent were cultivated by tenants.

8. Administration.

The following experiment stations, inspection stations and offices were engaged in agricultural work in 1938 in the prefecture:

Agricultural Experiment Station	Izumi-cho, Kumamoto-shi
Sericultural Experiment Station	Izumi-cho, Kumamoto-shi
Sericultural Administration Office	Prefectural Offices, Kumamoto-shi
Grain Inspection Station	Minami-sendanbata-cho, Kumamoto-shi
Cocoon Inspection Station	Izumi-cho, Kumamoto-shi
Rice and Grain Office	Hanabata-cho, Kumamoto-shi
Livestock Breeding Farm	Goshi-mura
Horse Breeding Station	Nishigoshi-mura, Kikuchi-gun
Poultry Breeding Station	Nishigoshi-mura, Kikuchi-gun

(For lists of the agricultural schools and of the offices of the Economic Department of the prefectural government engaged in agricultural work, see Chapter V.)

C. FISHERIES

1. Production

The average annual production of fish in Kumamoto-ken for the years 1935-39 was 41,500,000 pounds. This was 0.7 percent of the total production of Japan. The estimated production for 1943-44, adjusted for war-time conditions, was 34,000,000 pounds. Fish production in this prefecture is normally sufficient for local needs. Table 14, gives the relative values of all coastal fisheries products of this prefecture for 1936.

TABLE 14

Fisheries Products, 1936, Kumamoto-ken.

Kind	Value (in thousand yen)
Fish	
Sardine (<u>iwashi</u>)	424
Grey mullet (<u>bora</u>)	207
Sea bream (<u>tai</u>)	196
Eel (<u>unagi</u>)	184
Fresh water trout (<u>ayu</u>)	130
Black sea bream (<u>kurodai</u>)	101
Tuna (<u>maguro</u>)	35
Bonito (<u>katsuo</u>)	30
Flatfish (<u>hirame</u> , <u>karei</u>)	28
Spanish mackerel (<u>sawara</u>)	24
Carp (<u>koi</u>)	24
Yellow-tail (<u>huri</u>)	18
Horse mackerel (<u>aji</u>)	15
Mackerel (<u>saba</u>)	13
Shark (<u>fuka</u>)	11
Flying fish (<u>tobiuo</u>)	1
Shellfish	
Prawn (<u>ebi</u>)	357
Cuttlefish (<u>ika</u> , <u>surume</u>)	101
Octopus (<u>tako</u>)	76
Clam (<u>hamaguri</u>)	22
Abalone (<u>awabi</u>)	9
Oyster (<u>kaki</u>)	8
Seaweed	
Gloiopeltis (<u>funori</u>)	22
Gelidium (<u>tengusa</u>)	3
Other	605
Total	2,644

In 1936 there were 44,510 fishermen, of whom 17,562 were employed full-time. In that year there were 10,255 fishing vessels, only 781 of which were equipped with motors, one by steam and the others by gasoline.

2. Ports and Fishing Centers.

The principal ports and fishing centers of Kumamoto-ken are: Minamata, sardine and sea bream; Ushibuka, sardine and sea bream; and Misumi, sardine.

For further details on ports see Chapter IV,A,3.

3. Coastal Fishing.

The sardine season occurs during the months of January, February and March.

4. Deep-sea Fishing.

In 1938 there was only one woodhulled tuna vessel listed. The geographical location of Kumamoto-ken, on a large sheltered bay, does not encourage deep-sea fishing activity.

5. Specialized Fisheries.

The specialized fisheries of this prefecture are mainly in production of eel and carp. The relatively large amount of prawn taken is indicative of specialized netting and trapping methods.

6. Processing.

Table 15 lists the kinds and relative values of the processed marine products (except canned) of Kumamoto-ken in 1936.

TABLE 15

Processed Marine Products, 1936, Kumamoto-ken.

Kind	Value (in thousand yen)
"Bushi" type dried bonito	15
Plain dried	
Cuttlefish	11
Sharkfin	2
Salt dried	
Sardine	4

Cooked or boiled	
Sardine	256
Salt preserve	
Sardine	31
Mackerel	48
Yellowtail	45
Dried shellfish	
Shrimp	162
Abalone	2
Dried laver	
Quality laver	154
Fish oil	5
Fertilizer	5
Pressed sardine waste	57
Misc.	32
Other marine products	882
	<u>1,710</u>
Total	

7. Government Fishing Industry Activity.

The Amakusa Marine Biological Laboratory, located about 31 kilometers southeast of Nagasaki, is a branch of the Kyushu Imperial University. Its chief activities are surveys of the marine flora and fauna of the Kumamoto-ken region.

There is an aquatic experiment station in Kumamoto-shi at Minami-sendenbata-machi.

D. FOREST RESOURCES

1. Location and Composition of Forests

Kumamoto-ken contains 3 large contiguous timber tracts and numerous smaller scattered woodlands. One large tract which extends northward from Kagoshima border supports mainly a semi-tropical evergreen broadleaf species. Another in the east central sector of the prefecture lies adjacent to the Miyazaki-ken border while the third tract in the north lies along the Fukuoka border. The latter 2 are found at higher elevations and are primarily composed of temperate zone deciduous broadleaf trees and conifers. In all, these areas cover only about 1/5 of the land area of the prefecture or roughly about 600 square miles. No data is available on the smaller woodlands but they are known to cover a fairly extensive area.

Table 16 lists commercial timber trees found in Kumamoto-ken.

TABLE 16

Important Commercial Timber Trees, Kumamoto-ken.

<u>Species</u>	<u>Japanese Name</u>	<u>Common Name</u>	<u>Uses</u>
Cinnamomum camphora	Kuso	Camphor	Cabinets & camphor
Buxus sempervirens	Tsuge	Boxwood	Utensils & woodenware
Quercus myrsinaefolia	Kashi	Oak	Handles, hard lumber & fuel
Zelkova acuminata	Keyaki	-----	Woodwork, furniture & fuel
Cryptomeria japonica	Sugi	Japanese Redwood	High grade lumber
Chamaeyparis obtusa	Hinoki	Cypress	High grade lumber
Pinus densiflora	Aka-matsu	Red pine	Construction lumber
Pinus thunbergii	Kuro-matsu	Black pine	Construction lumber

2. Forest Administration and Management

There are at least 3 public forests in the prefecture: Kimpozan Forest, located near Kumamoto-shi; Kinoo Forest, in the southeast near Hitoyoshi-shi, and Oya Forest, in the

northeast along the Oita-ken border. Data pertaining to ownership of forest lands indicates that nearly 55 percent is publicly owned. It is probable that most of the small, scattered tracts are privately owned.

The Forestry Bureau Administration Office of the Bureau of Forestry (Sanri-kyoku) of the Ministry of Agriculture and Commerce (Nosho-sho) is located in Kumamoto-shi, Kyo-machi, Hon-cho.

Branch forestry administration field stations are at the following locations within the prefecture:

Kikuchi forestry office	Waifu-machi, Kikuchi-gun
Hama-machi forestry office	Hama-machi, Kamimashiki-gun
Yatsushiro forestry office	Yatsushiro-shi, Otago-machi
Minamata forestry office	Minamoto-machi, Ashikita-gun
Hitoyoshi forestry office	Hitoyoshi-shi
Taragi forestry office	Taragi-machi, Kuma-gun
Kumamoto forestry office	Kumamoto-shi, Kyo-machi

A Charcoal Inspection Station is located at Kumamoto-shi in the Prefectural Office.

There are also two forest observatories (ranger stations) in the prefecture, one located in Shiraito-mura, Kamimashiki-gun, and the other in Oguni-machi, Aso-gun.

Direct management, including logging and development, is handled by government foresters on the public lands. Private lands are managed by their owners in accordance with strict regulations of the Basic Forestry Act. Enforcement of these regulations is a joint responsibility of government forestry officials and prefectural officers usually attached to forestry inspection stations.

Intensive forest management is carried out with the selection and shelterwood systems in force in the hardwood and coniferous stands, respectively. In sprout stands, operated for charcoal and fuel production, the coppice or sprout system is generally followed.

3. Forest Problems.

Fire presents only a slight danger to forests in Kumamoto-ken during the months of March and April when most of the damage occurs. Precipitation is abundant, and accordingly danger exists only during dry periods. With such a large proportion

of broadleaf hardwood the danger is small except in the coniferous stands in the mountains. Intensive fire control regulations enforced by the forest officers provide severe penalties for incendiarism. Floods, high winds, insects and disease also cause considerable damage, but no data is available.

4. Forest Products.

Kumamoto-ken is of minor importance as a forest producing area, but it does contain some fine timber stands and yields a significant variety and quantity of material. In 1938 there were 103 sawmills turning out about one percent of the Japanese lumber output. Rough timber products such as sawlogs, poles, piling and pulpwood were valued at 3.4 million yen. No information is available on the location of sawmills or other wood-using plants.

Since the timber occurs mainly in steep terrain, logging is carried on with great difficulty. Logging railroads with very small temporary feeder lines have been constructed in heavily timbered areas. The only lines known to exist for logging are in the Kinco Government Forest. Otherwise, small cart and truck roads serve this purpose. Information on river transportation of logs is not available. Woods-labor is both full and part-time, usually skilled.

Bamboo poles, camphor products, charcoal, fuelwood, posts and poles make up the bulk of the forest products turned out in the woods ready for industrial or consumer use. Charcoal production is an important by-product of both logging and milling operations where slash and slabs are reduced in small pit type ovens. Production of charcoal in 1936 was valued at 1,900,000 yen and that of fuelwood at 900,000 yen.

E. MINING

Coal is the only important mineral product of Kumamoto-ken. Small scale production of anthracite is carried out at the Amakusa field in Amakusa-gun. The southern coal region and most important mines of the famous Miike coal field are in Tamana-gun. Annual production of bituminous coal from this field is more than 3,000,000 short tons.

Minerals of Kumamoto-ken are shown in Table 17.

TABLE 17

Minerals, Kumamoto-ken.

Mineral	Location found
Asbestos	Toyofuku-mura, Shimomashiki-gun
Coal*	Miike field, Omuta-shi
Kaolinite*	Takahama-mura, Amakusa-gun
Limestone*	Minamata-machi, Ashikita-gun

* Commercially important.

1. Non-metallic Minerals.

a. Clay. Extensive clay deposits are mined in Takahama-mura, Shimoda-mura and Tororo-mura, in Amakusa-gun. The largest deposit is in Takahama-mura. At this deposit 4 kaolinized "Liparite" dikes, 30 to 42 feet wide, are found. The white clay is called Amakusa ishi (Amakusa rock) or toseki (porcelain stone) and is used for porcelain manufacture. The Takahama clay is shipped to the island's west coast over a special mining railroad.

2. Coal Fields.

a. Amakusa. This coal field is located in Amakusa-gun on Amakusa-shima, off the western coast of the Kyushu mainland. The actual coal reserves of the field in 1912 were 3,850,000 short tons and the probable reserves were 16,500,000 short tons. Production of coal from 1913 to 1927 was 825,000 short tons, or an annual average of 59,000 short tons. The coal is Mesozoic in age and is found in 3 seams 0.8 to 6.0 feet thick. In the northern section bituminous coal has been changed to anthracite by igneous intrusions. An analysis of this coal in 1913 is shown in Table 18.

TABLE 18

Amakusa Coal Analysis, 1913, Kumamoto-ken.

Constituent	Percent
Water	2.17
Volatile matter	10.66
Fixed carbon	80.63
Ash	6.54

Specific gravity: 1.413.
 Calories per kilogram: 6,881.
 British thermal units per pound: 12, 386.

The field is divided geographically into: (1) northern section, where the coal beds have been badly faulted, making a complicated geologic structure, and many small mines have been opened; (2) middle section, where coal is found in a synclinal structure, and seams 2 feet thick are mined; and (3) southern section, where synclinal structure is found with the western limb extending under the sea, 3 seams have been mined, and local, easily-mined faulted blocks have been mined out, making present production difficult and expensive.

b. Miike Field. The southern section of this famous Japanese coal field, owned by Mitsui Kozan KK, and the 2 largest mines in the field are in Arao-shi. The northern part of the field, several important mines, the main coal washing plant for the field and the coal storage and ship loading equipment are in Fukuoka-ken.

The Miike field is approximately 11 miles long, north and south, extending along and under the Ariake-kai, and 5 miles wide, east to west. Of the 8 coal seams found in the field, only 2 can be mined. They occur in the Omuta beds of the Komoyama sedimentary series. The highest, or "Miike seam", averages 8 feet in thickness and has been extensively mined. Six to ten feet below the Miike seam is the "second seam", averaging 5 feet in thickness, which is also mined. Structurally, the field is simple, with the coal bearing beds dipping 5 to 10 degrees southwest. Many faults with small displacements are found underground.

The field is bounded on the east by granite ridges; to the southwest the coal seams extend, down dip, beneath the bottom of Ariake-kai. In 1912 the field had a proven area of

10 square miles and actual reserves of 66,000,000 short tons. In the same year the probable reserves were 770,000,000 short tons in a 70 square mile area. Coal from the field is bituminous but of poor coking quality. It has been used at times in coke ovens and large tonnage was formerly used for bunker fuel. Reliable reports indicate that it is becoming more powdery and of lower grade. Table 19 below, gives an analysis of the coal.

TABLE 19

Miike Coal Analysis, 1913, Kumamoto-ken.

Constituent	Percent
Water	0.66
Volatile matter	41.74
Fixed carbon	45.24
Ash	9.36
Sulphur	3.00

Calories per kilogram: 7,460
 British thermal units per pound: 12,300 to 13,427

Coal mined from 1934 to 1937 is shown in Table 20 below:

TABLE 20

Miike Coal Production, 1934-37, Kumamoto-ken and Fukuoka-ken.

Year	Short Tons	Average Tons per Day
1934	2,560,000	7,000
1935	2,722,000	7,460
1936	2,900,000	7,940
1937	3,175,000	8,700

All reports indicate a continued increase in annual production. A new mine, the Mikawa, was reported placed in operation in 1938. Production from this mine should more than offset the decline in production from the eastern section of the Miike field, which has virtually been worked out. The largest and most modern mine in the Miike field, the Yotsuyama, (33°00'N and 130°25'E) is located on the edge of the sea in the westernmost section of the field. It has the deepest vertical coal mine shaft in Japan. The 3 compartment shaft is 1,350 feet deep. From the bottom of the shaft, mining has

been extended under the sea's bottom several thousand feet west of the shoreline. Many mined out areas are filled with waste to prevent subsidence and permit greater extraction of the coal. Nine hundred gallons of water per minute are pumped from the mine by electrically driven centrifugal pumps. In 1929 an average of 14.3 tons of water was pumped from the mines for one ton of coal hoisted.

Surface installations at the mine include a reinforced concrete headframe with a "Koepe" type hoisting system built in the top of the headframe: a coal preparation plant with direct loading into railroad cars; and extensive workmen's dormitories.

Another important mine in the Miike field is the Manda mine, in Arao-shi, (See AMS map L571). At this mine are 2 vertical shafts 300 to 400 yards apart. The main shaft has 4 compartments and a steel headframe. Coal is loaded into railroad cars which are switched by electric engines to the coal-washing plant in Fukuoka-ken.

3. Mining Administration.

Kumamoto-ken is in the Kyushu Administration District of the Munitions Ministry, (Gunju-sho). Headquarters for the district are in Fukuoka-shi, Fukuoka-ken.

Mine maps, production records and mining reports for all mines within the district are maintained at headquarters. Mine inspectors and other mining officials from headquarters make regular trips to the mining districts in Kumamoto-ken.

All mapping and geologic work done in the prefecture by the Imperial Geologic Survey is authorized and supervised directly from Tokyo headquarters of the Survey.

F. MANUFACTURING.

Kumamoto-ken has a low degree of industrialization with less than one percent of the total value of manufactured products of Japan Proper contributed by this prefecture in 1938. Chemical production is the most important industry and in 1938 was valued at nearly 54 percent of the prefecture's total value of output by non-government factories employing 5 or more workers. These chemicals, however, represented only 1.4 percent of the value of the total national chemical output.

Textiles and food processing products in 1938 were the second and third categories, respectively, of Kumamoto-ken's manufactured products in terms of value. The position of other categories of industrial production is shown in Table 21. Appendix I lists manufacturers in Kumamoto-ken.

TABLE 21

Principal Manufactures, 1938, Kumamoto-Ken.
(in non-government plants employing 5 or more persons)

Industry	Value (millions of yen)	Value (rank among prefectures)	Percent of Value of total manufactures		
			Japan Proper*	Kumamoto- ken	Plants
Chemicals	54.1	17	1.4	53.5	21
Textile	16.8	33	---	16.5	59
Food processing	14.7	25	---	14.5	244
Ceramics	4.9	16	1.1	4.8	36
Lumber & woodenware	4.1	27	---	4.0	144
Ore & metal process- ing	2.1	36	---	2.0	22
Machinery & tools	1.4	40	---	1.3	75
Printing	1.4	15	---	1.3	39
Other	2.2	24	---	2.1	95
Total	101.7	31	---	100.0	715

* Shown only when 1 percent or more.

1. Food Products.

Kumamoto-ken ranked only 25th among the prefectures of Japan in the manufacture of food products in 1938. The most important food products, according to 1938 figures, were: refined sake and distilled liquors; soy sauce and bean paste (miso); wheat flour and other milled grains; and soft drinks, principally cider. (See Table 22). Within the prefecture, food processing accounted for 14½ percent of the 1938 total industrial production.

In the manufacture of refined sake and distilled liquors, Kumamoto-ken produced $4\frac{1}{2}$ percent of the total national production of these products, and was the ninth ranking prefecture in the production of distilled spirits.

Two percent of the bean paste produced in Japan came from this prefecture. Wheat flour processing products (vermicelli and macaroni) also accounted for 2 percent of the national total of processed flour production.

Although the fisheries of Kumamoto-ken supply sufficient fish for local needs, very little, with the exception of abalone, is canned or processed.

The number of plants reported for 1938 engaged in certain categories of food processing, together with yen value of production in each category, are shown in Table 22.

TABLE 22

Food Products Manufacturing, 1938, Kumamoto-Ken.

Industry	Plants	Value (in yen). 1938
Breweries & distilleries (distilled spirits & refined sake)	49	5,385,063
Soy sauce & bean paste (<u>miso</u>)	31	2,569,498
Flour & feed mills	2	2,368,906
Soft drink plants	9	1,449,138
Confectioneries & pastries	24	982,257
Starch manufacturing	10	608,771
Marine products (not including fish canning)	96	411,639
Wheat flour processing (vermicelli & macaroni)	7	209,044
Ice manufacturing	7	145,801
Others: (including liquor, dregs, canned seafood, livestock products tea processing, sauces & condiments)	9	
Total	244	14,714,260

2. Textiles.

Although the textile industry is relatively unimportant, the 1938 factory statistics list 59 textile plants for Kumamoto-ken. They consist of 29 silk reellers, 18 weavers, 2 knit goods manufacturers, and 10 dyeing and finishing plants. Included in this number are several larger units. Kanegafuchi Spinning has 2 branch plants; and Gunze Silk and Wakabayashi Silk each have a branch filature in this prefecture. The spinning plant of Kumamoto Boseki is apparently also of moderate size. According to recent information, 3 of these larger units have been converted to war

production. Kanegafuchi's Kumamoto-shi plant is reported to be working with the Kokura Rubber Co.; Kumamoto Boseki is producing aircraft parts under the Watanabe Aircraft Co.; and the Wakabayashi filature is converted to unidentified war production.

Raw silk is the leading product, and constituted 83 percent of the value of textile production in 1938. Table 23 lists detailed figures for textile production, by value, for 1938:

TABLE 23

Textile Production, 1938, Kumamoto-ken.

Product	Value (in yen)
Raw silk	14,102,785
Cotton fabrics	1,437,129
Cotton yarn	992,218
Cotton batting	114,090
Rayon fabrics	54,540
Knit goods	49,800
Silk fabrics	24,458

3. Chemicals.

Chemical production is above average importance in Kumamoto-ken. Pulp and paper manufactures in 1938 approximated 20,000,000 yen in value and are discussed under wood processing. Other important items as of 1938 were industrial chemicals, 17,600,000 yen; and carbon products, 3,500,000 yen. Large percentages of Japan's production of sulphuric acid, calcium carbide, nitric acid and acetic acid are supplied from Kumamoto-ken. Although valued at only 360,000 yen, 25 percent of Japan's total production of polishing agents were manufactured in this prefecture.

In 1943 it is estimated that the Minamata-machi plants of Nippon Chisso Hiryo KK had an annual capacity of 16,000 metric tons for the production of nitrogen from ammonia synthesis and a capacity of 10,000 metric tons for the production of calcium carbide. The Kagami-machi plant of Nissan Kagaku Kogyo KK had an estimated annual capacity of 6,000 metric tons for the production of calcium carbide in 1943.

4. Ore and Metal Processing.

a. Ore processing. Only one ore processing plant is known to be located in Kumamoto-ken. This is the Showa Iron Co. iron ore concentration mill at Sashiki-machi, Ashikita-gun ($130^{\circ} 31' E$ and $32^{\circ} 17' N$) (see AMS map L 571). The source of the ore treated and the disposition of concentrates produced are unknown.

b. Metal fabrication. This prefecture is unimportant as a producer of metal products. In official Japanese statistics for 1938, it was one of the 17 prefectures in which products of the metal industry were valued at less than 0.1 percent of the nation's production. This prefecture produced pig iron castings worth 500,000 yen, and very small quantities of sheet metal, springs and stampings. Plated metals were produced in 17 prefectures, among which Kumamoto ranked 16th, with production valued at only 7,100 yen.

5. Machinery, Tools and Appliances.

The production of machinery, tools and appliances in Kumamoto-ken is not important. The 3 most important categories produced are: farm and building tools; agriculture machinery; and miscellaneous food processing machinery.

6. Transportation Equipment.

There are a number of small shipyards in this prefecture. Most of the known ones are on Amakusa-jima. One company, the Morieda Zosensho, is reported to manufacture marine engines.

Fujita Seisakusho KK is known to be producing railway cars in Kumamoto-shi.

Mitsubishi Denki KK and Yasukawa Denki Seisakusho KK are believed to manufacture electrical equipment for aircraft.

7. Wood-using Industries.

The output of sawmills and other wood-working plants accounted for only 4 percent of the 1938 value of total industrial production of Kumamoto-ken, but pulp and paper contributed another 21 percent to the prefecture total and made the entire contribution by the wood-using industries 25 percent.

Kumamoto-ken, especially the area around Yatsushiro-shi, is one of the major pulp producing centers of Japan and is the major paper producing center of Kyushu. In 1938 there were 4 companies producing pulp and 9 producing paper in this prefecture. Two Oji Seishi KK mills in Kamimatsukuma-mura (Yatsushiro-gun) and in Yatsushiro-shi produced over 50,000 metric tons of pulp and nearly 70,000 metric tons of paper. Two other pulp mills are also in, or near, Yatsushiro-shi. At least one of them produces rayon pulp.

The pulp production of the prefecture was valued in 1938 at 8,243,561 yen, which was 10 percent of the pulp output value for Japan Proper. Paper production amounted to 12,676,160 yen, or 3 percent of the national output.

Pulp output was divided between crushed (or groundwood) and chemical pulp, the former being the larger of the two. Printing (newsprint), wrapping, and document paper were the chief paper mill products. However, the quantity and kinds of pulp and paper produced in this prefecture may have changed radically under war-time restrictions and war-time shifts in demands. There are limited supplies of timber in the prefecture, and pulping processes have probably not been adapted to use the species which are available.

Most of the other wood products processed in this prefecture were handled by the sawmills, of which there were 103 reported in 1938 with output valued at 3,000,000 yen. Some of the wood used undoubtedly came from local forests. In addition, there were the following wood-working plants, all of them small: 9 furniture plants, 12 wooden container plants, and 20 unclassified wood-working plants. In 1938 the latter produced, among other things, nearly 1,000,000 wooden clogs.

8. Other Industries.

a. Ceramics. Kumamoto-ken produces small quantities of glass, porcelain, clay and cement wares, some lime and some cement. Most important on the national scale, in terms of 1938 values, were acid and heat-resisting porcelain wares, which amounted to 4 percent of Japan's production, and portland cement, which was 3.8 percent of Japan's production.

b. Clothing. Factory-produced clothing in Kumamoto-ken is not important. It includes leather shoes, cloth hats, knit cotton hosiery and gloves, and a variety of other garments.

G. CONSTRUCTION AND CONSTRUCTION MATERIALS

1. Construction

The types of construction in Kumamoto-ken are similar to those throughout Japan. Most large industrial plants built in the last decade are of reinforced concrete, but older factories are usually of wood and brick construction. Most commercial establishments are of wood-frame construction, often with brick facings. Urban residences are primarily of wood, generally with paper partitions and tile roofs. Thatched roofs are common in the rural areas.

2. Construction Materials.

a. Lumber.

Kumamoto-ken has stands of commercial timbers in the mountain districts. (For construction timbers see Chapter III, D, 1.)

b. Cement. Kumamoto-ken has 4 major cement plants: The Asaki Semento plant is located in Amakusa-gun, Himedo-mura, Himeura, 456. This plant produces portland cement with an annual capacity of 158,657 metric tons.

The Kyushu Soda KK Amakusa plant is located in Amakusa-gun, Himedo-mura, Futamado, 5,996. This plant produces portland cement with an annual capacity of 120,000 metric tons.

The Nippon Semento KK Yatsushiro plant (now under management of Asano Semento KK) is located in Yatsushiro-shi and is equipped with 4 rotary kilns, two 38.10 by 2.28 meters and two 38.10 by 2.43 meters. It uses the dry process and produces portland and silica cements with an annual capacity of 292,320 metric tons. Its power equipment consists of three 11,500 kilowatt turbines and five 5,000 horsepower boilers.

The Nissan Kagaku Kogyo KK is located in Yatsushiro-gun, Kagami-machi, Gokai, 1159, and is equipped with one rotary kiln. It uses the dry process and produces portland cement with an annual capacity of 35,400 metric tons. Lime, gypsum, and ferric oxide are in part obtained as by-products of other operations of this plant.

c. Structural Steel. There are no structural steel mills in this prefecture, the nearest being located in Fukuoka-ken.

d. Slate. In 1941 a plant producing slate products was reported located in Yatsushiro-machi.

H. TRADE & COMMERCE

1. Foreign Trade

Misumi-machi is the only port in Kumamoto-ken open to foreign trade. Its trade amounted to about 0.15 percent of the national total in 1939, making it the 23rd port among Japan's 47 open ports. Table 24 indicates the amount of imports and exports at Misumi-machi.

TABLE 24

Exports & Imports, 1935-40, Misumi-machi, Kumamoto-ken

Year	Exports (yen)	Imports (yen)
1935	310,016	1,839,167
1936	501,591	2,477,358
1937	452,613	2,911,386
1938	1,686,583	2,857,274
1939	5,120,379	4,032,736
1939 (1st qtr)	536,527	867,335
1940 (" ")	1,719,773	943,283

a. The most important exports ad valorem from Misumi-machi in 1938 were lumber and other wood products, 770,000 yen; wheat flour, 332,713 yen; and cement, 100,605 yen. Other relatively important exports consisted of soy and paper products.

Misumi-machi's imports accounted for 65 percent of her foreign trade and consisted chiefly of corn, beans and seeds, 934,188 yen; bean and oil cake, 743,914 yen; phosphorite, 534,835 yen; cake, 214,002 yen; and also fodder, millet, wheat, bran and coal.

Further important considerations concerning Misumi's foreign trade are the tremendous gains made in exports after 1937. In 1938 her exports increased 4-fold over 1937 and in 1939, twelve-fold over the same year.

b. Table 25 indicates the trade of Misumi-machi with China in 1938:

TABLE 25

Trade, 1938, Between Misumi-machi & China

	Exports (yen)	Imports (yen)
Northern China	355,518	954
Central China	19,950	---
Southern China	---	---
Total	375,468	954

2. Domestic Trade.

Misumi-machi was the most important domestic trade port in Kumamoto-ken, and in 1936 rated 34th among Japan's domestic trade ports with exports of 132,000 metric tons, valued at 10,724,000 yen, of which rice,

grains and mitro-lime were the important items. Imports amounted to 308,000 metric tons, of 16,281,000 yen value, and the most important items were lumber, cement and bean refuse. (For smaller domestic trade ports see Chapter IV, A, 3).

3. Warehousing.

a. At Sashiki-machi extensive oil stores are reported near the mouth of the Sashiki-gawa northeast of Minamata-machi.

b. At Mikawa 12 warehouses are on the south side of the 300-foot general cargo pier.

c. At Misumi-machi there are 9 or 10 warehouses.

d. Kumamoto-shi, Kumamoto United Warehouse Company, 29 1-chome, Saiki-machi.

I. FINANCE.

1. Private Finance.

a. Relative position of Kumamoto-ken. Table 26 shows the relative position of Kumamoto-ken in private finance, as compared with the rest of Japan, and as of the dates indicated:

TABLE 26

Bank Deposits, Savings, & Life Insurance, 1936 & 1944, Kumamoto-ken

	Total for Kumamoto-ken	Percent of Nat'l. Total
Population (1936)	1,387,000	2.0
Total bank deposits (banks with head offices in prefecture) (1936)	83,333,000 yen	.7
Deposits in postal savings transfer accounts (1936)	23,387,000 yen	2.0
Ordinary life insurance in force (1936)	47,913,000 yen	1.32
Savings goal* (1944)	350,000,000 yen	.97

* An estimate which includes net increases of bank deposits, postal savings, trust deposits, deposits of financial cooperatives, insurance reserves, deposits of mutual financing companies, private investment, bond purchases, etc.

b. Banking. As of 1940, there were 4 ordinary provincial banks with head offices and a total of 20 branches and 6 agencies in Kumamoto-ken. In addition, 2 ordinary provincial banks with head offices in other prefectures each maintained one branch in Kumamoto-ken, while 3 so-called

"big ordinary" banks and one central bank had branches in Kumamoto-shi. There were no savings banks in the prefecture. A clearing house was operating in Kumamoto-shi in 1942.

Below is a list of the banks and branches that were known to exist in Kumamoto-ken in 1940, with salient data as to their operations. Since the recent trend among provincial banks in Japan has been toward the merging of all prefectural banks in each prefecture into one bank, it is quite probable that some, or possibly even all of the prefectural banks listed here have been merged.

(1) Provincial Ordinary Banks.

Higo Ginko (Higo Bank)

Main office: Kumamoto-shi

Branches: 15

Agencies: 5 (all in prefecture)

Location of branches in Kumamoto-ken:

Kumamoto-shi (4 branches)

Hitoyoshi-shi

Kamoto-gun, Yamaga-machi

Kakuchi-gun, Waifu-machi

Aso-gun, Miyaji-machi

Kamimashiki-gun, Mifune-machi

Shimomashiki-gun, Kumanosho-machi

Shimomashiki-gun, Matsubase-machi

Shimomashiki-gun, Ogawa-machi

Ashikita-gun, Sashiki-machi

Ashikita-gun, Minamata-machi

Amakusa-gun, Hondo-machi

Total assets	45,818,000 yen	Total liabilities	45,818,000 yen
Securities	24,369,000 yen	Deposits	5,581,000 yen
Cash on hand	5,581,000 yen	Reserves	324,000 yen
Total loans	14,113,000 yen	Net profit (6 mos.)	49,000 yen
Uncalled capital	750,000 yen	Paid-up capital	520,000 yen

Oguni Ginko (Oguni Bank)

Main office: Aso gun, Oguni-machi

Branches: 4 (all in Kumamoto-ken)

Location of known branches in Kumamoto-ken:

Aso-gun, Uchinomaki-machi

Aso-gun, Takamori-machi

Aso-gun, Minamioguni-mura

Total assets	5,719,000 yen	Total liabilities	5,719,000 yen
Securities	2,153,000 yen	Deposits	4,270,000 yen
Cash on hand	960,000 yen	Reserves	208,000 yen
Total loans	1,762,000 yen	Net profit (6 mos.)	32,000 yen
Uncalled capital	700,000 yen	Paid-up capital	400,000 yen

Yatsushiro Kyodachi Ginko (Yatsushiro United Bank)

Main office: Yatsushiro-shi

Branch: Ashikita-gun, Sashiki-machi

Total assets	3,126,000 yen	Total liabilities	3,126,000 yen
Securities	316,000 yen	Deposits	1,981,000 yen
Cash on hand	483,000 yen	Reserves	21,000 yen
Total loans	1,420,000 yen	Net profit (6 mos.)	11,000 yen
Uncalled capital	753,000 yen	Paid-up capital	257,000 yen

Iseri Ginko (Iseri Bank)

Main office: Yatsushiro-gun, Miyanohara-machi

No branches or agencies.

Total assets	3,089,000 yen	Total liabilities	3,089,000 yen
Securities	1,469,000 yen	Deposits	1,909,000 yen
Cash on hand	182,000 yen	Reserves	277,000 yen
Total loans	1,129,000 yen	Net profit (6 mos.)	31,000 yen
Uncalled capital	225,000 yen	Paid-up capital	275,000 yen

Juhachi Ginko (18th Bank)

Main office: Nagasaki-ken, Nagasaki-shi

Branch in Kumamoto-ken: Kumamoto-shi

Kagoshima Kinken Ginko (Kagoshima-Thrift Bank)

Main office: Kagoshima-ken, Kagoshima-shi

Branch in Kumamoto-ken: Ashikita-gun, Minamata-machi.

(2) "Big Ordinary" Banks

Teikoku Ginko (Imperial Bank)

Main office: Tokyo-to

Branch in Kumamoto-ken: Kumamoto-shi

(Note: This was formerly a branch of the First Bank (Dai-Ichi) which was merged in forming the Imperial Bank).

Sumitomo Ginko (Sumitomo Bank)

Main office: Osaka-shi

Branch in Kumamoto-ken: Kumamoto-shi

Yasuda Ginko (Yasuda Bank)

Main office: Tokyo-to

Branch in Kumamoto-ken: Kumamoto-shi

(3) Central Banks.

Nippon Ginko (Bank of Japan)

Main office: Tokyo-to

Branch in Kumamoto-ken: Kumamoto-shi

c. Insurance. As of 1940 there were 3 life insurance companies that were known to have branches in Kumamoto-ken: Nippon Life Assurance Co.; Teikoku Life Insurance Co.; and Teihei Life Insurance Co. As of 1936 there were 389,999 ordinary life insurance policies in effect in Kumamoto-ken, with a total value of 47,913,000 yen.

d. Postal savings. Postal savings are very important in the financial picture of the prefecture, since the ordinary individual uses the post office as his bank both for savings and also for a checking account, through postal savings transfer accounts. Postal savings in Kumamoto-ken totaled 194,406,000 yen as of the end of June 1942.

e. Credit associations. These associations were important to the individual, both as a place to invest his money and as a source from which small loans could be obtained. In 1936 there were 324 associations operating in Kumamoto-ken with a total investment of 3,910,000 yen.

f. Mutual financing associations (mujin). In common with the credit associations, the mujin were important to the ordinary individual as a place for investment and a source for small loans. Statistics are given below as of 1936:

Main offices	5
Branch offices	22
Authorized capital	680,000 yen
Paid-up capital	204,000 yen
Number of association accounts	939
Number of individual accounts	32,076

2. Public Finance.

a. Relative position of prefecture. Table 27 shows the relative

position, in regard to public finance, of Kumamoto-ken, compared with the rest of Japan, as of 1936:

TABLE 27
Public Finance, 1936, Kumamoto-ken.

	Total for Kumamoto-ken (in yen)	Percent of Total for All Prefectures
Prefectural revenue	10,491,000	1.75
Prefectural expenditures	10,491,000	1.75
National business profits tax collection		
(1) Individuals	456,599	1.65
(2) Corporations	308,177	.5
Total taxable income	52,660,000	1.12
National income tax collections	2,045,000	.8

b. Income of prefectural government. In the 1938-39 fiscal year the income of the prefectural government of Kumamoto-ken was derived from the following sources:

	Amount (in thousand yen)
Surtaxes on direct national taxes	
Land tax	1,339
Income tax	675
Other	459
Special land tax	149
House tax	1,031
Business tax	107
Miscellaneous taxes	909
Property income	147
Employment and handling fee	1,303
National grants in aid	2,189
Prefectural loans	747
Balance from previous fiscal year	150
Other	1,285
Total income	10,491

c. Expenditures of prefectural government. Expenditures in the fiscal year 1938-39 were as follows:

	Amount (in thousand yen)
Council expenses	43
Police expenses	1,202
Public works	1,523
Education	2,669

Encouragement of industry	2,134
Health and sanitation	297
Social welfare	115
Prefectural loan expenses	1,472
Handling of prefectural expenses	304
Official's expenses	573
Other	159
Total expenditures	10,491

d. Income of cities. Revenue of cities in Kumamoto-ken for the fiscal year 1938-39 were as follows:

	Amount (in thousand yen)
Surtaxes on direct national taxes	
Land tax	108
Income tax	None
Other	138
Surtaxes on prefectural taxes	
Special land tax	1
House tax	193
Business tax	21
Miscellaneous taxes	261
Special tax	541
Property income	95
Employment fee and handling fee	1,290
Delivery and Subsidy	198
City loans	712
Balance from previous year	84
Other	415
Total revenue	4,059

e. Expenditures of cities. Expenditures of cities in Kumamoto-ken for the fiscal year 1938-39 were as follows:

	Amount (in thousand yen)
Council expense	15
Office expense	220
Public works	147
Education	1,029
Health and sanitation	329
Social welfare	67
Police	29
Encouragement of industry	120
Municipal loan expense	790
Liability expense	5
Planning	5
Maintenance expense (property)	65
Electric and gas construction	363
Other	874
Total expenditures	4,059

Restricted

f. Income of towns and townships. Revenue of the towns and villages in Kumamoto-ken for the fiscal year 1938-39 were as follows:

	Amount (in thousand yen)
Surtax on national taxes	
Land tax	910
Income tax	None
Other	343
Surtax on prefectural taxes	
Special land tax	126
Personal property tax	410
Business tax	71
Miscellaneous taxes	769
Special taxes	4,532
Estate incomes	640
Rents and commissions	365
Subsidies	2,484
Town and village loans	809
Amount carried forward from previous year	420
Other	1,590
Total revenue	13,469

g. Expenditures of towns and townships. Expenditures of the towns and townships in Kumamoto-ken for the fiscal year 1938-39 were as follows:

	Amount (in thousand yen)
Council expense	119
Office expense	2,613
Public works	556
Education	6,336
Health and sanitation	489
Social welfare	218
Police	109
Encouragement of industry	479
Public loan expense	636
Various taxes and burdens	80
Building funds	162
Electricity and gas enterprise	None
Other	1,670
Total expenditures	13,469

h. Public debt. The local public debt in Kumamoto-ken as of 1936 totaled 43,482,000 yen. The following is a breakdown of this debt according to areas and objectives for which the debt was incurred:

By area	Amount (in thousand yen)
Prefectural	28,195

Restricted

Municipal	8,310
Town and township	6,378
Water supply (district)	599
By objective	
Education	4,167
Health and sanitation	2,229
Services expense	10,480
Disaster repair	5,433
Ordinary construction	13,911
Electric and gas works	4,067
Public welfare	1,039
Other	2,157

i. Incidence of national income tax. Some indication of the incidence of the tax burden is given by the following figures which show the number of persons in the prefecture in the various income tax brackets as of 1936:

	Number of individuals
Number paying less than 10 yen	5,332
10 to 15 yen	4,173
15 to 20 yen	2,031
20 to 30 yen	2,366
30 to 50 yen	2,053
50 to 100 yen	1,974
100 to 200 yen	1,350
200 to 500 yen	734
500 to 1,000 yen	211
1,000 to 2,000 yen	107
2,000 to 5,000 yen	59
Over 5,000 yen	14
Total number paying income tax	20,404

j. Location of finance offices in prefecture. As of 1943 the Revenue Bureau maintained 3 branches in Kumamoto-ken, located at the following places: Kumamoto-shi, Yatsushiro-shi and Hitoyoshi-shi. In the same year there was a branch mint at Kumamoto-shi, and the Kumamoto District Monopoly Bureau was also located there.

As of 1938, tax collector's offices were located at the following places: Kumamoto-shi, Renpei-cho; Tamana-gun, Takase-machi; Kamoto-gun, Yamaga-machi; Aso-gun, Miyaji-machi; Yatsushiro-shi; Hitoyoshi-shi; Amakusa-gun, Hondo-machi. At the same time deposit bureaus were located at the following places: Kumamoto-shi, Kyo-machi; Kamimashiki-gun, Mifune-machi; Aso-gun, Miyaji-machi; Yatsushiro-shi; Hitoyoshi-shi; Amakusa-gun, Hondo-machi; Uto-gun, Misumi-machi; Tamana-gun, Takase-machi; Kamoto-gun, Yamaga-machi.

IV. PUBLIC SERVICE.

A. TRANSPORTATION

1. Railroads.

a. Pattern and importance. The pattern of railroads in Kumamoto-ken consists of a north-south trunk line, the double-tracked Kagoshima Main Line, along the west coast of the prefecture, with connecting and feeder lines going east. Kumamoto-shi is the hub of the railroad system in the prefecture with many lines radiating from the trunk line to the north, east, and south. In the southern part of Kumamoto-ken lines leave the Kagoshima Main Line, going south east. The mountainous central section of the prefecture is devoid of railroads.

Railroads of primary importance are the Kagoshima Main Line (1)*, Hisatsu Line (3), Hohi Line (4).

Railroads of secondary importance are the Kumanobe Railroad (2), Yunomae Line (7), Misumi Line (8), Yamano Line (9), Takamori Line (11), Kikuchi Electric Railroad (12), Kumamoto Electric Tramway (13), Electric Railroad (14), Kumamoto-shi Electric Tramway (16).

Railroads of tertiary importance are the Kyudai (Daito) Line (5), Kamoto Railroad (6), Kyushu Hichiku Line (10).

Railroads of minor importance are the Coal Mining Railroad in Tamana-gun (15), Logging Railroad in Kuma-gun (17), Logging Railroad in Kuma-gun (18), Kaolin Mining Railroad in Amakusa-gun (19), Logging Railroad in Kuma-gun (20), Logging Railroad in Kuma-gun (21).

Details concerning trackable, gauge, etc. are given in Table 28 and Appendix II.

b. Administration. The Regional office for Kumamoto-ken is located at Moji in Fukuoka-ken.

c. Yards and shops. There are roundhouses at Hitoyoshi-shi and Takamori-machi

* Key numbers refer to route numbers shown on OSS map 7206.

TABLE 28

Railroads In Kumamoto-ken

Railroad	Ownership	Power	Mileage in prefecture	Gauge	Track	No. Stas.	Terminals
1. Kagoshima	Gov't	Steam	86	3'6"	Double	23	Kagoshima (1) & Moji (2)
2. Kumanobe	Private (1942)	Steam & Gas	18	3'6"	Single	12	Harutake & Tomochi
3. Hisatsu	Gov't	Steam	45	3'6"	Single	11	Yatsushiro & Hayato (1)
4. Hohi	Gov't	Steam	42	3'6"	Single	15	Kumamoto & Oita (3)
5. Kyudai (Daito)	Gov't	Steam	5	3'6"	Single	1	Oguni
6. Kamoto	Private (1936)	Steam	12	3'6"	Single	8	Ueki & Yamaga
7. Yunomae	Gov't	Steam	16	3'6"	Single	5	Hitoyoshi & Yunomae
8. Misumi	Gov't	Steam	16	3'6"	Single	6	Kumamoto & Misumi
9. Yamano	Gov't	Steam	12	3'6"	Single	-	Jinnai & Kurino (1)
10. Kyushu Hichiku	Gov't	Steam	5	3'6"	Single	3	Yanagawa (2) & Nishikuchi
11. Takamori	Gov't	Steam	11	3'6"	Single	6	Tateno & Takamori
12. Kikuchi	Private	Electric	15	Prob. 2'6"	Single	15	Kamikumamoto & Waifu
13. Kumamoto (T).	Private	Electric	10	3'6" & 4'8½"	Single	4	Hyakkangoku & Kumamoto

** Kumamoto-shi Waterway Bureau
(1) Kagoshima-ken
(2) Fukuoka-ken
(3) Oita-ken

14. Railroad	Private	Electric	7	3'6"	8	Single	8	Kawashiri & Kumamoto	-----				
15. Coal Mining	Private	Prob. steam	2	3'6"	-	Double	-		-----				
16. Kumamoto-shi (T.)	Private**	Electric	8	4'8 1/2"	-	Single	-		-----				
17. Logging	Private	Prob. steam	6	Prob. 2'6"	6	Single	6	Kumamoto-shi	-----				
18. Logging	Private	Prob. steam	7	2'6"	7	Single	7	Okaba	-----				
19. Kaolin Mining	Private	Prob. steam	4	2'6"	4	Single	4	Takahama	-----				
20. Logging	Private	Prob. steam	9	Prob. 2'6"	9	Single	9		-----				
21. Logging	Private	Horse	4	Prob. 2'6"	4	Single	4		-----				

** Kumamoto-shi Waterway Bureau

2. Highways.

a. Importance and pattern. Highway transportation in Kumamoto-ken is secondary in importance to railroad and water transportation. The best road in the prefecture is a north-south national highway that passes through Kumamoto-shi. Almost all of the north-south cross-prefectural traffic is on this route which is tied up with the interior by a network of secondary routes. The pattern of secondary routes is rather closely knit along the entire west coast of the prefecture. There are very few secondary roads in the mountainous region back of the coastline.

Only 3 or 4 possible east-west routes extend across the prefecture. One route is in the north and runs from Kumamoto-shi via Otsu-mura to Takamori-machi and to Nobeoka-shi on the east coast. Another route extends across the prefecture in a south-easterly direction from Kumamoto-shi, also to Nobeoka-shi. A third route connects Sashiki-machi and Hitoyashi-shi. This road continues on beyond the prefectural boundary in an easterly direction.

b. Administration. The construction and maintenance of national highways in Japan is a function of the Ministry of Home Affairs. Administration is uniform throughout Japan. Prefectural, municipal, town and village roads are planned, constructed and maintained by the local authorities concerned.

c. Construction. Although standards have been set up for the construction of Japanese roads, there is no over-all uniformity. No rules were set up for surfacing and great variety exists from place to place.

Detailed information on the construction and surfacing of individual Japanese roads is not available. It is likely that the north-south national highway across Kumamoto-ken is surfaced with crushed rock or gravel, with possibly short sections of concrete near Kumamoto-shi. Many of the prefectural roads are also graveled or surfaced with crushed rock. Through irrigated areas all roads are elevated from one to 5 feet.

Because much of the land is either irrigated rice land or very rugged and mountainous, road building and maintenance is very difficult. Innumerable tunnels, cuts, fills, and elevations are required in the construction of any road extending an appreciable distance. There is an abundance of road building materials in the prefecture.

d. National highway. From Kurume-shi, Fukuoka-ken, to Futami-mura (about 7 1/2 miles south of Yatsushiro-shi) this highway is 4 lanes wide and hard-surfaced, except for the section

over the divide, between Fukuoka-ken and Kumamoto-ken, which is 2 lanes wide. South of the divide it widens again to 4 lanes and proceeds through cultivated rolling plateau country to Kumamoto-shi. South of Kumamoto-shi the road follows the general contour of the coastline and lies approximately 5 miles inland. South of Futami-mura the width of the road varies. Generally, it is a 2-lane road in the hilly sections, becoming wider in the lowlands.

e. Primary prefectural highways. The primary prefectural highways of Kumamoto-ken are as follows:

- (1) Kumamoto-Otsu-Takamori: a river valley road running the entire distance along the north side of Shira-gawa.
- (2) Takamori-Sakanashi: A comparatively poor prefectural road running through a sparsely settled, undeveloped area follows the base of low mountains at about the halfway mark; the maximum elevation of the road is about 3,000 feet above sea level.
- (3) Sakanashi east to the prefectural boundary: rather unimportant road through sparsely settled, undeveloped rolling land.
- (4) Sakanashi north to prefectural boundary: as the road extends west and north-west from Sakanashi-mura it passes through rice land; where it turns north it leaves the rice land; the north-south section of the road passes through wooded and grass land.
- (5) Kumamoto-Waifu-Prefectural boundary: wooden bridges across Goshi-gawa and Kikuchi-gawa, north of Waifu the road has many sharp curves, tunnels and steep grades.
- (6) Waifu-Otsu: Many small villages along the route; believed to be a good prefectural road having much traffic; there are 2 short span wooden bridges across streams.
- (7) Waifu-Kutami-Yamaga: wooden bridge across Kine-gawa and Uchida-gawa; road passes through rice fields for about 7 miles around Kutami-machi.
- (8) Kagami-Yatsushiro: runs through dry rice fields the entire distance; there are 3 short span bridges on the route, all of wooden construction; believed to be a hard-surfaced, heavily-traveled road.
- (9) Hitoyoshi east to prefectural boundary: overpass over the railroad about 2 miles east of Hitoyoshi-shi; long span concrete bridge over Kawabe-gawa; from this bridge the road extends through a coniferous forest area, then continues through

irrigated rice land until it nears the prefectural border; in this area the road passes through sparsely-wooded grassland.

(10) Omuta-Miike-Eta-Goryo: comparatively good road across rolling terrain; wooden bridge across Kikuchi-gawa about 14 miles northwest of Kumamoto-shi; believed to be a hard-surfaced 4-lane road between Eta-machi and Goryo-mura.

(11) Hondo-(Shino-jima) west coast: main route between Hondo and the west coast of the island; concrete short-span bridge about 1/2 mile west of Hondo; wooden bridge about 2 miles farther; a concrete bridge about 4 miles from the west coast; and a short span wooden bridge across the Shimotsu-fukae-gawa near the coastline on the west; near the center of the island the road has many curves.

3. Water Transport.

The total unloading capacity of the only prefectural port accessible to ocean vessels, Misumi-machi, is 1,850 short tons per 10-hour day.

All prefectural shipping is administered under the jurisdiction of the Moji Marine Transport Bureau, a local branch of the National Ministry of Transportation & Communication.

See also AMS MAP 1571; and H.O. Charts 5676, 2072, 1697, 1660 and 1933. For description of rivers, see Chapter I, C,3.

a. Nagasu-machi.

- (1) Location: 6 miles south of Omuta-shi (Fukuoka-ken).
- (2) Harbor: fishing port; inner harbor protected by breakwaters, opens to south; available only to small vessels; depth of 30 feet; 3/4 miles off entrance to inner harbor.
- (3) Clearance: road and rail.

b. Chikoze.

- (1) Location: mouth of Tsuboi-kawa, north bank, due west of Kumamoto-shi.
- (2) Harbor: in mouth of river, protected by breakwaters. Shallow.
- (3) Clearance: road.

c. Misumi-machi.

(1) Location: northwest tip of large peninsula southwest of Kumamoto-shi.

(2) Nature of port: considerable amounts of lumber and cement exported.

(3) Harbor: extends south around tip of peninsula, in straits between mainland and Oyano-shima and between mainland and Tobase-shima; major port facilities about 1.5 miles south of town proper, on south shore of peninsula; while sheltered in all weather, in summer southwest winds sometimes interfere with handling of cargo. There are 3 entrances as follows: north entrance between mainland and Nogama-shima, 2 channels divided by Nakagami-shima, east channel used by small craft only, west channel 120 yards wide outside 18-foot contour; south entrance, 2 channels divided by Senzoku-shima, east channel has least width of 240 yards outside 18-foot contour, west channel has tortuous fairway and is not recommended; east entrance, between mainland and Tobase-shima, has general width of 300 yards outside 6-foot contour.

Harbor depths are from 19½ to 60 feet; north entrance east channel, 9 feet; north entrance west channel, 60 to 114 feet; south entrance east channel, 54 to 90 feet; south entrance west channel, 19½ feet; east entrance, 7½ feet. Tides are semidiurnal and have a mean lunital interval of 8 hours 46 minutes; springs rise 14.2 feet; neaps rise 9.5 feet.

There are 5 mooring buoys in southern part of harbor spaced 300 yards apart, 2 of which are in less than 30 feet. Outside buoyed area there are two 500-yard anchorages and two 300-yard anchorages in 33 to 66 feet with good holding ground. There are also limited anchorages over poor holding ground in northern part of harbor, with deep water close to shore.

Major berthing facilities are located about 1.5 miles south of town proper, on south shore of peninsula; known details are as follows:

TABLE 29

Berthing Facilities, Misumi-madri, Kumamoto-ken.

Location	Type	Purpose	Berthing Space (in feet)	Depth (in feet)	Berthage
Kassen-saki	no data	Cargo	984	24 to 48	Two 450-foot vessels drawing 20 ft.
Front of RR station	Floating	Boat landing	30-150-150	3 to 9	
Front of RR station	Floating	Boat landing	30-150-150	3 to 9	

Stone embankment with 18 to 31½-foot depths fronts the town in the northern part of the harbor. Plans for considerable development are indicated.

Unloading capacity is estimated at 1,850 short tons per 10-hour day (960 short tons per 8-hour day at known deep-water berths). In 1938, the port admitted 78 steamers (135,169 tons); 88 were cleared. There are branch railroad facilities at all landings on south waterfront with road connections. There are 9 or 10 warehouses, largely on south waterfront. Water can be taken from waterboats, but no coal is available. Local lighters are available.

d. Noboritate-machi.

(1) Location: east central coast of Oyano-shima within Misumi-machi harbor limit.

(2) Harbor: improved waterfront; no water at low tide.

e. Iwaya.

(1) Location: northeast coast of island, opposite Misumi-machi.

(2) Harbor: improved waterfront with several small piers; no water at low tide.

f. Futamado (Kojiro).

(1) Location: inlet south of Uryu-misaki, east coast of Kami-shima.

(2) Harbor: inlet with 30 feet opens southeast; channel entrance 900 feet long with 35-foot depth; mooring buoy.

(3) Landing facilities: quay, accommodating vessels less than 2,000 tons, fronts the cement works; cement loaded by conveyor; 2 buoys used in berthing. 63

g. Yufunehara.

(1) Location: inlet south coast of Kami-shima, north-east of Shiohama.

(2) Harbor: shallow inlet; port of call for coastal vessels.

h. Akasaki-mura.

(1) Location: northwest coast of Kami-shima.

(2) Harbor: small basin protected by breakwaters.

i. Hondo-seto.

(1) Location: separates Kami-shima and Shimo-jima; Hondo-seto is a narrow passage, less than 100 yards wide at its narrowest part; depth at highest high water, 7 to 10 feet; a drawbridge spans the channel near the south end.

j. Hondo-machi.

(1) Location: north-east coast of Shimo-jima, on Hondo-seto.

(2) Harbor: basin available only to small vessels.

k. Ushibuka-machi.

(1) Location: southeast tip of Shimo-jima.

(2) Anchorage exists in 72 to 84 feet with deep approach; tides: springs rise 9.5 feet, neaps 7.0 feet.

l. Oniki-mura.

(1) Location: southwest coast of Shimo-jima; with 21 to 27 feet.

(2) Harbor: natural inlet; small basin protected by breakwater near village; harbor entrance channel has a depth of 60 feet.

(3) Landing facilities: quay in 6 to 8 feet with berthage for one 2,000-ton vessel; coal available from neighboring mines.

m. Sakitsu.

(1) Location: north side of Sakitsu-ko, on west coast of Shimo-jima.

(2) Anchorage: in 72 to 84 feet with deep approach; tides: springs rise 9.5 feet, neaps 7.0 feet; junk traffic is usually heavy.

n. Shimoda-gawa.

(1) Location: empties into head of Sakitsu-ko, west side of Shimo-jima; navigable at high water for about 2 miles by small craft.

o. Oe-mura.

(1) Location: north side of entrance to Sakitsu-ko, southwest coast of Shimo-jima; small fishing harbor.

p. Shimotsufukae-mura.

(1) Location: west coast of Shimo-jima; small harbor protected by breakwater.

q. Tomioka-machi.

(1) Location: northwest coast of Shimo-jima.

(2) Harbor: natural bay to north of town protected by sandspit. General harbor depth, 24 to 30 feet;

r. Oninoike-mura.

(1) Location: northeast tip of Shimo-jima; small harbor protected by breakwater; small craft only, ferry connects with Kuchinotsu-machi, Nagasaki-ken.

s. Yatsushiro-shi.

(1) Location: on mainland east of north end of Kami-shima.

(2) Harbor: extremely restricted water area in river mouth; small craft basin; approach channel lies between mud flats extending as far as 2.5 miles off river mouth; low water depth of 2 feet; there are rail and road connections; The Kuma-gawa, river with a strong current, empties into the bay at Yatsushiro-shi. It divides into 3 channels near mouth. Navigable for small craft 16 miles upstream.

t. Hinagu-machi.

(1) Location: 5.5 miles south of Yatsushiro-shi.

(2) Harbor: small, protected by breakwaters; dredged channel leads between breakwaters; large vessels can anchor only within 2 miles of harbor.

(3) Clearance: rail and road.

u. Sashiki-machi.

(1) Location; 9.5 miles south of Hinagu-machi.

(2) Harbor: within mouth of Sashiki-gawa; shallow.

(3) Supplies; oil stores under jurisdiction of Sasebo Naval Fuel Depot.

V. Minamata-machi.

(1) Location: 9 miles southeast of Sashiki-machi.

(2) Harbor: divided into main harbor, separate inlet, small basin, and river mouth from south to north; main harbor, south of Myojin-saki, consists of an outer harbor one mile long in a north-south direction and about 1/2 mile wide, and of an inner harbor, Sannenga-ura, protected by a detached breakwater extending 650 feet in a northwest direction from south side of entrance; a separate inlet, Umeda-ko, protected by a breakwater extending from north shore of Myojin-saki, constitutes a private harbor of the Japan Nitrogen Fertilizer Co.; a small basin, protected by a short breakwater, fronts Marushima district, north of Umeda-ko;

Mimamata-gawa, which can be entered by small craft at high water, empties north of Marushima basin.

Depths in the main outer harbor are 60 to 28 1/2 feet; Sannenga-ura, 22 1/2 to 6 feet; Umeda-ko, 33 to 10 1/2 feet; Marushima basin dries.

There are two 500-yard anchorages or three 400-yard anchorages in 35 feet with comparatively calm water except during west winds.

(3) Landing facilities: main harbor: 980-foot quay in 20 feet along south shore of Sannenga-ura; 1,000-foot seawall in shallow water along shore east of quay. Umeda-ko: 460-foot quay along south shore with 11 feet, accommodating 2 vessels of 1,000 tons; vessels of over 3,000 tons can come alongside for only half their length, and at low water must moor 10 to 13 feet off the quay; one travelling electric crane on quay.

(4) Clearance: main railroad line runs within 100 yards of Sannenga-ura; narrow track connects fertilizer plant and Umeda-ko quay; there are adequate road connections; warehouses and open storage available adjacent to Umeda-ko.

4. Air Facilities.

Table 30 shows that at the end of 1944 there were 6 classified and 2 reported airfields in Kumamoto-ken.

Waifu Airfield, in December 1944, had 16 hangars, numerous buildings and 90 revetments under construction.

Kumamoto Airport was reported to be the site of an air crew school established in 1941.

TABLE 30

Airports & Seaplane Anchorages,
1944, Kumamoto-ken

Name	Type	Approximate locations Classified*	Elevation(in feet)
Goro (Amakusa)	S	1 mi. SSE of Goro, off NE coast of Shimo-jima	S.L.
Hirose (Kikuchi; Sonbongie; Ueki) Hitoyoshi	**L/G L/G	2 mi. ESE of Ueki In mountainous area 14 mi. NE of Hitoyoshi	
Kikuchi (Kikuchi- gawa; Takase) Kumamoto	L/G L/G	2 mi. SE of Takase About 2 mi. NNE of Kumamoto	8 (est.)
Waifu (Hiegata; Hikat; Hiro)	A/D	About 8 mi. WSW of Waifu	
		Reported*	
Bochu (Botyu; Miyaji)	L/G	1 mi. SE of Bochu, about 22 mi. ENE	
Misumi	L/G	Near Misumi of Kumamoto	

*All fields whose existence has been established by reasonably conclusive evidence are included in the "Classified" list. Those fields whose existence is questionable owing to possession of only dubious or insufficient evidence are included in the "Reported" list.

**Alternate names are carried in parentheses after the principal names.

A/D Airdrome with all-weather runway, or complete facilities, or both.

L/G Landing ground without an all-weather runway and with complete facilities.

S.L. Sea level or zero altitude.

B. COMMUNICATIONS

Kumamoto-ken is included with Fukuoka, Kagoshima, Miyazaki, Nagasaki, Oita and Saga prefectures in a single administrative district under the Kumamoto Bureau of Communications (Kumamoto Teishin-Kyoku) of the Ministry of Transportation and Communications (Unyu Tsushinsho). The headquarters of the district is located and Kumamoto-shi in a building adjacent to the city hall and across a small river or canal from the Headquarters of the Sixth Army Division. The bureau headed by a chief, consists of 4 main departments, business, engineering, management and savings. The chief of the bureau is responsible for all civilian communications activities within the district including telephone, telegraph and postal services.

Actual operation of submarine cables, as well as radio-telegraph and radio-telephone in Kumamoto-ken is nominally in the hands of the International Telecommunications Co., which is entirely dependent on the Japanese government.

Control and supervision of domestic radio broadcasting, including operations of stations and production of programs, is in the hands of the Japanese Broadcasting Corporation (Nippon Hoso Kyokai). This company is likewise under the complete control of the Ministry of Transportation and Communications.

Since the Cabinet reorganization of November 1943 control and censorship of the Press has been supervised by the Cabinet Board of Information (Joho-in).

1. Telephone

As of 1939, Kumamoto-ken had approximately 10,800 telephones, an increase of 800 since 1937. It can be expected that this number has further increased because as late as March 1945, 1,045 telephones of the 8,000 which were offered in the second telephone offering movement were allotted to the Kumamoto District. The number of telephones in Kumamoto-ken represents an average of 1.48 for every 100 persons, the highest for any prefecture in Kyushu, which compares with 1.38 for Japan as a whole. In 1940 the total number of local and long distance calls for this district was 549,014,000 and 41,673,000, respectively. It is estimated that the daily average handled in Kumamoto-ken during the same year was 188,017 local calls and 14,271 long distance calls. The local calling rate (number of calls per day per telephone) was between 17 and 19, which is extremely high in comparison with call rates in the United States, but

an average figure for Japan.

Kumamoto-shi is the focal point for all messages originating and terminating within the district. It has direct circuit connections with all of the other district zone centers as well as its sub-centers within its own district. The main communications route enters the north west corner of the prefecture from Omuta-shi, Fukuoka-ken, paralleling the Kagoshima Main Line to Kagoshima-shi via Nagasa-machi. At the latter point it connects with the submarine cable to Shimabara-shi in Nagasaki-ken. From Kumamoto-shi it continues south, still following the same railroad to Uto-machi, Ogawa-machi, Kagami-machi, Yatsushiro-shi, Hinagu-machi, Sashiki-machi, Minamoto-machi and then into Kagoshima-ken at Fukuro-machi. Another cable runs east across the prefecture from Kumamoto-shi via Otsu and connects with the east side cable at Oita-shi, Oita-ken. This route follows the Echi Main Line

During the past 10 years the Bureau of Communications has constructed at the insistence of the army, an elaborate network of subterranean and submarine cables throughout Japan. It can therefore be expected that the main communications routes in Kumamoto-ken are of cable construction rather than open wire. The underground cables are laid in ducts and are paper-insulated and land-covered. The ducts are generally iron tubes but where there is no surface water, earthen or concrete tubes are used.

There is a telephone repeater station, a very vulnerable point in the cable network, located at Kumamoto-shi. These stations are so designed that the buildings and equipment can be accommodated to a second toll cable. The 2-repeater stations are of the current type consisting of the usual vacuum tube 2-way amplifier. The 4-wire repeaters consist of 2 sets of amplifiers. One set is used for transmitting in each direction. Provision is made for auxiliary equipment, such as current supply circuits, alarm circuits, and intermediate signaling circuits.

Telephone service will be found in the majority of the other cities and towns not situated on the main route if they are located on main highways or railroads. The open-wire feeder circuits from these cities and towns will be, in most cases of 1.6 mm hard drawn copper wire. Telephones will also be found in practically all police stations, police sub-stations and police boxes in the prefecture.

Telephone rates are of 2 kinds, measured and flat rate. In Kumamoto-shi the rate was 3 yen per year (1938) and a measured rate of 3 sen per call was surcharged. In all other exchanges a flat rate of 60 to 90 yen per year (1938) was charged, the exact rate being determined according to the number of subscribers.

With the exception of Kumamoto-shi the telephone exchanges, single position magnetic and series multiple magneto switchboards, along with telegraph installations, will be found in the same buildings as the post offices. In a large majority of cases, one clerk is responsible for all the contacts that the general public has with the communications board.

In Kumamoto-shi the telephone office is located in the same building as the telegraph office which is 4 blocks southwest and on the same street as the City Hall. It is estimated that this exchange, a common battery manual switchboard, services 6,000-6500 telephones. A large percentage of these telephones are the wall type, twenty-one public telephones are installed in booths on the streets of the business sections and in stores, railroad stations and bus terminals. Private branch exchanges (PBX) will be found in the government offices and the larger of the industrial business establishments.

2. Telegraph

Kumamoto-shi is one of the zone centers of the telegraph network of Japan, and has direct wires to all other zone centers (Tokyo, Nagoya, Osaka, Hiroshima, Sendai, and Sapporo). It is also connected with the cities and town of Kumamoto-ken and is, therefore, a key center for both national and local service.

Trunk lines follow closely the network pattern of telephone circuits. In addition, there are circuits from Uto-machi around the cape to Noboritate-machi via Misumi-machi. Telegraph lines are of both serial and underground construction. The main telegraph office is located in Kumamoto-shi. Branch offices are located in most or all of the sub-post offices located throughout the city. In the rest of the prefecture, however, telegraph service facilities are located in the post offices or railroad stations. In 1936 telegraph service was available in 143 of the 176 third-class post offices. Such combination offices are particularly strategic, as they usually contain telephone facilities as well. Ordinary telegrams dispatched from the prefectures in 1936 totaled 638,000 as against a

total of 696,000 delivered for the same year.

Equipment at the main office is reported to be modern and efficient, and to include Kana-printers, senders, automatic repeaters, photo-telegraph, etc. The most common types of printer equipment in use are: Western Electric Duplex, Morkum Double Duplex, Teletype, Baudot Multiplex, and the Japanese Letter Printer. The outlying areas depend entirely on hand keys.

Rates for official and private telegrams are 15 Japanese characters or 5 European words for 40 sen, with an overcharge of 7 sen for 5 additional Japanese characters or one additional European word.

3. Radio

Kumamoto-ken is well-provided with broadcasting facilities. Stations are sufficient in number and power to serve the prefecture. Transmitting equipment is good, and studio equipment relay lines and other related installations are adequate.

JOGK, the principal station for the prefecture is located in Kumamoto-shi. It is likewise the key station of the Kumamoto Regional Central. As such, it includes administrative offices, construction and maintenance crews and equipment, facilities for preparing and presenting programs and a transmitter of 10,000watts (a 100,000 watt transmitter is reported under construction). The net of local transmitters consists of: JOLK, Fukuoka-shi; JOHG, Kagoshima-shi; JOSK, Kokura-shi; JOMG, Miyazaki-shi; JOAG, Nagasaki-shi; and JOIP, Oita-shi all operated by the Kumamoto Regional Central which is, in turn, under the general administration of Broadcasting House (The home studio building of JOAK, TOKYO). In 1940 and 1941 the overall offices of the Broadcasting Corporation of Japan issued policy directives and maintained relay lines for the entire network, while routine matters were handled within the Kumamoto Regional Central. The General Affairs, Program and Engineering Divisions of this central made it in effect, a miniature of the Broadcasting Corporation of Japan. JOGK can transmit programs originating in its own studios and the studios of JOAK, TOKYO. Programs from studios to transmitter are carried by underground cable. Electric current is obtained from local power sources, but the station is equipped with a motor generator for use in emergencies. Circuits for service messages, necessary for synchronizing programs, run parallel to the relay lines. JOMG is equipped with a receiver Frequency 6,125kc to be used when relay lines are interrupted. About 40 to 50 percent of the programs originate from this central, the remainder

originate from JOAK, Tokyo.

In addition to the installations of the Broadcasting Corporation of Japan (see table 31) there are various radio-telephone and radio-telegraph installations in Kumamoto-ken (see table 32) which are used for communications from ship-to-shore, from land-to-plane, between nearby cities, and to may islands as emergency routes in the event of failure of telephone and telegraph submarine cables.

Table 31

Installations
Broadcasting Corp. of Japan, 1945
Kumamoto-ken

Location	Address	Description
Hinahisa-machi Kumamota-shi	Kaigan-dori Shiromi-cho (to the rear of the City Hall and Communications Bureau)	Public address system Kumamoto central offices and studios of JOGK. Permanent information office.
Kumamoto-shi	Hanabatake Park	Public address system
"	Daikai Shrine	"
"	Hinahisa-cho	"
"	Kaigon-dori	"
"	Kitaoka Shrine	"
"	Yamashita-cho	"
"	Ari Grounds	"
"	Yashiro-cho, Hachimangu	"
Shimizu-machi		Transmitting station JOGK

Table 32
Radio Stations, 1943
Kumamoto-ken

Station	Call	Location	Freq.(kc)	Watts	Remarks
Goshonoura	JQJ	32° 20'15"N 130° 20'10E	--	--	Unidentified
Iwa(zozo)	JQM	--	--	---	Unidentified
Kumamoto	JOGK	32° 50' 12"N 130° 43' 16"E	790	10,000 (100,000?)	Brdestng station
Me-shima	JGI	31° 59' 35"N 128° 21' 20"	185	250	Radio-telegraph
Miyata	JQI	32° 14' 00"N 130° 15' 00E	--	--	Unidentified
Noboritate	JQK	32° 35' 30"N 130° 26' 00"E	--	--	Unidentified

Public address systems bring an integral part of Japanese life, are found throughout the prefecture (see table 31) in the parks, railroad stations or schools; while private systems may exist in factories and department stores. Many of the municipal parks in the smaller cities throughout the prefecture have small towns equipped with loud speakers for relaying various programs of general interest. Similar equipment is frequently installed near shrines or other places where crowds gather.

Radio broadcasting is one of the principal means of public instruction in Kumamoto-ken. As of 1943 there were approximately 123,598 licensed receivers (or 47.9 radios per 100 families) in the prefecture compared with 7,000,000 receivers or an estimated 35 radios per 100 families in all of Japan. These receivers are similar to small table models manufactured in the United States. Short-wave reception is prohibited; and there is only one band covering roughly 550 to 1,500 kc or slightly less than the standard broadcast band. These sets are of 3 and 4 tubes and are designed solely for local reception. Edison screw-type sockets are used. A continual check is made by repairmen and consultants from specially selected repair shops who travel throughout Kumamoto-ken under the sponsorship of the Broadcasting Corporation of Japan. In the capacity, they are able to watch for indications of illegally constructed or operated receivers or clandestine transmitters.

4. Cables

Kumamoto-ken does not have a very extensive submarine cable network. However, almost all of the telephone traffic from Nagasaki-shi is routed over a cable between Shimabara-shi, Nagasaki-ken and Nagasu-machi, Kumamoto-ken. There are a number of short cables to small scattered islands off the coast used for both telephone and telegraph service.

Table 33

Submarine Cable Landings, 1944, Kumamoto-ken

From	Location	To	Cables	Type
Amakusa Shimojima	32°30'N 130°55'N	Higashi Arie, 32°39'N Nagasaki-ken 130°11'E	1	Teleg.
Nagasu	32°55'N 130°27'E	Shimabara 32°49'N Nagasaki-ken 130°31'N	1	teleg.
Yanagiura	32°32'N 130°26'E	Amakusa, Kami-jima, Kumamoto-ken 32°31'N 130°26'E	4	teleg. and/or teleg

5. Postal Service

Postal Headquarters for this prefecture are located in Kumamoto-shi.

The main post office in Kumamoto-shi is located outside the Bureau of Communications, a large building situated in the downtown area, on the southern boundary of the Sixth Army Division Headquarters, or 2 blocks north of the Rice Exchange. A subpost office is situated in the center of the city, one block north of the Prefectural Office.

For postal savings data for this prefecture, see Chapter III, Finance.

Table 34

Classes of Post Offices, 1936, Kumamoto-ken

Key	Class	Number
1	First class; administrative headquarters of communications district	1
2	Ordinary first class	-
3	Second class	-
4	Special third class	2
5	Third class, with telegraph and telephone	111
6	Third class, with telegraph only	11
7	Third class, with telephone only	2
8	Ordinary third class, without telegraph or telephone	8
9	Third class, no collection or delivery with telegraph and telephone	21
10	Third class, no collection or delivery, with telegraph	4
11	Third class no collection or delivery, no telegraph or telephone	1
12	Third class, no collection or delivery, no telegraph or telephone	18
13	Sub-post office; collection and delivery, but no telegraph or telephone	21
	Total	<u>200</u>

TABLE 35

Location of Post Offices, 1936, Kumamoto-ken.
(Key numbers indicate class of P.O. as shown in table 34)

	Key		Key
KUMAMOTO-SHI	1, 5	KAMOTO-GUN	
YATSUSHIRO-SHI	4, 12	Yamaga-machi	5
HITYOYOSHI-SHI	4	Kutami-machi	5
ARAO-SHI	5	Ueki-machi	5
HOTAKU-GUN		Hiraogi-mura	13
Oshima-machi	5	Mitake-mura	12
Takahashi-machi	9	Takema-mura	13
Nishizato-mura	5	Uchida-mura	12
Kawachi-mura	5	Chida-mura	12
Hirohata-mura	13	Yamauchi-mura	13
Isono	13	Tasoko-mura	12
Nicho	8	Awase	5
UTO-GUN		Tomita	5
Misumi-machi	5	Shimo Uchida	5
Matsuyai-machi	5	KIKUCHI-GUN	
Uto-machi	5	Waifu-machi	5
Konoura-mura	5	Kawaharu-machi	5
Amitsu-mura	9	Suigen-mura	5
Oda-mura	5	Ryumon-mura	5
TAMANA-GUN		Shirokita-mura	12
Ohama-machi	12	Kamogawa-mura	12
Ikura-machi	5	Otsu-machi	5
Eta-machi	5	Tsuda-mura	5
Tamana-machi	5	Shisui-mura	5
Nankan-machi	5	Nishigoshi-mura	8
Nagasu-machi	5	Ihagi	9
Fumoya	5	Iakesako	12
Hisho	5	ASO-GUN	
Takamichi-mura	5	Miyaji-machi	5
Yokoshima-mura	9	Uchinomaki-machi	5
Oama-mura	5	Oguni-machi	5
Konoha-mura	5	Umamihara-machi	5
Togo-mura	13	Takamori-machi	5
Sakanoshita-mura	9	Ogaishi-mura	9
Midori-mura	12	Minamioguni-mura	5
Harutomi-mura	5	Ubuyama-mura	13
Sakaki-mura	9	Kusakabe-mura	5
Haraka-mura	12	Kashiwa-mura	5
		Sugeno-mura	13
		Nishikino-mura	13
		Yamanishi-mura	13
		Akamizu	5

	Key		Key
Yoshida	5	ASHIKITA-GUN	
Bochu	5	Hinagu-machi	5
Sasakura	5	Sashiki-machi	5
Tsudomi	5	Minamata-machi	5
Asoyama-kami	11	Futami-mura	5
Kayo	5	Tanoura-mura	5
Tsuedate	9	Yunoura-mura	5
		Tsunagi-mura	5
KAMIMASHIKI-GUN		Kugino-mura	13
Mifune-machi	5	Yoshio-mura	5
Kiyama-machi	5	Kudaragi-mura	5
Hama-machi	5	Shiraishi	5
Nanataki-mura	5	Tsuribashi	13
Akitsu-mura	12	Fukuhama	13
Toishigawa	13		
Kimoto	5	KUMA-GUN	
Kanenai	5	Menda-machi	5
Tsushida	13	Taragi-machi	5
Yosa	5	Yunomae-machi	5
Namazu	5	Ichibu-mura	5
Nasukawa	13	Youra-mura	5
Shirobara	13	Itsuki-mura	5
Tsumori-mura	5	Watari-mura	5
Tatsuno-mura	5	Isshochi-mura	5
Shiraito-mura	13	Konose-mura	13
Asahi-mura	5	Hayashi Onzen	5
		Ahata	5
SHIMOMASHIKI-GUN		Mizukami	13
Kumanosho-machi	5	Higo Shimbashi	13
Matsubase-machi	5		
Ogawa-machi	5	AMAKUSA-GUN	
Tomochi-machi	5	Noboritate-machi	5
Toyofuku-mura	9	Hondo-machi	5
Kaito-mura	13	Futae-machi	5
Toyono-mura	5	Tomioka-machi	5
Higashitomochi-mura	5	Ushibuka-machi	5
Katashida	5	Yushima-mura	5
Ogawa ekimae	12	A-mura	10
		Kusubo-mura	10
YATSUSHIRO-GUN		Oura-mura	6
Kagami-machi	5	Akasaki-mura	5
Miyanochara-machi	5	Shimotsura-mura	5
Shimomatsukuma-mura	9	Shimago-mura	5
Miyaji-mura	13	Shigaki-mura	9
Sencho-mura	9	Himedo-mura	5
Bunsei-mura	12	Takado-mura	6
Taneyama-mura	8	Hinoshima-mura	6
Kakisako-mura	8	Odo-mura	12
Itsukaso	8	Ura-mura	10
Matsukuma	5	Miyada-mura	5

	<u>Key</u>		<u>Key</u>
Sumoto-mura	5	Miyanokawachi-mura	6
Shimoura-mura	5	Fukami-mura	6
Miyaji-mura	12	Hayaura-mura	6
Otao-mura	6	Kameura-mura	6
Nakata-mura	9	Oniki-mura	6
Hon-mura	12	Fukae	6
Saitsu-mura	9	Chido	1
Goryo-mura	5	Yanagi	2
Oninoike-mura	5	Kiwa	3
Sakasegawa-mura	5	Aitsu	4
Tororo-mura	5	Kyoraki	5
Takahama-mura	5	Arashi	10
Oe-mura	5	Katagawa-ura	13 & 10
Tomitsu-mura	5	Yamatono	6
Itchoda-mura	5	Shashie	6
Shingo-mura	5	Karisu	6
Miyajidake-mura	5	Kudama	9
		Notsu	5 & 13

6. Newspapers

As of 1937, there were 89 newspapers and magazines published in Kumamoto-ken. There were 7 publications with daily editions and 11 with more than 4 editions per month and 71 with less than 3 editions per month. In 1938 the number of daily newspapers was reduced from 7 to 6, which may have been further reduced since that date. An important local newspaper is the Kumamoto Nichi Nichi, published in Kumamoto-shi, Kamidori-cho.

It is very likely that the leading Osaka papers, the Osaka Asahi Shimbun and the Osaka Mainichi Shimbun which publish provincial editions, are circulated in this prefecture.

C. UTILITIES.

1. Gas.

a. Enterprises and supply. In 1939, one public utility gas enterprise (Seibu Gasu KK) operated in Kumamoto-ken, serving Kumamoto-shi. This company supplied 6,038 consumers with a total of 3,043,000 cubic meters of gas, and in 1938 had mains totalling 41.9 kilometers.

2. Water Supply and Distribution.

According to available records there are 8 known waterworks in Kumamoto-ken, one owned by a city and 7 by towns and villages. Tap service exists in 23,677 or 9 percent of the buildings of the prefecture as compared with 27 percent for Japan as a whole.

In 1937 there were 20,452 water service outlets of which 287 were private, 1,213 common, 51 public, 16,965 metered and 1,911 fire hydrants. Available data concerning individual waterworks in Kumamoto-ken are as follows: (figures are for 1937 unless otherwise noted.)

a. Kumamoto-shi waterworks built 1925.

Population served	97,773
Percent of total population	45.4
No. of households supplied	16,910
Percent of total households	47.6
Average daily supply (gallons)	3,933,200
Average daily per capita consumption (gallons)	39
Length of distribution mains (miles)	121
Water pressure in lbs/in ²	21.6
Total outlets (all kinds)	16,268
Metered outlets only	12,797
Fire hydrants (1927)	1,065
Private wells in city	10,428

The planned ultimate capacity of the water system is 8,200,000 gallons per day.

Supply is from 2 drilled wells at Aso-zan, equipped with pumps, and flowing springs at Sunatori and Demizu.

Water is stored at Ezu-ko, 3.8 miles in diameter, located about 2 miles southeast of the city. Two reservoirs of 1,980,000 gallons total capacity are in service but their locations are not recorded.

Purity of the water may be indicated by the following bacterial count per cubic centimeter made in 1927:

Raw water at source: max. 16; min. 2; mean 9.
Finished water in mains: max. 20; min. 2; mean 11.

b. Minamata-machi (waterworks built 1937)

Population served	3,335
Percent of total population	12
No. of households supplied	667
Average daily supply (in gallons)	56,750
Average daily per capita consumption (in gallons)	17
Total outlets (all kinds)	790
Metered outlets only	635
Private wells in the town	1,017

The planned ultimate capacity of the water system is 1,380,000 gallons per day.

c. Tomioka-machi.

According to 1927 records this town has a pressure water system operating from wells in the northeast part of the town. Average quantity of water delivered under 51.6 lbs. per square inch was 3,750 gallons per day.

d. Otsu-machi.

According to 1937 records, this town has an operating waterworks of 1,320,000 gallons daily capacity supplying a total of 5,098 outlets. Estimated daily per capita consumption is 46 gallons. Information on supply and distribution is not available. Ultimate planned capacity is 1,550 gallons

e. Ushibuka-machi.

A waterworks was completed in Ushibuka-machi in 1927 with a planned capacity of 152,594 gallons per day. The source of supply is a rainwater catchment in the valley near the town. In 1927, 26 fire hydrants and 39 public hydrants were in operation. Estimated daily per capita consumption is 22 gallons.

f. Misumi-machi.

According to 1944 records, this port town has water boat facilities at the dock for supplying harbor vessels.

3. Sewage Disposal.

According to 1940 records a modern sewage disposal system existed at Kumamoto-shi with 109 miles of sewer mains in operation. In 1940 plans were under consideration for the construction of a sewage treatment plant.

As elsewhere in Japan, night soil collection is an accepted method for urban sewage disposal. For yard stick purposes primarily, it may be noted that in Kumamoto-shi 9,850 homes were served in 1937.

4. Electric Power.

At the end of 1943, the electric power generating plants of Japan had an estimated total capacity of 11,500,000 kilowatts and an estimated production of 46,700,000,000 kilowatt-hours. The Kyushu Supply Area, in which Kumamoto-ken is located, had approximately 15 percent of the total power capacity of Japan and approximately 18 percent of this national Kilowatt-hour production. The electric generation facilities within Kumamoto-ken contributed approximately 9 percent of the total electrical energy produced in the entire Kyushu Supply Area.

The Kyushu power grid is divided into 3 sub-areas; namely:

(1) Kokura-Tobata-Yawata grid (serving mainly those cities and the nearby areas).

(2) West Kyushu grid (serving the remainder of Fukuoka; the prefectures of Nagasaki and Saga; and the western portions of Miyazaki, Kumamoto, and Kagoshima).

(3) East Kyushu grid (serving Oita-ken, and the eastern portions of Miyazaki, Kumamoto and Kagoshima).

Kumamoto-ken is thereby served by both the East and West Kyushu grids, the East Kyushu grid being a 50-cycle frequency system, while the west Kyushu grid operates on a 60-cycle frequency. There are a few double-frequency hydro-electric generating stations in Kumamoto-ken, which can feed electrical energy into either network, as required. The majority of the generating plants in Kumamoto-ken are operated on a 60-cycle frequency.

In Kumamoto-ken, electric power is derived largely from hydro-electric generating plants, which carry the base load throughout the year. Thermal plants are used to supplement the decline in hydro-electric generation during the dry seasons (November through March and August), and for the supply of peak demands.

a. Capacity and Production. Kumamoto-ken has 34 electric generating plants ranging in capacity from 1,000 to 15,000 Kilowatts. All but 2 of these plants are hydro-electric stations. The total capacity of these plants at the end of 1941 was 134,233 Kilowatts (112,233 kilowatts hydro-electric and 22,000 Kilowatts thermal electric). The estimated production of these Kumamoto-ken plants in 1941 was 759,963,000 Kilowatt-hours (656,563,000 Kilowatt-hours hydro-electric and 103,400,000 Kilowatt hours thermal electric). Approximately 93,060 metric tons of coal (of thermal content of 11,500 BTU per pound) are estimated to have been required for the prefecture's thermal plants in 1941.

Table 36 lists the electric generating plants of Kumamoto-ken (1,000 or more Kilowatt capacity) with location, frequency, capacity and position of importance in the prefecture. Appendix III gives specific details on these generating stations.

TABLE 36

Electric Generating Plants, Kumamoto-ken.
(1,000 or more kilowatt capacity)

Plant	Location	Type & Frequency	Capacity (in Kilowatts)	Rank in Prefecture
Itsuki No. 2	Itsuki-mura, Kuma-gun	H-U	3,920	12
Kawabashirigawa No.1	Kusakabe-mura, Aso-gun	H-50	1,649	28
Kawabashirigawa No.2	Kashiwa-mura, Aso-gun	H-50	2,908	14
Kawabegawa No. 1	Itsuki-mura, Kuma-gun	H-60	2,300	19
Kawabegawa No. 2	Itsuki-mura, Kuma-gun	H-60	6,900	6
Kikuchigawa No. 1	Waifu-machi, Kikuchi-gun	H-60	1,200	31
Kikuchigawa No. 2	Waifu-machi, Kikuchi-gun	H-60	2,400	18
Kikuchigawa No. 3	Waifu-machi, Kikuchi-gun	H-60	2,000	22
Kikuchigawa No. 4	Waifu-mura, Kikuchi-gun	H-60	1,800	25
Kikuchigawa Bangai No. 1	Waifu-machi, Kikuchi-gun	H-60	1,200	33
Koguni	Oguni-machi, Aso-gun	H-U	6,000	8
Kurofuchi	Oguni-machi, Aso-gun	H-50/60	7,000	5

Plant	Location	Type & Frequency	Capacity (in Kilo-watts)	Rank in Prefecture
Kurogawa No. 1	Seta-mura, Kikuchi-gun	H-60	15,000	1
Kurogawa No. 2	Seta-mura, Kikuchi-gun	H-60	1,800	25
Kurogawa No. 3	Seta-mura, Kikuchi-gun	H-60	2,000	23
Mamihara	Umamihara-machi, Aso-gun	H-U	4,00	11
Midorikawa	Higashitomochi-mura, Shimomashi-ki-gun	H-50	4,700	9
Miyasono	Kinoe-mura, Kuma-gun	H-U	2,150	21
Naidaijingawa	Shiraito-mura, Kamimashiki-gun	H-50	2,450	17
Nanatakigawa No. 1	Takio-mura, Kamimashiki-gun	H-50	1,380	30
Nanatakigawa No. 2	Takio-mura, Kamimashiki-gun	H-50	2,650	15
Oihaya (Oiso)	Higashitomochi-mura, Shimomashi-ki-gun	H-60	4,200	10
Omukai	Minakami-mura, Kuma-gun	H-U	1,200	34
Shimbashi	Minakami-mura, Kuma-gun	H-60	1,850	24
Shimotsuru	Kakisako-mura, Yatsushiro-gun	H-U	1,680	27
Shirakawa	Nishikino-mura, Aso-gun	H-50	6,400	7
Shiramizutaki	Minakami-mura, Kuma-gun	H-60	1,300	31
Takase	Yatomi-mura, Tamana-gun	S-60	8,000	4
Takenokawa	Itsuki-mura, Kuma-gun	H-50	1,585	29
Tamukai	Minakami-mura, Kuma-gun	H-U	2,240	20
Tochi	Itsuki-mura, Kuma-gun	H-U	2,371	16
Tsuetate	Oguni-machi, Aso-gun	H-50/60	3,200	13
Tsuru	Shiraito-mura, Kamimashiki-gun	H-60	10,700	3
Umedo	Minamata-machi, Ashikita-gun	S-50	14,000	2

H= Hydro plant;
S= Steam plant;
U= Unknown

b. Transmission and Distribution. All of the electrical energy in Kumamoto-ken is transmitted and distributed by means of 3 phase alternating current circuits. The individual generating plants of this prefecture are of small capacity and are generally located at some distance from the load centers. High tension lines connect these generating plants with substations located in urban and industrial areas. The principal transmission lines in Kumamoto-ken are portions of an extensive 66-kilovolt transmission network, which forms the basis of the East and West Kyushu grids. A 110-kilovolt transmission line traverses the eastern portion of the prefecture connecting generating facilities of Miyazaki-ken with those of Oika-ken. One 66 kilovolt transmission line extends westward from the Kurogawa hydro-electric plants to the Kumamoto-shi region and the main grid system. Another 66 kilovolt transmission line carries energy from the Kikuchigawa generating stations to the main 66 kilovolt arteries. Additional 66, 24, and 11 kilovolt transmission lines serve to tie in the lesser hydro-plants with the main transmission system.

The output of the Kyushu hydro-electric plants drops more than 50 percent during the dry seasons. In the West Kyushu network, 75 percent of the dry season capacity and 65 percent of the wet season capacity is represented by steam plants located outside of the borders of Kumamoto-ken (especially 3 thermal plants in the vicinity of Omuta, Fukuoka-ken, whose capacity is approximately 300,000 kilowatts).

Through interchange arrangements, the 3 Kyushu sub-areas can obtain electrical energy from each other to the following extent:

Kokura-Tobata-Yawata grid:

40,000 Kilowatts from West and East Kyushu grids via existing transmission lines.

West Kyushu grid:

115,000 Kilowatts in wet season and 50,000 Kilowatts in dry season from double-frequency hydro-electric plants normally serving East Kyushu.

East Kyushu grid:

80,000 Kilowatts in wet season and 20,000 Kilowatts in dry season from double-frequency hydro-electric plants normally serving West Kyushu. Also 40,000 Kilowatts from Kokuro-Tobata-Yawata grid via existing transmission lines.

Electric distribution is by means of standard circuits ranging from 2.3 to 11 Kilovolts. Service to commercial and residential consumers is rendered at standard voltages of 110 and 220 volts and for industrial applications, 440 volt 3-phase service is available.

There are a number of transmission line substations located at strategic centers in Kumamoto-ken, the largest being the Yatsushiro substation, located in Yatsushiro-shi with a capacity of 15,900 kilovolt amperes and operating on 60 cycles.

c. Utilization. The principal industrial user of electric power in Kumamoto-ken is the chemical industry, with the ceramic industry and food processing industries rating second and third, respectively, in importance. Approximately 75 percent of the entire kilowatt-hour consumption in this prefecture is used in the manufacture and production of chemicals and associated by-products.

d. Administration. Electric generation and transmission facilities within Kumamoto-ken, as in the rest of Japan, is supervised and managed by the Japan Electric Generation and Transmission Co. (Nippon Hassoden KK). This company's headquarters are located in Tokyo and a branch office in Fukuoka-shi. Distribution of electric power throughout Kumamoto-ken is handled by the Kyushu Electric Distribution Co. (Kyushu Haiden KK). These companies are under the direct control of the Munitions Ministry.

V. SOCIAL ORGANIZATION & CULTURAL INSTITUTIONS.

A. GOVERNMENT & ADMINISTRATION.

1. Prefectural Government.

a. Governor (Kenchiji). The Governor of Kumamoto-ken is of "ordinary" chokunin rank. Prefectural governors are appointed by the Emperor on recommendation of the Premier. They have primary responsibility for the implementation of nationally determined policy at the prefectural level and are accountable to the Ministry of Home Affairs (Naimu-sho). Under the present regional organization of Japan, they are accountable also to the Superintendent General (Chiho Sokan Fu) of the region in which the prefecture is located.

b. Secretariat (chiji Kambo). The governor's secretariat is composed of his personal assistants and internal administrators, as distinguished from the personnel of the departments. In 1943 in Kumamoto-ken, the governor's secretariat consisted of the following sections:

- Budget Section (Yosan-ka)
- Accounts Section (Kaikai-ka)
- General Affairs Section (Shomu-ka)
- Statistics Section (Tokei-ka)
- Buildings and Repairs Section (Eizen-ka)

c. Departments (Bu). Prefectural administrative functions are performed by departments and sections. In 1943 these departments and the sections there under in Kumamoto-ken were as follows (for location of offices, see chapter II, B):

- Internal Administration Department (Naisei-Bu)
- Shrines, Temples and Military Affairs Section (Shaji Heiji-ka)
- Welfare Section (Kosei-ka)
- Overseas Affairs Section (Takumu-ka)
- Education Section (Kyogaku-ka)
- Local Affairs Section (Chiho-ka)
- Sanitation Section (Eisei-ka)
- Economics Department (Keizai-bu)
- Agricultural Affairs Section (Nomu-ka)
- Commerce and Industry Section (Shoko-ka)
- Price and Funds Section (Bukka Shizai-ka)
- Planning Section (Keikaku-ka)
- Public Works Section (Doboku-ka)
- Cultivated Land Section (Kochi-ka)
- Silk Section (Sanshi-ka)
- Forestry Affairs Section (Rimmu-ka)
- Livestock Section (Chikusan-ka)
- Marine Products Section (Suisan-ka)

Police Department (Keisatsu-bu) (See Chapter V, B.)

d. Assembly (Kenkai). The prefectural assembly deliberates and votes upon the budget, accounts, prefectural taxes and fees, and public works but may be over-ruled by the Governor. It also may suggest but may not initiate regulations. Prior to June 1943, prefectural elections occurred concurrently with national elections. Since June 1943, elections to prefectural assemblies have been suspended. In 1935, the membership of the Kumamoto-ken assembly was as follows:

From cities (<u>shi</u>)	5
From Counties (<u>gun</u>)	36
Total	41

e. Council (Ken Sanjikai). Prefectural councils act for assemblies when they are not in session. Councils consist of members of the assemblies elected by them, the prefectural governor as chairman, and 2 high officials of the prefectures. In 1935, the membership of the Kumamoto-ken council was 10.

f. Administrative personnel. In 1936, there were 84 classified civil service employees of sonin rank and 452 of hannin rank in the Kumamoto-ken administration.

2. Representation in the Imperial Diet (Teikoku Gikai).

In 1945, Kumamoto-ken had 10 representatives in the Imperial diet elected in 1942 from 2 election districts. Each election district was represented by 5 members of the Diet.

Table 37 is an analysis of the 1937 and 1942 elections of representatives to the Imperial Diet from Kumamoto-ken:

TABLE 37.

Election Analysis, 1937 & 1942, Kumamoto-ken.

	1937	1942
Number of representatives	10	10
Candidates for election	17	19
Qualified voters	281,688	261,869
V Valid votes cast	213,952	--
Invalid votes cast	1,926	--
Voters per 1,000 population	201.09	--
Population represented per member	140,080	--

3. Kyushu Administrative Region.

Kumamoto-ken is in the Kyushu Administrative

Region, which contains in addition the prefectures of Fukuoka, Saga, Nagasaki, Oita, Miyazaki, Kogoshima, and Okinawa. The Office of the Superintendent General (Chiho Sokan Fu) is in Fukuoka-shi, Fukuoka-ken. Since their institution in 1943 as a war-time measure to control Japan's economy, the regions have undergone territorial and frequent functional and organic changes. They were started as a means of achieving decentralization of administration while retaining centralization of policy-making and control. They have come to be regarded as an integral part of the present war-time governmental organization of Japan.

4. Local Government.

a. Cities (shi). There are 4 municipalities in Kumamoto-ken with the legal status of shi: Kumamoto, Yatsushiro, Hitoyoshi and Arao.

(1) Administrative officials. In 1936, Kumamoto-shi was the only municipality with the legal status of shi. The total salaried personnel then employed by the city administration was 523, including a mayor, a deputy mayor, a treasurer, 304 committee members and 216 other salaried officials.

(2) Assembly (Shikai). In 1936, the Kumamoto-shi assembly had 40 members. The number of voters was 19,813.

(3) Council (Shi Sanjikai). In 1936, the Kumamoto-shi council had 10 members.

b. Towns (machi) and townships (mura). There are 42 towns, 277 townships and one Municipality, the status of which is in doubt, in Kumamoto-ken. (See Appendix IV)

(1) Administrative officials. The following are the 1936 combined figures for the towns and townships in Kumamoto-ken:

Mayors: honorary	293
salaried	18
Deputy mayors: honorary	281
salaried	13
Treasurers	309
Committees	2,601
Buraku heads and deputies	7,573
Other officials (salaried)	1,719
Total personnel	12,807

(2) Town assemblies (Chokai). The following are figures for 1937, at which time there were 45 towns in Kumamoto-ken:

Restricted

Number of town assemblies in prefecture	45
Total membership	762
Voters	60,569

(3) Township assemblies (Sonkai). The following are figures for 1937, at which time there were 298 townships in Kumamoto-ken:

Number of township assemblies in prefecture	267
Total membership	3,448
Voters	172,928

Restricted

B. PUBLIC SAFETY

1. Police.

The civil police of Kumamoto-ken in 1938 consisted of: one prefectural police chief (keisatsubu-cho), 5 police superintendents (keishi), 34 police inspectors (keibu), 61 assistant police inspectors (keibuho), 108 police sergeants (junsabu-cho) and 827 policemen (junsu). This total police personnel of 1,036 is a ratio of one policeman for each 1,418 persons, as compared with a national ratio of one policeman for each 1,000 persons.

In 1943, the Prefectural Police Department (keisatsu-bu) in Kumamoto-shi contained the following sections, administrative: special higher police (Tokubetsu Koto Keisatsu-ka), police affairs (Keimu-ka), and Economic peace preservation (Keizai Hoan-ka), and Employment (Shokuygo-ka) with administrative officers in charge.

In 1938 there were 31 police stations (keisatsu-sho), 55 police sub-stations (keibuho junsaba-cho), 315 police boxes (junsu-chuzai) and 31 police detention quarters (keisatsu ryuchiyo) in Kumamoto-ken. There is a police training station in Kumamoto-shi at the North Police Station. The following are locations of police stations:

Kumamoto-shi: (1) North Police Station, 800 yards southwest of prefectural building, Shin-minami Sendanbata-machi, Shimotori-cho; (2) South Police Station, in extreme southwest section of the city, 200 yards northeast of Kumamoto railroad station of Kagoshima main line, in Kasuga-machi; (3) 400 yards south east of Kawashiri railway station on Kagoshima Main Line.

Yatsushiro-shi: central part of town, 300 yards southeast of municipal office.

Hitoyoshi-shi: center of town, near bank of river.

Arao-shi: at Oshima-cho 100 yards south of intersection of Kagoshima Main Line and east-west coal railway line.

Uto-gun: (1) Misumi-machi; (2) Uto-machi.

Tamana-gun: (1) Minaminoseki-machi; (2) Tamana-machi east central part of town, at west end of highway bridge across the Kikuchi-gawa.

Kamoto-gun: (1) Yamaga-machi, east side of town, 700 yards north of Yamaga railroad station on Kamoto Line; (2) Ueki-machi, north end of town, at junction of north-south and east-west highways through town.

Kikuchi-gun: (1) Otsu-machi; (2) Waifu-machi, southwest end of town, on highway leading southwest out of town.

Aso-gun: (1) Umamihara-machi, northeast of town, on highway leading east out of town; (2) Oguni-machi; (3) Miyaji-machi; (4) Takamori-machi, east end of town, on highway leading south out of town.

Kamimashiki-gun: (1) Hama-machi, west end of town, 400 yards east of north-south highway through town; (2) Kiyama-machi, center of town; (3) Mifune-machi, south end of town, 800 yards south of railroad station.

Shimomashiki-gun: (1) Matsubase-machi, east end of town, 1,000 yards east of railway station; (2) Tomochi-machi, west end of town, on highway leading west out of town.

Yatsushiro-gun: Miyano-hara-machi, west of the town, on east-west highway leading west out of town.

Ashikita-gun: (1) Minamata-machi, east end of town, 0.8 mile northwest of Minamata railway station on Kagoshima Main Line; (2) Sashiki-machi, north end of town.

Kuma-gun: Taragi-machi, center of town, 600 yards northeast of railway station.

Amakusa-gun: (1) Ushibuka-machi, (2) Tomioka-machi, north part of town, on east side of the peninsula, (3) Hondo-machi, northwest part of town, on highway leading northwest out of town; (4) Imatsu-mura.

A gendarmerie post is located in Kumamoto-shi, in the east corner of the military reservation in the center of the city.

2. Prisons.

The Kumamoto prefectural prison is located at Oe-machi, in the east-central section of Kumamoto-shi, near the army parade grounds on the bank of the Shira-gawa. In 1938, the administrative personnel of Kumamoto prison consisted of: one governor of prisons, 5 chief wardens, 2 doctors, one intern, 3 chaplains, 8 assistants for industrial work, 96 warders, and 19 hired help, making a total personnel of 134. It is estimated that this prison housed about 1,300 inmates at that time. Branch prisons are:

(a) Yatsushiro prison: located in Yatsushiro-shi; as of 1938, the administrative personnel consisted of one chief warden, 5 warders, and one helper.

(b) Kyo-machi prison; located in Kyo-machi, in Kumamoto-shi; as of 1938, its administrative personnel consisted of one chief warden, and matron, 15 warders, and 2 helpers.

Table 38 gives the comparative ratio of prisoners per 100,000 persons in Kumamoto-ken as compared with the national ratio.

TABLE 38

Ratio of Prisoners, 1929-38
Kumamoto-ken & Japan.

Year	Kumamoto-ken	Japan
1929	106.0	153.2
1930	108.9	166.8
1931	140.2	170.9
1932	141.4	188.6
1933	100.0	199.6
1934	107.0	202.2
1935	106.3	190.8
1936	119.1	197.5
1937	106.4	177.4
1938	86.4	157.5
Average (1929-38)	112.2	180.5

3. Fire Fighting and Control.

As of 1937, fire-fighting stations, personnel, and equipment in Kumamoto-ken consisted of: 313 volunteer fire brigades, 88,066 volunteer fire-brigade personnel, 9 automobile pumps, one motorcycle pump, 87 other type gas-powered pumps, 89 hose carts, 1,915 hand pumps, and 107 reservoirs for fire use. At that time, there were no special fire stations, steam engine pumps, fire boats, or mechanical ladders in Kumamoto-ken.

4. Civilian Defense.

It may be assumed that the neighborhood association and block leaders form the nucleus of civilian defense, and that these leaders are under the control of the civil police.

Apparently no special measures for civilian defense have been taken in Kumamoto-ken which have not been inaugurated on a national level.

5. Incidence of Crime.

In Kumamoto-ken, 23,810 persons were found guilty of crime in 1940. This is a ratio of 17.4 per 1,000 persons compared with a national ratio of 12 per 1,000 persons. Table 39 lists the crimes committed.

TABLE 39

Arrests of Criminals, 1937,
Kumamoto-ken .

<u>Crime</u>	<u>Kumamoto-ken</u>	<u>Japan</u>
Interference with execution of official duties	7	489
Incendiarism & fires through negligence	255	12,245
Obstruction of Traffic	39	831
Housebreaking	123	9,268
Forgeries	451	18,526
Obscenities, illicit intercourse & bigamy	40	3,566
Gambling & lotteries	274	40,204
Malfesance & bribery	2	2,781
Murder & attempted murder	54	2,211
Assault & battery	875	26,590
Accidental injuries, fatalities & occupational accidental injuries	407	21,638
Abortion	3	472
Interfering with capture & imprisonment	3	130
Kidnapping & abduction	34	1,040
Defamation of honor & character	57	1,725
Theft	4,162	436,775
Burglary	5	1,603
Fraud, embezzlement & blackmail	4,917	280,874
Dispossession	1,746	209,886
Others	402	24,624
Sub-total Arrest for violation penal code	13,856	1,095,838
Army & Navy criminal code violations	5	502
Violations within police court jurisdiction		
Departmental ordinances	2,415	163,919
Prefectural regulations	96	10,598
Violation of prefectural regulations	8,553	333,104
Other criminal law violations	8,806	503,026
Grand Total	33,731	2,106,987

C. LEGAL AFFAIRS.

Justice in Japan is administered on a national basis under the jurisdiction of the Ministry of Justice (Shiho-sho). The Minister of Justice has general supervision of courts and procurators. The theory and practice of legal affairs is uniform for all prefectures.

1. Courts of Appeals (Koso-in).

Below the Supreme Court (Daishin-in), which sits only in Tokyo, are 7 collegiate courts of appeals, located in the following cities: Tokyo, Hiroshima, Nagasaki, Sendai, Nagoya, Osaka, and Sapporo. The Kumamoto District Court is under the jurisdiction of the Nagasaki Court of Appeals.

2. District Courts (Chiho Saibansho).

In general there is one district in each prefecture of Japan, the Kumamoto District Court being located in 1 chome, Kyo-cho, Kumamoto-shi.

3. Local Courts (Ku-Saibansho).

There are 9 local courts in Kumamoto-ken with 43 branches, located as follows:

Kumamoto Local Court (Kumamoto-shi, Kyo-cho, 1 chome).
 Izumi Branch Court (Kumamoto-shi).
 Joyama Branch Court (Hataku-gun, Joyama-mura).
 Kawashiri Branch Court (Kumamoto-shi).
 Matsubase Branch Court (Shimomashiki-gun, Matsubase-machi).
 Ogawa Branch Court (Shimomashiki-gun, Ogawa-machi).
 Otsu Branch Court (Kikuchi-gun, Otsu-machi).
 Goshi Branch Court (Kikuchi-gun, Goshi-mura).
 Misumi Local Court (Uto-gun, Misumi-machi).
 Uto Branch Court (Uto-gun, Uto-machi).
 Takase Local Court (Tamana-gun, Tamana-machi).
 Ikura Branch Court (Tamana-gun, Tamana-machi).
 Nagasu Branch Court (Tamana-gun, Nagasu-machi).
 Arao Branch Court (Arao-shi).
 Minaminoseki Branch Court (Tamana-gun, Minaminoseki-machi).
 Eta Branch Court (Tamana-gun, Eta-machi).
 Mifuné Local Court (Kamimashiki-gun, Mifune-machi).
 Katashida Branch Court (Shimomashiki-gun, Nakayama-mura).
 Kumanosho Branch Court (Shimomashiki-gun, Kumanosho-machi).
 Kiyama Branch Court (Kamimashiki-gun, Kiyama-machi).
 Hamamachi Branch Court (Kamimashiki-gun, Hama-machi).
 Nanataki Branch Court (Kamimashiki-gun, Nanataki-mura).
 Tomochi Branch Court (Shimomashiki-gun, Tomochi-machi).

Umamihara Branch Court (Aso-gun, Umamihara-machi).
 Yamaga Local Court (Kamoto-gun, Yamaga-machi).
 Mitori Branch Court (Kamoto-gun, Yamamoto-mura).
 Rokugo Branch Court (Kamoto-gun, Rokugo-mura).
 Waifu Branch Court (Kikuchi-gun, Waifu-machi).
 Miyaji Local Court (Aso-gun, Miyaji-machi).
 Uchinomaki Branch Court (Aso-gun, Uchinomaki-machi).
 Yoshida Branch Court (Aso-gun, Shirami-mura).
 Oguni Branch Court (Aso-gun, Oguni-machi).
 Tsuru Branch Court (Aso-gun, Nojiri-mura).
 Yatsushiro Local Court (Yatsushiro-shi).
 Miyano-hara Branch Court (Yatsushiro-gun, Miyano-hara-machi).
 Kakisako Branch Court (Yatsushiro-gun, Kakisako-mura).
 Hinagu Branch Court (Ashikita-gun, Hinagu-machi).
 Sashiki Branch Court (Ashikita-gun, Sashiki-machi).
 Minamata Branch Court (Ashikita-gun, Minamata-machi).
 Hitoyoshi Local Court (Hitoyoshi-shi).
 Isshochi Branch Court (Kuma-gun, Isshochi-mura).
 Youra Branch Court (Kuma-gun, Youra-mura).
 Taragi Branch Court (Kuma-gun, Taragi-machi).
 Menda Branch Court (Ashikita-gun, Minamata-machi).
 Amakusa Local Court (Amakusa-gun, Hondo-machi).
 Akasaki Branch Court (Amakusa-gun, Akasaki-mura).
 Tomioka Branch Court (Amakusa-gun, Tomioka-machi).
 Ushibuka Branch Court (Amakusa-gun, Ushibuka-machi).
 Aizu Branch Court (Amakusa-gun, Imatsu-mura).
 Miyada Branch Court (Amakusa-gun, Miyada-mura).
 Takahama Branch Court (Amakusa-gun, Takahama-mura).
 Itchoda Branch Court (Amakusa-gun, Itchoda-mura).

4. Police Courts (Keizai-Saibansho).

Police courts are presided over by police officers and are held in police stations. (For location of police stations see Chapter V, B. 1.) Their jurisdiction is limited to misdemeanors involving penalties not exceeding a fine of 20 yen, a detention of not over 20 days, or a combination of both.

D. HEALTH AND SANITATION.

1. Public Health Organization and Services.

In Kumamoto-ken, as in other prefectures, public health activities and services stem from the prefectural office. Authority over these matters rests with the prefectural governor.

As of 1943, under the governor's direction and supervision, the Health (or Sanitation) Section (Eisei-ka) of the Department of Internal Administration (Naisei-bu) assisted by the Police Department carried out the prefectural phases of the national health program (consisting of sanitation, epidemic disease control, chronic disease prevention, collection of

vital statistics, medical care, etc.) as well as local as health activities. The organization of the Eisei-ka, the specific functions it serves, and the nature of the public health activities of the police department are not definitely known. Although detailed information is not available for Kumamoto-ken on the organization of public health in cities, towns and villages, it is believed to be the same as in other predominantly rural prefectures.

Numerous semi-official and private organizations such as the Kumamoto medical and dental societies, the Kumamoto Branch of the Japanese Red Cross Society, local health unions and other community organizations cooperate in measures to improve the health of the people and are reported to have been mobilized to function in emergency conditions.

In 1938, unlike many other rural prefectures, Kumamoto had a large prefectural medical school and a pharmacy school. It also had a relatively large number of hospitals, including one of the largest leprosaria in all Japan. For this prefecture (1938), the ratio of physicians in actual practice per urban population (4.8) and per rural population (5.1) approximated the comparable national ratios (11.9 and 4.7), although the combined ratio (urban and rural) for Kumamoto-ken (6.3) was somewhat lower than that for Japan (7.2).

War needs have most likely depleted the ranks of civilian medical personnel, but it is believed that public health services and all available medical personnel have been mobilized for emergency conditions in Kumamoto-ken.

2. Medical Facilities.

An incomplete list of hospitals for 1938 shows Kumamoto-ken as having 2 public hospitals with a total bed capacity of 58 and 62 private hospitals with 1,110 beds. These did not include leprosaria and charity, mental, tubercular and prostitute hospitals.

Kumamoto-ken is the important hospital center for lepers in Kyushu. In 1938, the prefecture had 3 of the 17 leprosaria in Japan, and had the largest leprosaria, in Kyushu.

Among the institutions listed for Kumamoto-ken, it is believed that at least the following are important because of their size, facilities or staff: Kumamoto Medical College Hospital, Yatsushiro Health Center, Prefectural Kyushu Leprosarium, Kumamoto, Mental Disease Hospital, and the new (1939) Prefectural Tuberculosis Sanatorium.

From the large number of the following institutions reported for Japan in 1938: communicable disease hospitals, isolation wards, medical clinics (shinryojo), trachoma treatment centers, medical stations, and infant health centers, it can be assumed that some of them will be found in Kumamoto-ken.

Mineral springs used as health resorts for treatment, recuperation and bathing purposes are located in the following areas: (cold springs) Misumi and Akase (north of Misumi); (hot springs) Hayashi and Hinagu (southwestern part of the prefecture), Tonoshita Kakino and Nakamatsu (northeastern part of the prefecture), Yamaga, Eta, Ryuganji, and Hirajima (northwestern part of the prefecture).

Medical institutions and facilities in Kumamoto-ken follow:

Kumamoto-shi*

- a. Kumamoto Medical College Hospital, Hanjo-machi, 78 beds, 3 doctors, 4 nurses, one pharmacist; 383 admissions, 378 discharged patients. (1938).
- b. Prefectural Nihongi Hospitals, Nihongi-machi.
- c. Shirakawa Hospital, Ae-machi.
- d. Kumamoto Convalescent Home, 60 beds, 3 doctors, 5 nurses, one pharmacist; 63 admissions, and 52 discharged patients (1938).
- e. Seishin Byoin, Shintsubai-machi. (A Sacred Heart Hospital).
- f. Kumamoto Kaishu Byoin (Leprosarium). 635 Kurokami-cho. (Episcopal institution, capacity 100, reported taken over by the Prefectural Kyushu Leprosarium in 1940).
- g. Tairo-in (Leprosarium), Shimazaki-machi. Capacity 85 in 1938, had 72 patients in 1941. A free medical dispensary is reported at the same address.
- h. Fukuda Maternity Hospital (Private).
- i. Mura Hospital, (Private).
- j. Taniguchi Maternity Hospital (Private).
- k. Seishin-in Hospital (Private)

No dental, veterinary or nursing schools were reported for Kumamoto-ken as of 1938.

The Yatsushiro Health Center, Yatsushiro-shi, established under the National Health Center Act of 1937, provides intensive training for public health personnel needed for local health programs.

A government professional school of pharmacy, the Kumamoto Yakugaku Semmon Gakko, is located at Oe-machi in Kumamoto-shi. It offers a 3-year course and, as of 1942, had a yearly enrollment of 98.

A 4-year course is given and the number of students admitted (1941) was 80; the total enrollment was 310 (1936) and 327 (1941); and the number of students in the graduating classes were 69 (1936) and 30 (1940).

Kumamoto-ken had a large government medical school (Kumamoto Ikadai-gaku) of university rank established by the prefecture with the support of the central government.

* Of this number 18 are women. Of the total 1,070, only 869 doctors were in actual practice. These were distributed as follows: 291 in urban and 578 in rural (i.e., machi and mura) areas. ** Figures not available.

Year	Doctors	Pharma- lists	Veteri- narians	Mid- wives	Nurses	acupuncture and moxa
1936	1,012	285	328	**	1,545	1,532
1938	1,070*	298	392	855	1,584	1,979
					1,561	**

Medical Personnel, 1936-1938, Kumamoto-ken

TABLE 40

practicing physicians per 10,000 urban population and 5.1 per 10,000 rural population. For the same year, 1938, corresponding national figures were 11.9 and 4.7 respectively. There are approximately twice as many midwives and practitioners of traditional treatments (acupuncture, moxa, and massage) as there are practicing physicians in the prefecture and the number of veterinarians approximates that of the doctors in actual practice. The number of practitioners of traditional treatments is shown in Table 40 below, because of their reported extensive use by the rural population of Japan. Medical personnel in Kumamoto-ken are shown in Table 40.

From the large number of the following institutions reported for Japan in 1938: communicable disease hospitals, isolation wards, medical clinics (shinryojo), trachoma treatment centers, medical stations, and infant health centers, it can be assumed that some of them will be found in Kumamoto-ken.

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- c. Shirakawa Hospital, Ae-machi.
- d. Kumamoto Convalescent Home, 60 beds, 3 doctors, 5 nurses, one pharmacist; 63 admissions, and 52 discharged patients (1938).
- e. Seishin Byoin, Shintsubai-machi. (A Sacred Heart Hospital).
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- h. Fukuda Maternity Hospital (Private).
- i. Mura Hospital, (Private).
- j. Taniguchi Maternity Hospital (Private).
- k. Seishin-in Hospital (Private)

- l. Municipal Central Clinic, Hanabata-cho, (1938).
Municipal North Clinic, Kita-tsubai-cho, (1938).
Municipal West Clinic, Yohate-cho, (1938).

Yatsushiro-shi

- m. Yatsushiro Health Center. (Established under National Health Center Act of 1937).

Hitoyoshi-shi

- n. Fukusei-in, 6 Tera-machi. (A Catholic hospital and dispensary).

Miscellaneous**

- o. Prefectural Kyushu Leprosarium, Kikuchi-gun, Goshimura. Capacity 1,000 (1938); had 1,032 patients in 1938, 1,095 patients (1940), 1,144 patients (1941).
- p. Municipal Hospital for Infectious Diseases, Ashikita-gun, Minamata-machi; 24 beds, one doctor (1939).
- q. Hakuai-in, Yatsushiro-shi, (A Catholic Hospital).
- r. Kumamoto Nobyojin (Mental Hospital). Exact location unknown; capacity, 134 (1938).
- s. Prefectural Tuberculosis Sanatorium. Exact name and location unknown; capacity, 100, constructed 1937 or 1938 and was in operation in 1939.

* One source reports Kumamoto-shi as having 2 clinics with 2 doctors, 2 nurses and 13,129 outpatients (1938). Another source for the same year shows the 3 clinics listed previously. The 4 hospitals, h to k above, are most likely very small establishments.

**A total of 3 mental disease hospitals (including "r" above), 3 tuberculosis sanatoria (including the "s" above), and 6 bacteriological laboratories were reported for the prefecture in 1938.

3. Medical Personnel and Schools.

The ratio of practicing physicians to population in Kumamoto-ken in 1938 was one doctor to every 1,583 persons (6.3 per 10,000). This figure is less than the national ratio of 7.2 per 10,000 for the same year. Of more specific interest is the ratio of practicing physicians to population in urban and rural areas. In Kumamoto-ken, there were 11.8

practicing physicians per 10,000 urban population and 5.1 per 10,000 rural population. For the same year, 1938, corresponding national figures were 11.9 and 4.7 respectively.

There are approximately twice as many midwives and practitioners of traditional treatments (acupuncture, maxa, and massage) as there are practicing physicians in the prefecture and the number of veterinarians approximates that of the doctors in actual practice. The number of practitioners of traditional treatments is shown in Table 40 below, because of their reported extensive use by the rural population of Japan. Medical personnel in Kumamoto-ken are shown in Table 40.

TABLE 40

Medical Personnel, 1936-1938, Kumamoto-ken

Year	Doctors	Den- tists	Pharma- cists	Veteri- narians	Mid- wives	Nurses	Practitioners of acupuncture moxa and massage
1936	1,012	285	328	**	1,545	1,532	1,561
1938	1,070*	298	392	855	1,584	1,979	**

* Of this number 18 are women. Of the total 1,070, only 869 doctors were in actual practice. These were distributed as follows: 291 in urban and 578 in rural (i.e., machi and mura) areas.

**Figures not available.

Kumamoto-ken had a large government medical school (Kumamoto Ikadaigaku) of university rank established by the prefecture with the support of the central government.

A 4-year course is given and the number of students admitted (1941) was 80; the total enrollment was 310 (1936) and 327 (1941); and the number of students in the graduating classes were 69 (1936) and 30 (1940).

A government professional school of pharmacy, the Kumamoto Yakugaku Semmon Gakko, is located at Oe-machi in Kumamoto-shi. It offers a 3-year course and, as of 1942, had a yearly enrollment of 98.

The Yatsushiro Health Center, Yatsushiro-shi, established under the National Health Center Act of 1937, provides intensive training for public health personnel needed for local health programs.

No dental, veterinary or nursing schools were reported for Kumamoto-ken as of 1938.

4. Vital Statistics.

In Kumamoto-ken, as in other prefectures, birth reports (shussho todoke-ide) and death reports (shibo todoke-ide) are registered at the district (prefectural), municipal, town, or township offices where the individual identification registers (koseki) are kept. Reports are then forwarded through the prefectural office in Kumamoto-shi to national agencies.

Birth and death rates for Kumamoto-ken are shown below in Table 41.

TABLE 41

Vital Statistics, Kumamoto-ken, Japan, & U.S.
(per 1,000 population)

	Birth Rates			Yearly rates	
	Average yearly rate (intercensal periods)			1937	1938
	1920-25	1925-30	1930-35		
Kumamoto-ken	33.19	32.87	31.63	31.51	27.13
Japan	34.82	33.70	31.75	30.61	26.70
U.S.	22.7	20.0	17.4	17.1	17.6
	Death Rates				
Kumamoto-ken	20.89	19.32	18.19	17.79	18.15
Japan	22.22	19.50	17.98	16.95	17.44
U.S.	12.1	11.9	11.00	11.3	10.6

Infant death rates have been consistently lower for Kumamoto-ken than for Japan. Rates per 100 live births in the prefecture from 1934-38 were 10.3, 8.8, 9.6, 8.8, and 9.6 respectively. Corresponding national rates were 12.5, 10.7, 11.7, 10.6, and 11.4. In 1940, the U.S. infant death rate was 2.9.

Leading causes of death in Kumamoto-ken are shown in Table 42.

TABLE 42

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Leading Causes of Death, 1938,
Kumamoto-ken & Japan

Cause	Kumamoto-ken		Japan	
	Deaths	Death rate (per 100,000)	Deaths	Death rate (per 100,000)
Cerebral hemorrhage (82)*	2,807	204.1	126,861	177.2
Tuberculosis (23-32)	2,228	162.0	148,827	207.9
Senility (162)	2,091	152.0	98,772	138.0
Pneumonia (107-109)	1,849	134.4	118,153	165.1
Nephritis (130-132)	1,514	110.1	61,996	86.6
Diseases of early infancy (157-161)	1,301	94.6	79,246	110.7
Diarrhea & enteritis (over one year of age)(120)	1,245	90.5	58,491	81.7
Diseases of the heart (90-95)	1,027	74.7	47,460	66.3
Cancer (45-53)	965	70.2	50,447	70.5
Diarrhea & enteritis (less than one year of age) (119)	939	68.3	58,465	81.7
Meningitis (79)	780	56.7	36,748	51.3
Cause of death, ill defined or unknown (200)	636	46.2	36,255	50.7
Bronchitis (106)	625	45.4	26,178	36.6
Pleurisy (110)	476	34.6	20,980	29.3
Ekiri (13b)	537	39.0	16,414	22.9
Non-specific Diseases of stomach & duodenum (118)	463	33.7	16,858	23.6
Liver & gall bladder diseases (124-127)	423	30.8	13,467	19.0
Peritonitis due to unknown causes (129)	412	30.0	20,384	28.5
Ulcer of stomach & duodenum (117)	343	24.9	13,279	18.6
Asthma (112)	321	23.3	9,648	13.5
Sepsis, non-puerperal (36)	296	21.5	9,203	12.9
Total deaths all causes	25,542		1,259,805	

*Numbers refer to diseases in the "International List of Causes of Death."

Respiratory diseases are of first importance among the leading causes of death in Kumamoto-ken. Tuberculosis, pneumonia, bronchitis, pleurisy, and asthma in 1938 accounted for 22 percent of all deaths. The major degenerative diseases, cerebral hemorrhage, nephritis, diseases of the heart and cancer accounted for 25 percent of the deaths. In all likelihood the latter figures would be higher were it not for the inadequate diagnoses reflected in such vague categories as "senility", "cause of death ill-defined", "non-specific diseases of the stomach etc.", "peritonitis due to unknown causes" and "sepsis".

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Among the causes of death not shown in Table 42 for 1938, are diabetes (71 deaths), puerperal diseases (96), suicide (181), and beri-beri (193).

5. Communicable Diseases.

As shown in Table 43 below, epidemic, contagious, and parasitic diseases accounted for 16 percent of all deaths in Kumamoto-ken in 1938, which represents a decrease of 2 percent from the preceding year.

TABLE 43

Deaths from Communicable Diseases, 1938,
Kumamoto-ken & Japan.

	Kumamoto	Japan
Population 1938	1,375,729*	71,570,244
Intestinal typhoid fever (1)**	65	7,819
Paratyphoid fever (2)	1***	297
Measles (7)	141	4,997
Scarlet fever (8)	5	398
Whooping cough (9)	166	8,871
Diphtheria (10)	30***	4,135
Influenza (11)	112	7,646
Dysentery (13a)	133***	5,550
Ekiri (13b)	537	16,416
Erysipelas (15)	65	3,409
Meningitis cerebrospiral epidemic (16)	21	715
Sleeping sickness (17)	5	1,088
Cerebrospinal meningitis (18)	8	580
Tetanus (22)	25	1,775
Tuberculosis of respiratory organs(23abc)	1,736	107,442
Tuberculosis of all other organs (24-32)	492	41,385
Tuberculosis, all forms (23-32)	2,228	148,827
Leprosy (33)	23	337
Syphilis (34)	78	4,412
Sepsis (except puerperal sepsis)(36)	296	9,203
Malaria (38)	1	207
Other diseases due to protozoa, helminths & hemorrhagic-jaundice due to spiro- chieles (39)	57	1,545
Bacterial diseases of the duodenum (40)	5	280
Other diseases of helminths (42)	17	493
Mycosis (43)	12	418
Other epidemic or parasitic diseases (44)	3	149
Epidemic infectious, & parasitic diseases (1-44)	4,041	229,708
Total deaths	25,542	1,259,805
Percentage of deaths caused by (1-44)	16.	

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Restricted

- * By interpolation: 1935 and 1940 populations.
- ** Numbers refer to "Diseases in International List of Causes of Death".
- ***Another source lists 45 deaths for typhoid fever, 2 deaths for paratyphoid fever, 27 deaths for diphtheria, 150 deaths for dysentery and 475 deaths for ekiri. Corresponding national figures are similarly in disagreement.

There is no history of cholera or bubonic plague epidemics in Kumamoto-ken. Mite-borne typhus fever, dengue fever, and filariasis occur in this area. Schistosomiasis and liver fluke (clonorchis) infections are said to be epidemic here. However, in routine examinations conducted under the Law for the Prevention of Parasitic Diseases, only 5 clonorchis egg carrier were found among the 62,035 persons examined in towns and townships of Kumamoto-ken in the 2-year period, 1937-38. Similar data for Schistosoma egg carriers is not available.

For 1938, one source reports no deaths from smallpox and another source lists one death for Kumamoto-ken.

TABLE 44

Morbidity Data, 1938,
Kumamoto-ken & Japan.

	Cases		Case Fatality (rate per 100 cases)		Morbidity rate (per 100,000 population)		Crude death rate (per 100,000 pop).	
	Kumamoto	Japan	Kumamoto	Japan	Kumamoto	Japan	Kumamoto	Japan
Diphtheria	72	28,420	38	14	5.23	39.7	1.96	5.4
Typhoid fever	251	42,132	18	17	18.25	58.9	3.27	9.7
Paratyphoid fever	46	6,117	4	5	3.34	8.5	0.15	0.4
Dysentery (inc. Ekiri)	1,789	80,221	35	25	130.06	112.1	45.44	28.2
Ekiri	738	32,728	64	47	53.65	45.7	34.53	21.7**

- * Population 1938, determined by interpolation: 1935 and 1940 populations.
- **Data for this table was taken from a source which differs from that in Table 43 above. See footnote *** to that table.

The table shows that in contrast to Japan, for dysentery and ekiri Kumamoto-ken had appreciably larger case fatality,

morbidity, and crude death rates.

Results of examinations of children in public and private elementary schools in Kumamoto-ken (1935) showed that 15 percent of those examined had trachoma and 0.7 percent had one or more contagious skin diseases. Comparable percentages for Japan were 10.3 and 2.1 respectively. The size of the sample was not reported.

6. Medical Supply.

There are no large pharmaceutical manufacturers reported for Kumamoto-ken (1944)

Of the 4,218 medicine manufacturers (small establishments) listed for all Japan (1936), 59 were located in Kumamoto-ken. For the same year there were 3,295 retailers of patent medicines and 2,731 patent medicine peddlers in the prefecture.

No Army or Navy medical supply depots are listed for Kumamoto-ken. However, it is believed that medical supplies will be found in the Kumamoto military zone, in the underground warehouses reported to have been constructed recently throughout Japan, and at the large hospitals in the area. As in the case of other prefectures, Kumamoto-ken is dependent upon Tokyo and Osaka laboratories for its vaccines and serums.

7. Sanitation, Port Quarantine and Public Health Houses.

(Water supply and sewage disposal are covered in Chapter IV, Section C).

Kumamoto-ken had 2 municipal, 10 town or village, and 2 privately-owned slaughter houses, (1938). For the same year there were 855 veterinarians in the prefecture. However, specific data on food inspection and other phases of sanitation in Kumamoto-ken, as distinguished from other prefectures, are not available.

There are no permanent or temporary quarantine stations reported for Kumamoto-ken (1938). However, it is believed that some quarantine facilities (e.g. for medical and veterinary inspection and rat and insect extermination) are available at the ports of Misumi and Minamata.

Public health laws and regulations applicable to all of Japan on narcotics control, epidemic disease control, food and water sanitation, sewage disposal, public hospitals, etc., obviously apply to Kumamoto-ken as well. The substance of local health ordinances is unknown. In the prefecture (1936)

there were 38,870 first period vaccinations against smallpox (given within 6 months after birth and if negative, repeated before June of the following year) and 33,899 second period vaccinations (given in the tenth year after birth). In all, 64,801 persons were vaccinated one or more times in that year.

E. PUBLIC WELFARE

1. Organization.

The public welfare program in Kumamoto-ken is conducted on a national basis according to standards and policies established by the Ministry of Welfare, (Kosei-sho) Provincial administration is conducted by the Welfare Section (Kosei-ka) under the Prefectural Department of Internal Administration (Naisei-bu). The mayors of the cities and the heads of the towns and townships are responsible for the distribution of relief. These officials are assisted by paid welfare directors in the cities. There are 144 welfare districts in the urban areas of Kumamoto-ken. These districts are serviced by District Welfare Committees composed of volunteer social workers who do the actual field work. They also maintain in the municipal offices an index file (homen-caado) of families receiving assistance.

a. Kumamoto-shi. The city is divided into 4 relief districts served by 58 volunteer social works. There are 3 public orphanages (capacity 150); 2 private orphanages (capacity 140); 11 day nurseries; and 2 pawn shops. Of these, the following are names and addresses of known agencies:

(1) Ji Ai En, 175 Kuwa Mizu Machi. This agency is a combined orphanage (capacity 70), old peoples' home (capacity 30), rescue home for unfortunate women, nursery school, and kindergarten. It is staffed by 17 persons and is considered one of the finest in the empire. United Lutheran Church.

(2) Jikei En Ikuji Bu (orphanage), Kengun-machi, in the southeastern part of the city, has an estimated capacity of 70 children. Catholic.

(3) Tairo In (combined day nursery, old peoples' home, and leper hospital), Biwazaki, Shimazaki-machi. Catholic.

(4) Tenshi En (nursery), Minami Shin Tsuboi-machi. Catholic.

The amount of money spent for relief in Kumamoto-shi is less than that in most cities of comparable size.

b. Yatsushiro-shi. The following agency is the only one known in the city: Nazare-In (kindergarten and nursery). Catholic.

c. Hitoyoshi-shi. There is a Catholic orphanage located at 6, Tera-machi.

d. Ashikita-gun, Minamata-machi. Minamata is divided

into 19 relief districts served by 22 volunteer social workers.

2. Kinds of Assistance.

a. Poor relief. For the aged and infirm over 65; children under 13; persons ill or disabled; maternity cases. Application is made through the volunteer welfare workers (homen-ii) at the municipal offices. Financial support: $\frac{1}{2}$ national, $\frac{1}{2}$ prefectural. The amount of money spent for relief in Kumamoto-ken is less than the national average but is in accord with that of surrounding prefectures. Relief standards appear low.

b. Mothers' and children's relief. For the children under 14 and responsible adults. Application is made through the volunteer social workers at the municipal offices. Financial support: $\frac{1}{2}$ national, $\frac{1}{4}$ prefectural, $\frac{1}{4}$ municipal.

c. Veterans' relief. For incapacitated veterans and their dependents and for survivors of deceased military personnel. Application is made through the municipal offices of "The Information Service for Soldiers' Families." Financial support: entirely national.

d. Other services of the Social Welfare Bureau. Removal of neglected children from their homes; recommendation for tax cancellation; provision for burial of indigents.

e. Minimum cost services. One public boarding house, one public market, one public bath, 15 public pawn shops.

f. Institutions: 6 orphanages, 25 day nurseries, and one reformatory.

F. EDUCATION

1. Educational System.

The educational policies and administration of all schools in Japan, (with the exception of naval and military schools, which are under the Navy and War Ministries, and a few other institutions under the jurisdiction of other government offices) are under the control of the national Ministry of Education (mombu-sho). These schools may be classified into 3 groups, according to establishing authority as follows:

a. National government schools.

b. Public schools.

- (1) Those established by prefectures.
- (2) Those established by cities.
- (3) Those established by towns and townships.

c. Private schools.

Government schools are under the direct supervision of the Ministry of Education, which also supervises directly all schools of higher education, both public and private.

The prefectural government is responsible to the national Ministry of Education through the Education Section (Kyogaku-ka) of the Department of Internal Administration for the supervision of all secondary and elementary schools in the prefecture, both public and private. The actual management of a school is the responsibility of the governmental unit which established it: national government, prefecture, city, town, or township.

2. Elementary Schools.

In 1935 there were 120,630 boys and 117,168 girls of elementary school age (6 to 14 years) in the prefecture. Of this number 291 boys and 275 girls were exempted from attendance at school.

There were at this time 621 primary schools, including 94 ordinary elementary schools, (Jinjo Shogakko), and 527 higher elementary schools (Jinjo koto shogakko) including detached classes or branch schools (bunkyojo). There were 5,072 elementary school classes in the prefecture.

In 1935 there were 5,638 elementary school teachers in the prefecture or an average of 7.6 teachers per school, as follows:

a. Regular elementary school teachers: 4,707.
 Ordinary: 3,697.
 Higher: 1,010.

b. Teachers holding licenses for special subjects: 141
 Ordinary: 125
 Higher: 16

c. Assistant teachers: 31
 Ordinary: 31
 Higher: 0

d. Substitute teachers: 759
 Ordinary: 721
 Higher: 38

Each town and township in the prefecture had at least one elementary school except for the following: Hamada-mura,

Hataguchi-mura, Hayaura-mura, Hoji-mura, Jin-mura, Oda-mura, Namitate-mura, Shiroishi-mura, Tamana-mura, Toyoaki-mura, Ueki-machi, and Ujiguchi-mura. For locations of schools see Table 45.

3. Secondary Schools.

In 1935 there were 11 boys' middle schools (chu gakko), with 291 instructors and 7,309 students, 10 of which are located on Table 45.

There were in 1935, 18 girls' high schools (see Table 45) with 302 instructors and 7,710 students, and 10 girls' vocational high schools with 51 instructors and 1,001 students.

The 26 vocational and trade schools were classified as follows:

- a. Four industrial schools, with 43 instructors and 989 students.
- b. Twelve agricultural schools, with 145 instructors and 3,397 students.
- c. Six commercial schools, with 89 instructors and 2,153 students.
- d. Four trade schools, with 37 instructors and 588 students.

The locations of the following vocational schools are known:

Kumamoto Technical School:
Kumamoto-shi, Oe-machi.
Municipal East Kikuchi Industrial School:
Kikuchi-gun, Otsu-machi.
Municipal West Kikuchi Industrial School:
Kikuchi-gun, Shisui-mura.
Municipal Minamata Practical School:
Ashikata-gun, Minamata-machi.
Kumamoto Agricultural School:
Kumamoto-shi, Izumi-cho.
Prefectural Aso Agricultural School:
Aso-gun, Miyaji-machi.
Prefectural Kuma Agricultural School:
Kuma-gun, Ue-mura.
Prefectural Kikuchi Agricultural and Sericultural School:
Kikuchi-gun, Waifu-machi.
Prefectural Yabe Agricultural School:
Kamimashiki-gun, Hama-machi.

Prefectural Ashikita Agriculture and Forestry School:
Ashikita-gun, Sashiki-machi.
Prefectural Amakusa Agricultural School:
Amakusa-gun, Hondo-machi.
Municipal Kamoto Agricultural School:
Kamoto-gun, Omichi-mura.
Municipal Yatsushiro Agricultural School:
Yatsushiro-gun, Kagami-machi.
Municipal Commercial School:
Kumamoto-shi, Shin-machi.
Prefectural Commercial School:
Kumamoto-shi, Kengun-machi.
East Asia Railway School:
Amakusa-gun, Hondo-machi.

Kumamoto Higher Technical School, in Kumamoto-shi, Kurokami-cho, had 38 teachers and 530 students. Its 3-year curriculum includes mechanical, electrical, and civil engineering; and mining and metallurgy courses.

4. Special and Higher Schools in Kumamoto-shi.

a. Deaf, Dumb and Blind Schools. In 1935 there was one public blind school with 9 teachers and 101 students. The one deaf and dumb school, with 16 teachers and 150 students, was located in Izumi-cho.

b. Normal Schools. There are 2 normal schools in Kumamoto with 43 teachers and 650 students: Teachers Training School, in Kyo-machi, Hon-cho; and Kumamoto Second Teachers Training School in Kengun-machi. There are also a girls' Teachers' Training School, Uchitsuboi-cho, and a Teachers' Training Institute for Young Men's Schools, Izumi-cho.

c. Higher Schools. (1) Kumamoto University of Medicine is located in Honjo-machi. In 1941, there were 38 faculty and 326 students. The library contained 36,245 volumes. (2) Kumamoto Pharmaceutical College, in Oe-machi, had 23 faculty and 300 students in 1939. (3) The Fifth Higher School, Kurokami-cho, in 1943 had 53 faculty and 693 students. Its library contained 59,590 volumes.

5. Young Men's Schools.

In 1935 there were 442 Young Men's schools with 520 teachers and 54,175 students.

6. Private Schools.

There were known to be 23 private schools in the prefecture in 1939 as follows:

a. One similar to a middle school, with 33 teachers and 729 students.

b. One similar to a girls' high school, with 22 teachers and 271 students.

c. Twenty-one various other schools, with 140 teachers and 2,299 students.

The following private schools are located in Kumamoto-shi:

- Chinzei Middle School, Oe-machi
- Jishu Middle School, Oe-machi
- Kumamoto English Language School, Sendanbata-machi
- Kumamoto Kokugakuin Shinminami, Sendanbata-machi
- Kumamoto Surveying School, Kasuga-machi
(Kumamoto Sokuryo Gakko)
- Kinjo Gakkan, Oe-machi
- Kambayashi Girls' High School, Kambayashi-cho
- Kyushu Central Girls' High School, Uchitsuboi-cho
- Hoshiyama Girls' High School, Izumi-cho
- Kumamoto Girls' Vocational School, Oe-machi
- Shirakawa Gakuin, Oe-machi
- Kumamoto Higher National School, Kengun-machi

The following private schools are located as follows:

- Yatsushiro Narumi Girls' High School, Yatsushiro-shi
- Tamana Girls' High School, Tamana-gun, Tamana-machi
- Minaminoseki Girls' Practical High School, Tamana-gun,
Minaminoseki-machi
- Yamaga Girls' Practical School, Kamoto-gun, Yamaga-machi
- Tamana Girls' Vocational School, Tamana-gun, Tamana-machi
- Takase Girls' Vocational School, Tamana-gun, Tamana-machi

7. Christian Schools.

There were known to be 3 Christian Schools in the prefecture in 1938.

a. Kyushu Gakuin, a boys' middle school sponsored by the Board of Foreign Missions of the United Lutheran Church in America, is located in Kumamoto-shi, Oe-machi.

b. Kyushu Jo Gakuin, a girls' high school, sponsored by the Board of Foreign Missions of the United Lutheran Church in America, is located in Kumamoto Shigai, Murozono.

c. Oe Koto Jo Gakko, a girls' high school, sponsored by the Nihon Kumiai Kirisuto Kyokai (Congregational Church), is in Kumamoto-shi.

TABLE 45

Public Schools, 1938, Kumamoto-ken.
Exclusive of Vocational Schools

Place	Ordinary Elementary Schools (6 grades)	Ordinary higher Elementary Schools (8 grades)	Detached Classes	Middle Schools	Girls High Schools T-Technical
KUMAMOTO-SHI	14	17		2	
YATSUSHIRO-SHI	-	5	-	1	1
MITOYOSHI-SHI	-	6	2	1	1
ARAO-SHI	-	10	-	-	-
HOTAKU-GUN					
Oshima-machi	-	1	-	-	-
Takahashi-machi	-	1	-	-	-
Tatsuta-mura	-	1	-	-	-
Kawakami-mura	-	2	-	-	-
Nishizato-mura	1	1	-	-	-
Yoshino-mura	-	1	-	-	-
Kawachi-mura	-	1	1	-	-
Matsuo-mura	1	2	-	-	-
Ikenoue-mura	-	1	-	-	-
Fujidomi-mura	-	1	-	-	-
Nakamidori-mura	-	1	-	-	-
Nakashima-mura	-	1	-	-	-
Namitate-mura	-	1	-	-	-
Zendomo-mura	-	1	-	-	-
Uchida-mura	-	-	-	-	-
Okukoga-mura	-	1	-	-	-
Kawaguchi-mura	-	1	-	-	-
Hashirigata-mura	-	1	-	-	-
Tomoai-mura	-	1	-	-	-
Hirohata-mura	-	1	-	-	-
Oyamatoshima-mura	-	1	-	-	-
Tamukae-mura	-	1	-	-	-
Miyuki-mura	-	1	-	-	-
Joyama-mura	-	1	-	-	-

Restricted

UTO-GUN					
Misumi-machi	-	2	1	-	-
Matsuyai-machi	-	1	-	-	-
Uto-machi	-	1	-	1	1(T)
Tobase-mura	-	1	-	-	-
Konoura-mura	-	1	1	-	-
Otake-mura	-	1	-	-	-
Shiranui-mura	-	2	-	-	-
Hanazono-mura	-	1	-	-	-
Todoroki-mura	-	1	-	-	-
Midorigawa-mura	-	1	1	-	-
Amitsu-mura	-	2	3	-	-
TAMANA-GUN					
Ohama-machi	-	1	-	-	-
Minaminoseki-machi	-	1	-	-	-
Ikura-machi	-	1	-	-	-
Eta-machi	-	1	-	-	-
Tamana-machi	-	3	-	1	-
Nagasu-machi	-	1	-	-	-
Ono-mura	-	1	-	-	-
Tsukiyama-mura	-	1	-	-	-
Mutsuai-mura	-	1	-	-	-
Nabe-mura	-	1	-	-	-
Takamichi-mura	-	1	-	-	-
Nameishi-mura	-	1	-	-	-
Toyomizu-mura	-	1	-	-	-
Hachika-mura	-	1	-	-	-
Yokoshima-mura	-	1	-	-	-
Tamamizu-mura	-	1	-	-	-
Oama-mura	1	1	-	-	-
Yamakita-mura	-	1	-	-	-
Konoha-mura	-	1	-	-	-
Bairin-mura	-	1	1	-	-
Oda-mura	-	1	-	-	-
Hanamure-mura	-	1	-	-	-
Togo-mura	-	1	-	-	-
Kawazoe-mura	-	1	-	-	-
Tsukise-mura	-	1	-	-	-
Ishinuki-mura	-	1	-	-	-
Yonedomi-mura	-	1	-	-	-
Sakanoshita-mura	-	1	-	-	-
Ohara-mura	-	1	-	-	-
Kamio-mura	-	1	-	-	-
Midori-mura	-	1	-	-	-
Harutomi-mura	-	1	-	-	-

Restricted

Sakaki-mura	-	1	-	-	-
Rokuei-mura	-	1	-	-	-
Haraka-mura	-	1	-	-	-
Kiyosato-mura	-	1	-	-	-
KAMOTO-GUN					
Yamaga-machi	-	1	-	-	1
Kutami-machi	-	1	-	1	1
Ueki-machi	-	1	-	-	1(t)
Kawabe-mura	-	1	-	-	-
Yawata-mura	-	1	-	-	-
Mitake-mura	-	1	-	-	-
Hironi-mura	-	1	-	-	-
Iwano-mura	-	1	-	1	-
Takema-mura	-	1	-	1	-
Uchida-mura	-	1	-	2	-
Rokugo-mura	-	2	-	-	-
Inada-mura	-	1	-	-	-
Mitama-mura	-	1	-	-	-
Nakadomi-mura	-	1	-	-	-
Chida-mura	-	2	-	-	-
Menodake-mura	-	1	-	1	-
Yamauchi-mura	-	1	-	-	-
Yamamoto-mura	-	1	-	-	-
Tabaru-mura	-	1	-	-	-
Hishigata-mura	-	1	-	-	-
Sakurai-mura	-	1	-	-	-
Santo-mura	-	1	-	-	-
Yoshimatsu-mura	-	1	-	-	-
Tasoko-mura	-	1	-	-	-
Omichi-mura	-	1	-	-	-
Hirosa-mura	-	1	-	-	-
Komeda-mura	-	1	-	-	-
KIKUCHI-GUN					
Waifu-machi	-	1	-	-	-
Kawaharu-machi	-	1	-	-	-
Asahino-machi	-	1	-	-	-
Otsu-machi	-	1	-	1	-
Ryumon-mura	2	1	-	-	-
Hazama-mura	-	2	-	-	-
Shirokita-mura	-	1	-	-	-
Tofide-mura	-	1	-	-	-
Kamogawa-mura	-	1	-	-	-
Kikuchi-mura	-	1	-	-	-
Hanabusa-mura	-	1	-	-	-
Tosaki-mura	-	1	-	-	-
Kitagoshi-mura	1	1	-	-	-

Morikawa-mura	-	2	-	
Hiramagi-mura	-	2	-	
Seta-mura	-	2	-	
Jinnai-mura	-	1	-	
Tsuda-mura	-	1	1	
Kyozumi-mura	-	1	-	
Haramizu-mura	-	1	-	
Goshi-mura	2	1	1	
Shisui-mura	-	3	-	
Nishigoshi-mura	2	1	2	
Tashima-mura	-	1	-	
Minamogo-mura	1	1	1	
ASO-GUN				
Miyaji-machi	-	1	-	1
Uchinomaki-machi	1	1	-	
Oguni-machi	3	7	7	
Umamihara-machi	1	1	1	
Takamori-machi	-	1	-	
Sakanashi-mura	-	1	-	
Kurokawa-mura	2	-	-	
Nagamizu-mura	-	1	-	
Ogishi-mura	1	1	1	
Yamada-mura	-	2	-	
Nakadori-mura	-	1	-	
Kojo-mura	-	1	-	
Minamioguni-mura	4	2	-	
Ubuyama-mura	-	1	2	
Namino-mura	2	1	2	
Nojiri-mura	-	1	3	
Kusakabe-mura	-	2	1	
Kashiwa-mura	4	1	-	
Sugeno-mura	-	1	1	
Omine-mura	1	1	3	
Shikimi-mura	1	1	-	
Kugino-mura	1	1	-	
Nishikino-mura	1	1	-	
Yamanishi-mura	-	1	1	
Nagakita-mura	-	2	-	
Shirami-mura	-	1	3	1(t)
KAMIMASHIKI-GUN				
Mifune-machi	-	1	-	1(t)
Kiyama-machi	-	1	-	
Kosa-machi	-	1	-	1
Hama-machi	-	1	-	
Nanataki-mura	3	1	-	
Knokura-mura	-	1	-	1

Takaki-mura	-	1	-	
Iino-mura	-	1	-	
Rokka-mura	-	1	-	
Ozaka-mura	-	1	-	
Oshima-mura	-	1	-	
Akitsumura	-	1	-	
Hiroyasu-mura	-	1	-	
Fukuda-mura	1	1	-	
Tsumori-mura	-	1	-	
Kawaharu-mura	-	1	-	
Shirahata-mura	-	1	-	
Otome-mura	-	2	-	
Tatsuno-mura	-	1	-	
Miyauchi-mura	-	1	-	
Shimoyabe-mura	-	2	-	
Nakashima-mura	1	2	-	
Shiraito-mura	1	3	-	
Mitake-mura	1	1	-	
Narekawa-mura	-	2	-	
Asahi-mura	-	2	1	
Takimizu-mura	-	2	2	
Shirami-mura	-	1	-	
SHIMOMASHIKI-GUN				
Kumanosho-machi	-	1	-	
Matsubase-machi	-	1	-	1
Ogawa-machi	-	1	-	
Tomochi-machi	1	1	2	
Sugikami-mura	-	2	-	
Sugiai-mura	2	-	-	
Moritomi-mura	2	-	-	
Toyoda-mura	1	1	-	
Tono-mura	-	1	-	
Toyokawa-mura	-	1	-	
Toyofuku-mura	-	1	-	
Onobeta-mura	-	1	-	
Gonoe-mura	-	1	-	
Kaito-mura	-	1	-	
Toyono-mura	-	2	1	
Nakayama-mura	-	2	-	
Toshine-mura	1	1	1	
Higashitomochi-mura	2	1	2	
YATSUSHIRO-GUN				
Kagami-machi	-	2	-	
Miyanochara-machi	-	1	2	1(t)
Kongo-mura	-	1	-	
Koda-mura	-	1	-	
Kamimatsukuma-mura	-	2	-	
Shinomatsukuma-mura	-	-	4	2
Miyaji-mura	1	1	-	
Yachiwa-mura	-	1	-	

Sencho-mura	-	2	-
Showa-mura	-	1	-
Ryuhō-mura	-	1	-
Arisa-mura	-	1	-
Bunsei-mura	-	1	-
Wakashima-mura	-	1	-
Yoshino-mura	-	1	-
Nozu-mura	-	1	-
Taneyama-mura	-	1	2
Kawamata-mura	-	1	-
Shimotake-mura	-	1	-
Kakisako-mura	1	1	1
Kurigi-mura	1	-	-
Nitao-mura	1	-	-
Kureko-mura	1	-	-
Shiibaru-mura	-	2	-
Hagi-mura	1	-	1
Momaki-mura	-	1	-
ASHIKITA-GUN			
Hinagu-machi	-	1	-
Sashiki-machi	2	2	3
Minamata-machi	3	4	2
Futami-mura	-	1	2
Tanoura-mura	2	1	2
Yuoura-mura	3	2	1
Tsunagi-mura	2	1	-
Kugino-mura	-	1	2
Ono-mura	1	2	2
Yoshio-mura	1	2	4
Kudaragi-mura	1	1	1
KUMA-GUN			
Menda-machi	-	1	1
Taragi-machi	-	1	1
Yunomae-machi	-	1	-
Nishi-mura	-	1	-
Ichibu-mura	-	1	-
Ue-mura	-	2	0
Okabaru-mura	-	1	-
Kume-mura	-	2	-
Minakami-mura	-	4	2
Kurohiji-mura	-	1	1
Sue-mura	-	1	-
Fukada-mura	-	1	-
Kinoe-mura	-	1	1
Kawa-mura	-	1	2
Youra-mura	-	1	1
Itsuki-mura	4	1	3
Yamae-mura	-	4	2
Watari-mura	1	1	2
Isshochi-mura	-	2	2

1(t)
1(t)

1(t)

Konose-mura	1	2	2
AMAKUSA-GUN			
Noboritate-machi	-	1	-
Hondo-machi	-	1	1
Futae-machi	-	1	-
Tomiooka-machi	-	1	-
Ushibuka-machi	-	1	3
Iwa-mura	-	1	-
Kami-mura	-	1	2
Aka-mura	1	1	1
Yushima-mura	-	1	-
A-mura	-	1	-
Imatsu-mura	-	1	1
Kyoragikawachi-mura	-	1	-
Kusubo-mura	-	1	-
Oura-mura	-	1	-
Suji-mura	-	1	-
Akasaki-mura	-	1	-
Kotsura-mura	-	1	-
Shimotsura-mura	-	1	-
Shimago-mura	-	1	-
Shigaki-mura	-	1	1
Himedo-mura	-	2	-
Takado-mura	-	1	-
Hinoshima-mura	1	-	-
Odo-mura	-	1	1
Goshonoura-mura	-	2	3
Ura-mura	-	1	-
Tanasoko-mura	-	1	-
Miyada-mura	-	1	-
Sumoto-mura	1	1	-
Shimoura-mura	-	1	1
Kameba-mura	-	1	-
Hajiuto-mura	-	1	1
Kusuura-mura	-	1	1
Miyaji-mura	-	2	1
Otao-mura	-	1	-
Nakata-mura	-	1	-
Ikariishi-mura	1	-	-
Hon-mura	-	2	1
Saitsu-mura	-	1	-
Goryo-mura	-	1	1
Eninoike-mura	-	1	1
Jogawara-mura	-	1	-
Teno-mura	-	1	-
Sakasegawa-mura	-	1	2
Shiki-mura	-	1	2
Tororo-mura	-	1	1
Fukuregi-mura	-	1	1
Takahama-mura	-	1	-

1

1(t)

Oe-mura	-	1	2
Tomitsu-mura	-	1	1
Itchoda-mura	-	1	4
Shingo-mura	-	1	-
Miyajidake-mura	-	1	-
Miyanokawachi-mura	-	1	1
Fukami-mura	-	1	2
Kameura-mura	-	1	-
Oniki-mura	-	1	1
Kutami-mura	-	1	3
Shimoda-mura	1	1	-

G. ASSOCIATIONS.

There is a Chamber of Commerce and Industry in Jogyoji-cho, Kumamoto-shi.

H. CULTURAL INSTITUTIONS

1. Temples.

Hommo-ji, Kumamoto. Kumamoto-shi. A Buddhist temple dedicated to Kiyomasa, Kato, the special protector of the Nichiren sect. It is said to have been laid out in 1632. While very attractive in a setting of cherry trees, terraces, stone lanterns and many steps, it contains no architectural treasures. There are many manuscripts and relics of Kiyomasa among the temple treasures.

Kato Jinsha, Kumamoto-shi. A Shinto shrine dedicated to Kiyomasa Kato.

2. Castle.

Kumamoto Castle, Kumamoto-shi. A type of the "Castle on Plain and Mountain" built on high ground north of the center of the city. The castle was originally begun in the second quarter of the 16th century but was thoroughly remodeled in 1601 by its new lord, Kiyomasa Kato, one of the Hideyoshi's chief generals in his Korean campaigns, and known as the foremost castle architect in Japan. The conspicuous features of this castle were high stone walls and deep moats and the fact that the gables are formed not of the usual curved lines, but of straight linear design. Most of the building was destroyed at the time of the time of the military campaign of 1877 but one tower remains. After the end of the house of Kato the Lord of Hosokawa held the castle until the end of feudalism.

3. Libraries.

Kumamoto Prefectural Library. Kumamoto-shi. Founded 1912 contains 63,740 books. For University and school libraries see section F.4.c.

4. Miscellaneous.

Aso-Kazan. Kenkyu-Jo. (Kyoto Teikoku Saigaku). Aso-Gun. A laboratory for geophysical and geological research in volcanic regions branch of Kyoto Imperial University. For Aso-San see chapter I.D. 4.

VI. WHO'S WHO IN KUMAMOTO-KEN

This chapter consists of a listing, divided into 2 parts, of prominent persons reported to be residents of Kumamoto-ken. List "A" classifies persons, by cities, according to occupation. Those names starred with an asterisk (*) indicate persons who are believed to have some knowledge of English.

List "B" is an alphabetical directory which presents available biographical information concerning persons in list "A". A date in parenthesis placed after a statement, e.g. "(1940)", indicates the date of the report giving that information.

The use of occupational List "A" will aid in locating experienced personnel in various fields. The alphabetical directory, List "B", will in some instances aid in identifying persons and in checking their background and experience.

Local Japanese records or files on persons should prove useful whenever they can be secured. Certain key sources of this nature are listed here:

1. The Koseki.

Each city, town and township maintains a record of all families domiciled within the unit, including the names of all members of the family, even though they may be living elsewhere, together with the dates of their birth, marriage, and death. The files of the community also indicate the following classifications of individuals: foreigners, Koreans, and laborers. It will be noted that every individual is listed in at least 2 different places, the Koseki of his native city, town and township and the police box of the district where he actually resides.

2. Police Registers.

a. The central files of the Special Higher Police (Tokubetsu Koto Keisatsu) which are kept in the police stations.

b. Kempei (military police) records of political offenders. The location of these files is unknown except that they would be under military custody.

c. Local police box records which list the name, age, address, and occupation of each person living within the district.

d. Finger-print files. Finger-printing is less extensively used than in the United States; only about 5,000,000 prints are available. Files are maintained by the Tokyo and Osaka metropolitan police.

3. Files of National Employment Exchanges.

These exchanges, located in Kumamoto-shi, Arao-shi, Hondomachi and Yatsushiro-shi maintain a record of all employable persons, listing their occupations and present employments. In villages and towns having no employment exchanges, the same information is found in the village office or city hall.

4. Files of Public Welfare Offices.

Lists are kept of the homeni-in, prominent persons in the community doing volunteer welfare work. These persons are of the wealthy, leisure class, and have training in public relief techniques. The homeni-in number about 10 to 200 persons in each city, depending upon its size.

5. Postal Savings Accounts Records.

Records of postal savings accounts are kept in local post offices. Each account lists the name, address, occupation, and amount of deposit.

6. Other Sources.

Other sources of names are bank records, municipal tax rolls, corporation employment records, military draft records, and the Shokuin-roku (Roster of Government Officials, an annual registry of the Imperial Cabinet).

A. LIST BY CITIES ACCORDING TO OCCUPATION **

AGRICULTURE

* FUJISAKI, Yaguma Owner, Fujisaki Farm, Tanoura-mura, Ashikita-gun.

ASSOCIATIONS

NAKAYAMA, Mikio Chairman, Chamber of Com. & Industry.

COMMUNICATIONS

YANO, Ichiro Editor, Kumamoto Nichi-Nichi.
IZU, Tomindo Repr., Kumamoto Nichi-Nichi.

CONSTRUCTION

MASUNAGA, Shigemi President, Bldg. & Contracting Co.

COURTS & LAW

AKABOSHI, Tenta Ex-judge, Court of Adm. Litigation.
HIRANO, Tatsuki Lawyer.
KOBAYASHI, Migitaro Judge, District Court.
MATSUI, Zenichi Chief Procurator, District Court.
TANIDA, Katsunosuke Procurator, District Court.

** Unless otherwise specified, address is Kumamoto-shi.

EDUCATION

ENDO, Kaneichi Prin., Higher Tech. Sch.
FUJITA, Atsushi Pres., Kumamoto Coll. of Pharmacology.
*FUKUDA, Genzo Prin., Middle School.
*INADOMI, Hajime Dir., Kyushu Gakuin School.
KOIKE, Dr. Ex-head, Agr. Sch.
KUROZAWA, Yoshiomi Prin., Med. Univ.
MIURA, Nabetaro Pres., Tech. Coll.
MURAYAMA, Yoshiatsu Prin., Pharmacology Sch.
OMORI, Ichiro Prin., Higher Tech. Sch.
*OTSUKI, Takashi Prof., Tech. Coll.
SASA, Kunio Librarian, Pref. Library.
SHIBUYA, Tamotsu Chief, Pref. Education Sect., Internal Admin. Dept.
SOENO, Shin Pres., Fifth Higher Sch.
TAKEDA, Tetsuyuki Pres., Shikamoto Agr. & Ind. Sch.
TAKEZAKI, Yasu Rev. Prin., Girls' High Sch.
*TOKUHIRO, Harumi Prof. Higher Tech. Sch.

ENGINEERS

KUNIMUE, Susumu Engineer, Kumamoto Electric Co.
OHARA, Masaichi Chief engr., Kumamoto Electric Co.
OTA, Yujiro Engineer, Bur. of Forestry.
*OTSUKI, Takashi Prof., Kumamoto Tech. College.
*TOKUHIRO, Harumi Prof., Higher Tech. Sch. (Civil Engr.).

FINANCE

ANDO, Moku Branch mgr., Dai-Ichi Bank.
ARAI, Makoto Ex-branch mgr., Hypothec Bank of Japan.
KATAGIRI, Yasushi Pres., Higo Bank.
KATAOKA, Yoshikazu Branch mgr., Dai-Ichi Bank.
KAWAHARA, Kikutaro Mgn. dir., Higo Bank.
KITAJIMA, Yaichiro Branch mgr., Sumitomo Bank.
KOJIMA, Tomojiro Ex-branch mgr., Bank of Japan.
KUMAGAI, Eiji Ex-branch mgr., Sumitomo Bank.
*MATSUE, Keizo Branch mgr., Bank of Japan.
NAKAYAMA, Koji Branch mgr., Hypothec Bank of Japan.
SHIBUE, Eiju Branch mgr., Yasuda Bank.
YONEZAWA, Katsutarō Branch mgr., Hypothec Bank of Japan.

GOVERNMENT

Prefectural Government Officials.

AKABOSHI, Tenta Ex-governor.
SOGA, Kajimatsu Governor (1944).
YOKOMIZO, Koki Ex-governor (1943).
YUKIZAWA, Chiyoji Ex-governor (1942).
YAMAMOTO Head, Governor's Secretariat.
UDA, Toshihira Chief, Budget Section.
TAKEUCHI, Ko'ichi Chief, Accounts Section.
MORIOKA, Hidec Chief, General Affairs. Section.
FUKUTOMI, Kazuma Chief, Statistics Section.
FUJITA, Takashi Chief, Buildings & Repairs.

YURA, Taminosuke Head, Internal Administration Dept.
KOYAMA, Shichiro Chief, Shrines Temples & Mil. Affairs Sect.
UYEDA, Yutaka (Jo) Chief, Welfare Section.
HAYASHI, Ryu Chief, Overseas Affairs Section.
SHIBUYA, Tamotsu Chief, Education Section.
IWAMI, Takayuki Chief, Local Affairs Section.
YAMAMOTO, Kenichi Chief, Sanitation Section.
NISHIOKA, Taro Head, Economics Dept.
KOBAYASHI, Mineo Chief, Agricultural Affairs Section.
SHIGEMI, Sukeyuki Chief, Commerce & Industry Section.
NISHIYAMA, Tameyoshi Chief, Price & Funds Section.
MIYAKE, Tomohira (Yuhei) " Chief, Planning Section.
SASAKI, SEN Chief, Public Works Section.
ISHIDA, Shogo Chief, Cultivated Land Section.
KUSE, Kanjiro Chief, Silk Section.
KURAOKA, Nagayoshi Chief, Forestry Affairs Section.
NOZAWA, Ryoichiro Chief, Livestock Section.
GOTO, Go (Hide) Chief, Marine Products Section.
INOUE, (Rokudera) Chief, 2nd Economics Section.
HIROOKA, Kenichi Head, Police Dept.
YASUDA, Sashichiro Chief, Employment Section.
INUKAI, Kennosuke Chief, Insurance Section.
YOKOYAMA, Juichi Chief, Special Higher Police Section.
(Shigekazu)
SHIMADA, Junichiro Chief, Police Affairs Section.
TAKATA, Michitoshi Chief, Economic Peace Preservation Section.

Chiefs of District Offices.

FUCHITA, Hiroshi (Kan) 1. Hotaku.
KOZAKI, Toshiro 2. Uto.
YAMAMURA, Matao 3. Tamana.
MATSUNAGA, Seiichi 4. Kamoto.
SONODA, Kazumasa 5. Kikuchi.
IMAI, Matayoshi 6. Aso.
KIMURA, Kenjyu 7. Shimomashiki.
KITAHARA, Kikuo 8. Yatsushiro.
MAZAKI, Hajime 9. Ashikita.
AKAHOSHI, Toshiro 10. Kuma.
YAMAMOTO, Heisaku 11. Amakusa.

National Government Officials stationed in Kumamoto-ken.

OKAI, Yasaburo Head, Kumamoto Communication Bureau.
KATAGIRI, Kaoru Chief, Management Dept.
MATSUO, Shigeyoshi Chief, Business Dept.
NAGATA, Kenji Chief, Savings Dept.
NAKAGAWA, Matsutarō Chief & engr., Engineering Dept.
ONNOYA, Hoten Ex-chief, Finance Bureau (1942).
SHIKIMURA, Yoshio Ex-chief, Finance Bureau (1941-42).
TODA, Sadatoshi Chief, Finance Bureau (1943).
UI, Yoshio Acting dir., Revenue Supt. Office.
*ISHIWARA, Seitsu Ex-chief, Forestry Bureau (1942).
OTA, Yujiro Chief, Forestry Bureau (1944).
TAKAI, Shinichi Chief, Kumamoto Const. Ofc., Rys. Bur.
Arao-shi Officials.
WAKATAKE Matao Mayor

MIZUMA Deputy-mayor.
 DEI, Shigeru Head, National Employment Exch.
Hitoyoshi-shi Officials.
 FUCHIDA, Choichiro Mayor.
 SHIBATA, Masaji Treasurer.
 KAMII, Denkichi Deputy-mayor.
 AKAIKE, Teizo Deputy-mayor.
Hondo-machi Officials.
 MIYAMOTO, Tadashi Head, National Employment Exch.
Kumamoto-shi Officials.
 HIRANO Mayor.
 KAMIYAMA, Hideo Treasurer.
 MAEDA, Yutaka Head, National Employment Exch.
 NISHIKAMI, Shijuro Chief, North Police Station.
 SAHEKI, Matsuo Chief, South Police Station.
Yatsushiro-shi Officials.
 SAKATA, Michio Mayor.
 NAKANISHI Head, National Employment Exch.
 IDO Treasurer.
 MORISHITA, Jiro Deputy-mayor.
 IMURA, Sakutarō Deputy-mayor.

 HEALTH & SANITATION
 AKASHI, Mataka M.D., Head, Akashi Hospital.
 FUJITA, Atsushi Pres., Coll. of Pharmacology.
 *FUKUDA, Yoshinobu Head, Fukuda Maternity Hospital.
 *IKEGAMI, Goro M.D., Prof., Medical Univ.
 *KAGOSHIMA, Shigero M.D., Prof., Medical Univ.
 KOMIYA, Etsuzo M.D., Pres., Medical Univ.
 MIURA, Toyo M.D., Head, Miura Hospital.
 OHARA, Dr. S. Pediatrician, Kumamoto Medical Acad.
 TANIGUCHI, Yazaburo M.D., Head, Taniguchi Hospital.
 TARUKI, Shinzo Head, Seishin Iin (Medical Work).

 HOUSING
 YOSHIDA, Saburo Mgr., Aso Kanko Hotel, Choyo-mura, Aso-gun.

 MANUFACTURING
 ASHIDACHI, Tadashi Mgn. dir., Oji Seishi KK, Yatsushiro-shi.
 KATO, Fujitaro Mgn. dir., Oji Seishi KK, Yatsushiro-shi.
 NAGANO, Chuji Pres., Silk Yarn Mfg. Co.
 NAKAJIMA, Tameyoshi Pres., Kyushu Elec. Co.
 NAKAYAMA, Mikio Dir., Marine Products Co.
 TAMAKI, Tsunehachi Pres., Soy Mfg. Co.
 UENO, Kageharu Prop., Drugs Mfg. Co.
 YOSHIMURA, Tsunesuke Repr., Sake Brewing Co.

 PUBLIC UTILITIES
 *AKABOSHI, Tenta Pres., Electric Light Service Co.
 KOUZUMA, Hiroshi Mgn. dir., Electric Light Service Co.
 KUNIMUE, Susumu Engr., Electric Light Service Co.
 *NAKAJIMA, Tameyoshi Dir., Electric Light Service Co.
 OHARA, Masaichi Chief Engr., Electric Light Service Co.

RELIGION
 *HARADA, Tamezo Pastor.
 *ISHIMATSU, Ryoza Pastor, Kumamoto (Lutheran) Church.
 KITAGAWA, Shiro Pastor, First Nazarene Church.
 AKAMATSU, Ryū Priest.
 *WATANABE, Kiyoshi Minister, Lutheran Girls' School.
 TOMINAGA, Shunji Pastor, Kuwamizu Lutheran Church.

 TRADE & COMMERCE
 FUJII, Rihichi Repr., Paper Distr. Co.
 FURUSHO, Kenjiro Pres., Trading Co.
 IZUMI, Masutaro Repr., Isumi Tailor Co.
 MASUDA, Zenjiro Repr., Textile Wholesaling Co.
 OKUBO, Seisuke Pres., Soy Sauce Distr. Co.
 OSHIMA, Shiro Auditor, Real Estate Co.
 SEMBA, Sochiro Pres., Department Store.
 SUZUKI, Yasaburo Pres., General Merchandise Store.
 TAKAKI, Daishiro Prop., Milk Shop.
 *YAMANOUCI, Eikichi Pres., Cooperative Assn.
 YONAWA, Isogoro Repr., Automobile Distr. Co.

 MISCELLANEOUS
Presumed to Speak English.
 *FUJIE, Toshio
 *ISERI, Sadayosu
 *HIROTA, Sajiro
 *ISHIMURA, Mitsuru
 *KUDO, Motoki
 *OKAMOTO, Tatsuji
 *ONO, Takeo Thomas
 *SAGARA, Shunto
 *SAKANISHI, Taikichi
 *SHIMADA, Mitsugu
 *YAMATO, Kiyoki
 *YOSHIDA, Kazumi
 *YOSHINAGA, Jenji

B. Alphabetical Directory

- AKABOSHI, Tenta: pres. Kyushu Elec. Co; mem. Japan Econ. Fed.; b. Kumamoto-shi, 1868; grad, Tokyo Imp. Univ., law, 1896; excise officer, Kanazawa & Sapporo Taxation Superintendence Burs.; council & secy, Justice Dept.; same Agr. & Com. Dept.; judge, Ct. of Adm. Litigation; gov., Kumamoto, Yamaguchi, Nagano & Nagasaki prefs.; organized Int'l. Rotary chapter, Kumamoto-shi address; 34 Tedoru, Hon-mura, Kumamoto-shi; listed, Who's Who. 1941
- AKAHOSHI, Toshiro: chief Dist. Office, Kuma-gun, (1943).
- AKAIKE, Teizo: Deputy-mayor, Hitoyoshi-shi, 1943.
- AKAMATSU, Ryu: priest served in Fukuoka Juvenile Ct., address Kumamoto-shi. (1944)
- AKASHI, Mataka: M. D.; head Akashi Hospital; b. Fukuoka-ken, 1872; grad., Kyushu Imp. Univ. med., 1908; head Taiwan Gov't Hosp; prof., Kumamoto Med. Coll., pres. of same; retired 1937; address, 47, Yamazaki-cho, Kumamoto-shi; listed Who's Who. 1941-42.
- ANDO, Moku: manager, branch office, Dai-ichi Bank, 384, Shin-yashiki-machi, Kumamoto-shi; member Rotary Int'l., 1939-40; res; Naka-Tojin-cho, Kumamoto-shi.
- ARAI, Makoto: magr, branch office, Hypothec Bank of Japan, 168 Oe-machi, Kumamoto-shi; member, Rotary Int'l., 1939; res: Hanabatake-cho, Kumamoto-shi. 1939
- ASHIDACHI, Tadashi: man dir. Oji Seishi K K address, Yatsushiro-shi. 1941.
- DEI, Shigeru: head, Nat'l Employm. Exch., Arao-shi, 1943.
- ENDO, Kaneichi: principal, Kumamoto Higher Technical Sch., Kurogami-machi, Kumamoto-shi. 1936
- FUCHIDA, Choichiro: mayor, Hitoyoshi-shi. 1943.
- FUCHITA, Hiroshi (Kan): chief, Dist. Office Hotaku-gun 1943.
- *FUJIE, Toshio: teacher; b. 1901; grad. Meiji Univ. Tokyo, 1924; B. A; Columbia S. S., 1925-27, M. A., Economy, Political Science, Res, 620 Mifune, Kumamoto-shi.
- *FUJII, Rihichi; repres., Fujii Shoten, paper distributing, 166, Ishikami, Shimazaki-cho, Kumamoto-shi; member, Rotary Int'l., 1939-40. res; 1 chome, Sai-ku, Kumamoto-shi.
- *FUJISAKI, Yaguma: agriculture; owner, Fujisaki Farm, Tanoura-machi, Ashikita-gun; member, Rotary Int'l., 1939-40.
- FUJITA, Atsushi: pharm. dr., pres., Kumamoto Coll. of Pharmacology, Kumamoto-shi. 1944.
- FUJITA, Takashi: chief, Buildings & Repairs Sect., Gov's, Secretariat, pref. gov't, 1943.
- *FUKUDA, Genzo: educator; principal, Kumamoto Middle Sch. b. Kumamoto-ken 1881; grad. Tokyo Higher Normal School, history, 1909; asst. prof. same; principal Shin Hatta Middle Sch., 1919; Takata Middle Sch., 1922, Nagaoka Middle Sch., 1925; present post since 1927; sent abroad to study educational system, 1936; address; Kumamoto Middle Sch., Oe-machi, Kumamoto-shi.

- *FUKUDA, Yoshinobu: M. D. Ch. B; head, Fukuda Maternity Hosp; b. Kumamoto-ken, 1873; grad. Edinburgh Univ. med sch; studied obstetrics and gynecology at Marburg Univ., Germany; principal, Kumamoto Girl's Sch. lecturer, 5th Higher Sch; prof. Kumamoto Med. Coll; lecturer, Kyushu Pharmaceutical Coll; vice-chm. Kyushu Med. Ass'n; pres., Kumamoto-ker. Physicians Ass'n. address; 55 Shioya-machi, Kumamoto-shi; listed, Who's Who, 1941-42.
- FUKUTOMI, Kazuma; chief, Statistics Sect., Gov's Secretariat, pref. gov't 1943.
- GOTO, Go (Hide): chief, Marine Products Sect., Economics Dept. pref. gov't. 1943.
- FURUSHO, Kenjiro: finance; pres., Furusho Goshi Kaisha, 15 Yamasaki-machi, Kumamoto-shi, member, Rotary Int'l, 1939-40; paid 27,000 yen income tax 1935.
- *HARADA, Tamezo; Christian pastor; b. 1882 Chinei Coll., Nagasaki, 1896-1901; Aoyama Gakuin, Tokyo, 1901-04; Drew Theo. Sem., N. J., 1907-10, B. D; Union Theo. Sem., N. Y. 1910-14, B. D; Columbia Univ., 1914-17 M. A.
- HAYASHI, Ryu: chief Overseas Affairs Sect., Internal Admin. Dept. pref. gov't., 1943.
- HIRANO: mayor, Kumamoto-shi. 1943
- HIRANO, Tatsuki: lawyer; pres., Hirano Law Office, 190, Uchitsuboi-machi, Kumamoto-shi, member, Rotary Int'l, 1939-40.
- HIROOKA, Kenichi: head, Police Dept., pref. gov't. 1943
- *HIROTA, Sajiro: b. 1893; Tokyo Imp. Univ., 1915-18, B. L; Columbia Ext., 1924-25, studied English, res: 51 Shimbari-machi, Kumamoto-shi, 1925.
- IDO: treasurer, Yatsushiro-shi. 1943.
- *IKEGAMI, Goro: M. D.; prof. Kumamoto Med. Univ.; b. Mie-ken, 1883; grad. Kyoto Imp. Univ. med., 1907; studied in Eur and Amer., 1924; made inspection tour to same, 1932; head of Univ. Hosp. address; 7 6 Higashi Kogai-cho, Kumamoto-shi listed, Who's Who, 1941-42.

- IMAI, Matayoshi: chief, Dist. Office, Aso-gun, 1943.
 IMURA, Sakutaro: Deputy-mayor, Yatsushiro-shi, 1943.
 *INADOMI, Hajime, Rev.: principal, Kyushu Gakuin, Boys' Middle Sch., Oe-machi, Kumamoto-shi; Christian; grad. So. Carolina State Univ.; visited U.S. on lecture tour, 1940 World Conv. of Lutheran Churches; member, Rotary Int'l., 1939-40; address, Oe-machi, Kumamoto-shi, 1940.
 INOUE, Rokudera: chief, 2nd Econ. Sect. of Pref. gov't; formerly asst. advisor of legal affairs to Ehime-ken; 1945.
 INUKAI, Kennosuke: chief, Insurance Sect., Police Dept., pref. gov't., 1943.
 *ISERI, Sadayosu: Chaplain; Ethics teacher at Kyushu Gakuin; b. 1912; Christian; grad. Kyushu Gakuin, Lutheran Theological Seminary, Tokyo, Pacific School of Religion, Berkeley, Calif., & Gettysburg College & Seminary, Pa. Returned to Japan, 1941; was appointed chaplain Ethics teacher at Kyushu Gakuin; has fine command of English; address: Kumamoto-shi, Kyushu Gakuin, 1941.
 ISHIDA, Shoga: chief, Cultivated Land Sect., Economics Dept. pref. gov't., 1943.
 *ISHIMATSU, Ryoza: Pastor, Kumamoto Church (former Lutheran); b. 1894; Christian; grad. Lutheran Seminary in Japan; ordained in 1921; has been pastor of Kumamoto Church many years; attended World Sunday School Convention, Los Angeles; Address, 18 Suido-cho, Kumamoto-shi, 1941.
 *ISHIMURA, Mitsuru: attended Univ. of Calif., address, Kumamoto-shi.
 *ISHIWARA, Seiitsu: dir., Kumamoto-ken Forestry Bur.; b. Gifu-ken, 1884; grad. Tokyo Imp. Univ., fores., 1910; ent. Agr.-For. Min. on grad; sect. chief, Tokyo, Akita and Osaka For. Bur.; made insp. tour of Eur. and S. Amer; dir., Akita For. Bur., 1935; address, 297 Kubonji, Oe-machi, Kumamoto-shi; listed, Who's Who, 1941-42.

- IWAMI, Takayuki: chief, Local Affairs Sect., Internal Admin. Dept., pref. gov't., 1943.
 IZUMI, Masutaro: rep., Izumi Tailoring Co., 17 Kami-dori-machi, Kumamoto-shi; member, Rotary Int'l., 1939-40.
 IZU, Tomindo: rep., Kumamoto Nichi Nichi, newspaper.
 *KAGOSHIMA, Shigeru: M.D.; prof., Kumamoto Medical Univ., 1926-42; b. Kurume-shi, 1882; grad. Chiba Med. Univ., 1923; studied in Eur. and Amer., 1924-25; address: 377 Shin Yashiki-machi, Kumamoto-shi, listed, Who's Who, 1941-42.
 KAMII, Denkichu: deputy-mayor, Hitoyoshi-shi, 1943.
 KAMIYAMA, Hideo: treasurer, Kumamoto-shi, 1943.
 KATAGIRI, Kaoru: chief, management dept., Kumamoto Communications Bur., National Ministry of Transp. & Communications; address, Kumamoto-shi, 1944.
 KATAGIRI, Yasushi: pres., Higo Bank, Ltd., Konya-cho, Kumamoto-shi; res. 504 Oaza Kushinadera, Oe-cho, Kumamoto-shi. member, Rotary Inter., 1940.
 KATAOKA, Yoshikazu: mgr., Kumamoto branch, Dai-Ichi, Bank, Ltd., Naka Tojinmachi, Kumamoto-shi; member Rotary Int'l, 1940; res. 383 Shinyashiki-cho, Kumamoto-shi, 1940.
 KATO, Fujitaro: managing dir., Oji Seishi KK., Yatsushiro-shi, 1941
 KAWAHARA, Kikutaro: managing dir., Higo Bank, Ltd., 82 Tsuboi, Kur-okami-cho, Kumamoto-shi. Member Rotary Int'l., 1939-40; res. 744 Tsuboi, Kurogami-cho, Kumamoto-shi, 1940.
 KIMURA, Kenju: chief, Dist. Office, Shimomashiki-gun 1943.
 KITAHARA, Kikuo: chief, Dist. Office, Yatsushiro-gun, 1943.
 KITAGAWA, Shiro: Pastor, First Nazarene Church, Kumamoto-shi; b. 1905, address, Kumamoto-shi, 1938.
 KITAJIMA, Yaichiro: Mgr., Kumamoto branch, Sumitomo Bank, Ltd., Uoya-cho, Kumamoto-shi; member, Rotary Int'l, 1940, res. 24 Nishi Tsuboi-cho, Kumamoto-shi, 1940.
 KOBAYASHI, Migitaro: chief, Kumamoto District Court, Kumamoto-shi, 1940.
 KOBAYASHI, Mineo: chief Agricultural Affairs Sect., Economics Dept., pref. gov't., 1943.
 KOIKE, Dr.: former head, Agr. School, Kumamoto-shi; studied in Denmark; has PhD. in Agr.; about 60 years old
 KOJIMA, Tomojiro: former mgr., branch office, Nippon Ginko, Ltd., 401, Shinyashikimachi, Kumamoto-shi; member, Rotary Int'l, 1939, Res., Samba-cho, Kumamoto-shi, 1939.
 KOMIYA, Etsuzo: M.D.; pres., Kumamoto Med. Univ., Kumamoto-shi, 1944
 KOUZUMA, Hiroshi: managing dir., Kumamoto Electric Co., 686 Motoyama-cho, Kumamoto-shi; b. 1879 Kumamoto-ken; grad. Tokyo Imp. Univ. (Elec. Engr.), 1905; entered govt. service; chief, Electric Sect., Osaka Communications Bur.; dir. Kagoshima Elec. Co. Takeda Hydro-elec. Co., Oase Tourist Assn.; member, Rotary Int'l, 1939-40; Res; Konya-machi, Kumamoto-shi; listed, Who's Who, 1941-42.
 KOYAMA, Shichiro: chief, Shrines, Temples, & Military Affairs Sect. Internal Admin. Dept., pref. gov't. 1943.
 KOZAKI, Toshiro: chief, Dist. Office, Uto-gun, 1943.

KUDO, Motoki: attended Univ. of Calif., address, 1432 Kamogawa-mura Kikuchi-gun.

KUMAGAI, Eiji: former mgr., branch office, Sumitomo Bank, Ltd. 24 Nishitsuboi-machi, Kumamoto-shi; member, Rotary, Intr'l., 1939-40, res., Uoya-machi, Kumamoto-shi, 1940.

KUNIMUE, Susumu: Engineer, Kumamoto Electric Co., 10 Kyo-machi Hon-cho, Kumamoto-shi; delegate, World Power Conf., Tokyo, 1929.

KURAOKA, Nagayoshi: chief, Forestry Affairs Sect., Economics Dept. pref. gov't., 1943.

KUROZAWA, Yoshiomi: principal, Kumamoto Medical Univ.; Member, Rotary Int'l, 1939-40; res. Honjo-machi, Kumamoto-shi, 1940.

KUSE, Kanjiro: chief, Silk Sect., Economics Dept., pref. gov't, 1943.

MAEDA, Yutaka: head, Nat'l, Employment Agency, Kumamoto-shi, 1943.

MASUDA, Zenjiro: rep. Masuda Co. Ltd., 18, Konya-machi 1-chome; member Rotary Int'l., 1939-40, res. Miyuki-machi, Kumamoto-shi, 1940.

MATSUNAGA, Seichi: chief, Dist. Office, Kamoto-gun, 1943.

MASUNAGA, Shigemi: pres., Masunaga-Gumi, Ltd., Kumamoto-shi; member Rotary Int'l. 1939-40; res. Oe-machi,, Kumamoto-shi, 1940.

*MATSUE, Keizo: Mgr., Kumamoto branch, Bank of Japan, Funaba-cho, Kumamoto-shi; member, Rotary Int'l., 1940; res. 401 Shinyashiki Kumamoto-shi, 1940. b. Kyoto Pref. 1890; grad. Tokyo Imp. Univ. Com., 1916; joined Bank of Japan; Inspector London Agencies; same, Nat'l. Treas. Dept of Head Ofc. 1937; listed Who's Who 1941-42.

MATSUI, Zenichi: chief Public Procurator, Kumamoto District Court, Kumamoto-shi; former chief public procurator, Kagoshima District Court, 1945.

MATSUO, Shigeyoshi: chief, Business Dept., Kumamoto Communications Bur., National Ministry of Transp. & Communications, Kumamoto-shi, 1944.

MAZAKI, Hajime: chief, Dist. Office, Ashikita-gun, 1943.

MIZUMA; asst. mayor, Arao-shi, 1943.

MIURA, Nabetaro: pres., Kumamoto Tech. Coll. 297 Oe-machi, Kumamoto-shi; delegate, World Power Conf., Tokyo, 1929.

MIRURA, Toyo: head doctor, Miura Hospital, Kusunoki-machi, Kumamoto-shi; member, Rotary Int'l, 1939-40; res., Kusunoki-machi, Kumamoto-shi, 1940.

MIYAKE, Tomohira (Yuhei): chief, Planning Sect., Economics Dept., pref. gov't., 1943.

MITAMOTO, Tadashi: head, Nat'l. Employnt. Exch., Hondo-machi, Amakusa-gun.

MORIOKA, Hideo: chief, General Affairs Sect., Gov's. Secretariat, MORISHITA, Jiro: deputy-mayor, Yatsushiro-shi, 1943.

MURAYAMA, Yoshiatsu: principal, Kumamoto Yakugaku Senmongakko (Education-Pharmacology), Oe-machi, Kumamoto-shi; member, Rotary Int'l. 1939-40, res., Kuhonji, Oe-machi, Kumamoto-shi, 1940.

NAGANO, Chuji: pres., Kumamoto-Sei-shi Co. (silk yarn mfg.), Kumamoto-shi; member, Rotary Int'l, 1939-40; res., Kuhonji, Oe-machi, Kumamoto-shi, 1940.

NAGATA, Kenji: chief, Savings Dept., Kumamoto Communications Bur. National Ministry of Transp. & Comm., Kumamoto-shi, 1944.

NAKAGAWA, Matsutarō: chief & engineer, Engineering Dept., Kumamoto Communications Bur., National Ministry of Transp. & Comm., Kumamoto-shi, 1944.

*NAKAJIMA, Tameyoshi: pres., Kyushu Elec. Co.; b.1880, Kumamoto-shi grad. Tokyo Imp. Univ., English Law, 1908; editorial staff, Osaka Asahi Shimbun; editor, Chuo Shimbun; steward to Marquis Hosokawa family; toured Eur. & Amer., 1921; pres. Kanagawa Elec. Co; dir. Kagoshima Elec. Co.; sr mgn. dir., Kumamoto Elec. Light Co, Address: Shinyashiki-machi, Kumamoto-shi; listed, Who's Who, 1941-42.

NAKANISHI: Head, Natl. Employment Exch., Yatsushiro-shi. 1943

NAKAYAMA, Koji: mgr., Kumamoto br., Hypothec Bank of Japan, Hanabatake-machi, Kumamoto-shi; member, Rotary Int'l., 1940, Res: 168 Moto-Oe-cho, Kumamoto-shi, 1940

NAKAYAMA, Mikio: chairman, Kumamoto Chamber of Commerce & Industry; dir. Kumamoto Marine Products Co; dir. Higo Seishi KK; b. Kumamoto-ken, 1879, member Rotary Int'l., 1939-40, address: 613 Motoyama-cho, Kumamoto-shi, listed Who's Who, 1941-42.

NISHIKAMI, Shijuro: Chief, North Police Sta., Kumamoto-shi, 1943.

NISHIOKA, Taro: Head, Economics Dept., pref. Gov't., 1943.

NISHIYAMA, Tameyoshi: chief, Price & Funds Sect., Economics Dept., 1943.

NOZAWA, Ryoichiro: chief, Livestock Sect., Eco. Dept, pref. govt.1943

OHARA, Masaichi: chief eng., Kumamoto Elec. Co., 52 Hon-cho, Kyo-machi, Kumamoto-shi, 1929.

OHARA, Dr. S. Pediatrician, Children's Clinic, Kumamoto Medical Academy, Kumamoto-shi, 1939.

OKAI, Yasaburo: chief, Kumamoto Communications Bur., Nat'l. Ministry of Transp. & Comm., Kumamoto-shi, 1944.

*OKAMOTO, Tatsuji: attended Doshisha Univ. (LLB.), Columbia Univ., 1922-23; address: Sashiki, Kumamoto-shi, 1923.

OKUBO, Seisuke: pres., Okubo Soy Co., (soy sauce distributing), Ide-machi, Kumamoto-shi; member, Rotary Int'l., 1939-40; res. Kuhonji, Oe-machi, Kumamoto-shi, 1940.

OMORI, Iichiro: Prin., Kumamoto High Industrial School, Furushin-Yashiki-machi, Kumamoto-shi; member, Rotary Int'l., 1939-40. Res: Kurokami-machi, Kumamoto-shi. 1940.

OMORI, Iichiro: pres., Kumamoto Higher Tech. Sch.; b. Tokyo-to 1897; grad. Tokyo Imp. Univ., Mining & Metallurgy, 1904; prof., Kumamoto Higher Tech. Sch. 1906; present post 1938; member Rotary Int'l, 1939-40; address: 390 Shinyashiki-machi, Kumamoto-shi; listed in Who's Who, 1941-42.

*ONO, Takeo Thomas: attended Tokyo Technical Sch., 1902; Columbia Ext., 1910-17; b. 1886; address, Kumamoto-shi, 1917.

ONOYA, Hoten: chief, Finance Bur., Kumamoto-ken, 1942; former chief Finance Bur., Sendai.

OSHIMA, Shiro: auditor, Furusho Real Estate Co, 560 Oe-machi, Kumamoto-shi; member, Rotary Int'l, 1939-40; res., Hanabatake-cho, Kumamoto-shi, 1940.

OTA, Yujiro: dir., Kumamoto Forestry Bur., 1941-44, Nat'l. Dept. of Agr. & Commerce, Kumamoto-shi; b. Miyagi-ken, 1890; grad. Tokyo Imp. Univ., forestry, 1915; forestry expert; Horse Bur. Agr. & For. Ministry; sent abroad 1928; address, 297 Kuboji, Oe-machi, Kumamoto-shi; listed, Who's Who, 1941-42.

*OTSUKI, Takashi: prof. Elect. Engr., Kumamoto Tech. Coll.; b. Kobe 1893; educ: Tokyo Tech. Coll.; Darmstadt Tech. Coll, Stanford Univ., 1924; 1914-20, Asst. Prof., Tokyo Tech. Coll; 1920-24, Prof., Kumamoto Tech. Coll.; applied for Assoc. Membership, Amer. Institute of Electrical Engrg., 1924.

*SAGARA, Shunto: educ., Los Angeles Polytechnic High Sch., 1915-19; Columbia Univ., 1920-22 (B.A.); b. 1889; address; Kumamoto-shi; 1922.

SAHEKI, Matsuo: chief, South Police Sta., Kumamoto.

*SAKANISHI, Taikichi: educ: Doshisha Univ., Kyoto, 1915-20 (B.L.); Columbia Univ., 1925-26; b. 1894; address, Kumamoto-shi, 1926.

SAKATA, Michio: mayor, Yatsushiro-shi, 1943.

SASA, Kunio: chief librarian, Kumamoto-ken library; chairman, Kumamoto Cultural Asso.; b. Tokyo 1898; grad. Tokyo Imp. Univ., 1921; teacher, various middle schools; staff member, Kyushu Nichi Nichi Shimbun; address, 565 Kubonji, Oe-machi, Kumamoto-shi; listed, Who's Who, 1941-42.

SASAKI, Sen: Chief, Public Works Sect., Economics Dept., pref. gov't., 1943.

SEMBA, Soshiro: pres., Sentoku Dept. Store, 24, Koetorizaka, Kumamoto-shi; member, Rotary Int'l., 1939-40; res., Anseibashi-machi, Kumamoto-shi, 1940.

SHIBATA, Masaji: treasurer, Hitoyoshi-shi, 1943.

SHIBUE, Eiju: mgr. branch office, Yasuda Bank, Ltd., 87 Uchitsubo, Kumamoto-shi; member, Rotary Int'l., 1939-40; res., Komeya-machi, Kumamoto-shi, 1940.

SHIBUYA, Tamotsu: chief, Education Sect. Internal Admin. Dept., pref. gov't., 1943.

SHIGEMI, Sukeyuki: chief, Commerce & Industry Sect., Economics Dept., pref. gov't., 1943.

SHIKIMURA, Yoshio: dir., Kumamoto Financial Affairs Bur. (1941-42); b. Hiroshima-ken, 1899; grad. Tokyo Imp. Univ., law, 1923; supt., Osaka & Tokyo revenue offices; chief, indirect tax dept., Tokyo Revenue Supt. Office; chief, general affairs dept. of same; dir., Kumamoto Revenue Supt. Office, address, c/o Kumamoto Financial Affairs Bur., Kumamoto-shi, listed, Who's Who, 1941-42.

SHIMADA, Junichiro: chief, Police affairs Sect., Police Dept., pref. gov't., 1943.

*SHIMADA, Mitsugu: educ., Higher Tech. Coll. Tokyo, 1903-07; Columbia Univ., 1919-20; Harvard Univ., 1920-21; b. 1881; address; Kumamoto-shi, 1921.

SOENO, Shin: pres., 5th Higher School (1936-44); b. Tochigi-ken; 1880, grad. Tokyo Imp. Univ., philosophy, 1906; Prof. Fukushima Com. Coll.; dir., Oita Com. Coll., 1932-36; res, Karogami-cho, Kumamoto-shi; listed, Who's Who, 1941-42.

SOGA, Kajimatsu: gov., Kumamoto Pref., 1944; b. Ehime-ken, 1896; grad. Kyoto Imp. Univ., econ., 1923; joined civil service 1923; served various pref. govts.; section chief, Social Insurance Bur., Welfare Ministry; same Physical Bur., 1939; dir., Aid Bur. Military Protection Board, 1941; gov., Mie-ken, 1942; listed, Who's Who, 1941-42.

SONODA, Kazumasa: chief, Dist. Office, Kikuchi-gun, 1943.

SUZUKI, Yasaburo: pres., Gincho Hyakkaten (general merchandise); member, Rotary Int'l., 1939-40; res., Hanabatake, Kumamoto-shi, 1940.

TAKAI, Shinichi: chief, Kumamoto Construction Office, Railways Dept.; b. Aichi-ken; 1890, grad. Tokyo Imp. Univ., civil enrg., 1915; entered Rys. Dept.; chief, Morioka, Gifu & Tokyo Construction offices; present post 1939; address, Kubonji, Oshie-cho, Kumamoto-shi; listed, Who's Who, 1941-42.

TAKAKI, Daishiro: prop., Takaki Milk Shop; member, Rotary Int'l., 1939-40; res., Honjo-machi, Kumamoto-shi, 1940.

TAKATA, Michitoshi: chief, Economic Preservation Sect., Police Dept., pref. gov't., 1943.

TAKEDA, Tetsuyuki: pres., Shikamoto Agr. and Ind. Sch., 1944.

TAKEUCHI, Koichi: chief, Accounts Sect., Gov's. Secretariat, pref. Gov't., 1943.

TAKEZAKI, Yaso: Rev., principal, Oe Koto Jo Gakko (Girls' Sch.), Kumamoto-shi, 1938.

TAMAKI, Tsunehachi: pres., Tamaki Soy Co. member, Rotary Int'l., 1939-40; res., Mukae-machi, Kumamoto-shi, 1940.

TANIDA, Katsunosuke: procurator, Kumamoto District Court, Kumamoto-shi, 1944.

TANIGUCHI, Yazaburo: head doctor, Taniguchi Hospital (obstetrics), Honjo-machi, Kumamoto-shi; member, Rotary Int'l., 1939-40; res., Honjo-machi, Kumamoto-shi, 1940.

TARUKI, Shinzo: head, Seishin Iin (medical work), Kamibayashi-machi, Kumamoto-shi, 1938.

TODA, Sadatoshi: chief, Kumamoto Financial Affairs Bur.; former chief, Accounts Sect., Taxation Bur., 1943.

*TOKUHIRO, Harumi: prof., Kumamoto Higher Tech. Sch.; b. Kochi-ken, 1891 grad. civil enrg. Dept., Kumamoto Higher Tech. Sch., 1911; appointed prof. of same coll., 1911; studied, Germany Eng. & Amer., 1923-25; address, 84 Shichiken-cho, Kumamoto-shi;

listed, Who's Who, 1941-42.
 TOMINAGA, Shunji: clergyman; pastor, Kuwamizu Church (Lutheran); b. 1900; Christian; grad. Lutheran Theological Seminary, Japan; ordained, 1929. Chaplain, Ji-Ai-En (Colony of Mercy); address; Kuwamizu-machi, Kumamoto-shi, 1941.
 UDA, Toshihira: chief, Budget Sect., Gov's. Secretariat, pref. Gov't., 1943.
 UENO, Kageharu: prof., Ueno Shoten (drugs mfg.), Izumi-machi, Kumamoto-shi; member, Rotary Int'l., 1939-40; res., Kamidori-machi, Kumamoto-shi, 1940.
 UI, Yoshio: acting dir., Kumamoto Revenue Supt. Office; b. Tokyo-to, 1892; supt., Chiba Revenue Office. chief, accounts dept., Kumamoto Revenue Supt. Office, 1937; chief, direct tax dept. of same; chief, general affairs dept. of same; present post 1941; address; 36, Funaba-cho, Kumamoto-shi; listed, Who's Who, 1941-42.
 UYEDA, Yutake: chief, Welfare Sect., Internal Admin. Dept., pref. gov't., 1943.
 WAKATAKE, Matoi: mayor, Arao-shi, 1943.
 *WATANABE, Kiyoshi: minister & teacher; b. 1895; grad. Lutheran Theological Seminary, Japan; ordained, 1922. Formerly held pastorate at Hiroshima; since 1941 has been teaching and preaching at Kyushu Jo Gakuin; speaks English fairly well; address: Kyushu Jo Gakuin (Lutheran Girls' School), Kumamoto, 1941.
 YAMAMOTO: head, Governor's Secretariat, pref. gov't., 1943.
 YAMAMOTO, Heisaku: chief, Dist. Office, Amakusa-gun, 1943.
 YAMAMOTO, Kenichi: chief, Sanitation Sect., Internal Admin. Dept., pref. gov't., 1943.
 YAMAMURA, Matao: chief, Dist. Office, Tamana-gun, 1943.
 *YAMANOUCHI, Eikichi: pres., Kumamoto Mujin Co. (co-operative), 42, Konyaima-cho, Kumamoto-shi; member, Rotary Int'l., 1939-40; res., Hanabatake-cho, Kumamoto-shi, 1940.
 *YAMATO, Kiyoki: attended Univ. of Penna., 1929; address: Kawakami-mura, Hotaku-gun, 1929.
 YANO, Ichiro: Ed.-in-chief, Kumamoto Nichi-Nichi, Kumamoto-shi, 1943.
 YASUDA, Sashichiro: chief, Employment Sect., Police Dept., pref. gov't., 1943.
 YOKOMIZO, Koki: ex-pref. gov., 1943.
 YOKOYAMA, Juichi: chief, Special Higher Police Sect., Police Dept., pref. gov't., 1943.
 YONAWA, Isogoro: repr., Yonawa Shokai (automobile dist.); member, Rotary Int'l., 1939-40; address; Kasuga-machi, Kumamoto-shi, 1940.
 YONEZAWA, Katsutarō: mgr., Kumamoto branch, Hypothec Bank of Japan, Hanabata-cho, Kumamoto-shi; member, Rotary Int'l., 1939; res., 168 Moto Oe-machi, Kumamoto-shi, 1939.

*YOSHIDA, Kazumi: educ; Coll. of Pacific, Calif., 1924-25; Cornell Univ., N. Y., 1926; Columbia S.S., 1926, English, Architecture; b. 1897; address, Kumamoto-shi, 1926.
 YOSHIDA, Saburo: mgr., Aso Kanko Hotel, Choyo-mura, Aso-gun; member, Rotary Int'l., 1940; res., 1672 Izumi-cho, Kumamoto-shi, 1940.
 YOSHIMURA, Tsunesuke: repr., Yoshimura Gomei KK., (sake brewing); member, Rotary Int'l., 1939-40; res., Kumamoto-shi, 1940.
 YOSHINAGA, Jenji: attended Univ. of Calif., address, Toyofuku-mura, Shimomashiki-gun, 1918.
 YUKIZAWA, Chiyoji: former Gov. Kumamoto-ken, 1937-42; b. Nagasaki-ken, 1889; grad. Tokyo Imp. Univ., English law, 1919; entered Home Office; sec. Shizuoka, Iwate and Kyoto Prefs; dir. Educ. Bur., Niigata-ken; chief, Harbor Sect., Public Works Bur., Home Office; chief, city planning sect., Minister's secretariat; listed, Who's Who, 1941-42.
 YURA, Taminosuke: head, Internal Administration Dept., pref. gov't., 1943.

MANUFACTURES

A. LIST OF MANUFACTURERS.

FLOUR AND FEED MILLS

1. Matsumoto & Co.
1 chome, Saiku-machi, Kumamoto-shi.
Flours, cereals and pulse; canned foods.
Capital, 300,000 yen.

SOY SAUCE AND BEAN PASTES

2. Kato Giichi Honten.
Yakuyen-cho, Kumamoto-shi.
"Shoya" and sauces.
Capital, 120,000 yen.

TEXTILES

3. Gunze Raw Silk Manufacturing Co.
Kumamoto-shi.
Raw silk.
Capital, 20,667,000 yen.
4. Kanegafuchi Boseki K.K. (Kanegafuchi Spinning Co.)
Takase-machi, Kumamoto-shi.
Branch: 2.
Cotton yarn, cotton and rayon piece goods.
Capital, 120,000,000 yen.
5. Kumamoto Boseki K.K. (Kumamoto Spinning Co.)
Kumamoto-shi.
Cotton yarn.
6. Wakabayashi Seishi Boseki K.K. (Wakabayashi Silk Reeling Co.)
Gonoe-mura, Ogawa-machi.
Raw silk.

CHEMICALS

7. Government-owned plant.
Otsu.
Alcohol (ethyl), daily capacity, 3,816 U.S. gallons absolute alcohol.
8. Nippon Chisso Hiryo KK. (Japan Nitrogen Fertilizer Co.)
Minamata-machi, Ashikita-gun.
Nitric acid, 30,800; calcium carbide, 10,000; ammonia, 16,000; ammonium sulphate, 80,000; sulphuric acid (chamber), 87,500; glycerol, 1200; butyl alcohol, 117,000 (gals.); ammonium nitrate. (Productions are estimated metric tons (or gals.) annually for the late 1930's or early 1940's.)

9. Nissan Kagaku Kogyo KK.
Kagami-machi, Yatsushiro-gun.
Calcium carbide, 6,000 and sulphuric acid (chamber) 45,500 metric tons estimated annual capacity.
10. Showa Shuzo Co.
Yatsushiro-shi.
Alcohol (ethyl), daily capacity 15,264 U.S. gallons absolute alcohol.
11. Tokai Denki Kyoku KK.
Tanoura-mura, Ashikita-gun.
Carbon black.

MACHINERY, TOOLS AND APPLIANCES

12. Fakuda Tekkosho.
106 of 1 Shim-machi, Kumamoto-shi.
Polishing machine.
13. Fuminisha Tekkosho.
300 Kami Aoi-cho, Hitoyoshi-shi.
Sickles.
14. Fujita Tekkojo.
980 Haratake-machi, Kumamoto-shi.
Chemical machinery.
15. Fujiyoshi Tekkosho.
Tatema, Yatsushiro-shi.
Heavy oil engines.
16. Kiyo-fuji Tekkosho Goshi Kaisha.
322 Motoyama-cho Kumamoto-shi.
Spinning machines.
17. Yamata Shoka Goshi Kaisha.
108 Kawajiri-cho, Kumamoto-shi.
Plows.
18. Hashizaki Tekkojo.
3, Hakumachi, Uto-gun.
Castings.
19. Higashi Seisekusho.
Konoha-mura, Tamana-gun.
Rope making machine.
20. Inoguchi Imono.
1402 Harutake-machi, Kumamoto-shi.
Machines.

21. Kumamoto Dennetsu Kogyosho KK.
133 Hachioji Harutake-machi, Kumamoto-shi.
Iron bath kettles.
22. Mitsubishi Denki KK.
Kumamoto-shi.
Engine mounted accessories; magnetos; generating and starting equipment; motors; light, voltage regulators, switches, transformers, and other electrical equipment; radio equipment; instruments; pumps and other hydraulic equipment; parachutes; buoys; marine and mining equipment; machine tools.
23. Niiyama Chuzosho.
971 Haratake-machi, Kumamoto-shi.
Casting.
24. Okubo Tekkosho.
Funazu, Kawachi-mura, Hotaku-gun.
Farm tools.
25. Ota Chuzosho.
637, Motogama-machi, Kumamoto-shi.
Industrial machines.
26. Sakanichi Imono Seisakusho.
413, Kasaga-machi, Kumamoto-shi.
Cast iron tools.
27. Sashijiku Nogu Seisakusho.
18 Haikubo-cho, Hitoyoshi-shi.
Farm machine tools.
28. Shimoda Kyodai Tekkosho.
13 Higashi-Amidagi-cho, Kumamoto-shi.
Small boilers.
29. Shimoda Tekkojo.
Yoshiyasu, Hiyoshi-cho, Kumamoto-shi.
Plows.
30. Taketa Chutetsu.
Honjo-machi, Kumamoto-shi.
Cast iron kettles.
31. Tokai Denkyoku Seizo.
Tanoura-mura, Ashikita-gun.
Electrodes.
32. Tominaga Seihiki Shokuki Seizo Kojo.
18 Kusaba-cho, Kumamoto-shi.
Spinning machines.

33. Toyosha Nogu Seizo.
1521 Keda-cho, Kumamoto-shi.
Plows.
34. Ujiie Tekkosho.
304 Harutake-Harutake-cho, Kumamoto-shi.
Boilers.
35. Yoshida Imono.
1402, Harutake-machi, Kumamoto-shi.
Machines.
36. Yoshida Imono Seisakusho.
Honjo-machi, Kumamoto-shi.
Pumps.

AIRCRAFT, RAILROAD EQUIPMENT & SHIPS

37. Chihara Zoseusho.
1562 of 1 Noboritake-machi, Amakusa-gun.
Miscellaneous ships.
38. Fujimoto Zosensho.
4046 A-mura, Amakusa-gun.
Miscellaneous ships.
39. Futahara Zosensho.
3 of 12055 Noboritake-machi, Amakusa-gun.
Miscellaneous ships.
40. Iwasaki Zosensho.
4228 A-mura, Amakusa-gun.
Miscellaneous ships.
41. Kyodo Zosensho.
Eigetsu Aza, Himedo-mura, Amakusa-gun.
Western type sailing craft.
42. Maeda Kokun Kogyo.
Hanabata-machi, Kumamoto-shi.
Aircraft manufacture or research.
43. Matsumoto Miyomatsu Zosensho.
9869 Goryo-mura, Amakusa-gun.
Miscellaneous ships.
44. Matsumoto Zosensho.
144 Oninoike-mura, Amakusa-gun.
Sailing vessels.
45. Miyazaki Jinsaku Zosensho.
1129 Goryo-mura, Amakusa-gun.
Miscellaneous ships.

46. Miyazaki Kamezo Zosensho.
9508 Goryo-mura, Amakusa-gun.
Miscellaneous ships.
47. Mitsubishi Denki KK.
Kumamoto-shi.
Electrical and radio equipment for aircraft; hydraulic equipment; marine equipment.
48. Morieda Zosensho.
1 of 2546 Tobase-cho, Uto-gun.
Marine engines.
49. Morioka Zosensho.
2 of 5126 A-mura, Amakusa-gun.
Miscellaneous ships.
50. Murakami Zosensho.
Eigetsu-Aza, Himedo-mura, Amakusa-gun.
Western type sailing craft.
51. Nagaki Zosensho.
4238 A-mura, Amakusa-gun.
Miscellaneous ships.
52. Naganb Shigeshichi.
6439 Goryo-mura, Amakusa-gun.
Miscellaneous ships.
53. Natahama Manro Zosensho.
9869 Goryo-mura, Amakusa-gun.
Miscellaneous ships.
54. Sakaguchi Nakaji Zosensho.
9721 Goryo-mura, Amakusa-gun.
Miscellaneous ships.
55. Sakaguchi Ryuzo Zosensho.
319 Goryo-mura, Amakusa-gun.
Miscellaneous ships.
56. Shinozaki Tekkosho.
Misumi-machi, Uto-gun.
shipbuilding.
57. Tatsuma Hachiyo Zosen.
Location unknown.
Wooden vessels.
58. Tsutsumida Ichisaburo Zosensho.
320 Goryo-mura, Amakusa-gun.
Miscellaneous ships.

59. Tsutsumida Sei Zosensho
320 Goryo-mura, Amakusa-gun
Misc. ships.
 60. Urata Zosensho
4662 A-mura, Amakusa-gun
Misc. ships.
 61. Yasukawa Denki Sesakusho KK
Location unknown
Electrical aircraft equipment.
 62. Yoshinaga Zosensho
Ushubuka-shi, Amakusa-gun
Misc. ships.
- PULP AND PAPER.
63. Oii Seishi KK
Yatsushiro-shi
1937-39 average in metric tons: pulp 31,000, paper 32,500.

Kamimatsukuna-mura, Yatsushiro-gun
1937-39 average in metric tons: pulp 20,000, paper 36,500.
 64. Kokoku Rayon Pulp Mill
East of Yatsushiro-shi
Wood pulp.
 65. Nisso Jinken Parupu KK
Otako-machi, Yatsushiro-gun
Sufu. woven goods, etc., chemicals, pulp.

B. PRODUCTS.

(Numbers refer to companies in List A.)

FOOD

- Canned food 1.
- Flour 1.
- Soy sauce 2.

TEXTILES

- Cotton piece goods 4.
- Cotton yarn 4, 5.
- Raw silk 3, 6.
- Silk and rayon piece goods 4.
- Woven goods 65.

CHEMICAL PRODUCTS

Alcohol (ethyl) 7, 10.
 Ammonia 8.
 Ammonium nitrate 8.
 Ammonium sulphate 8.
 Calcium carbide 8, 9.
 Carbon black 11.
 Chemicals 65.
 Glyceral 8.
 Nitric acid 8.
 Sulphuric acid 8, 9.

MACHINES, TOOLS AND APPLIANCES

Agriculture machinery and tools 13, 17, 21, 24, 27, 29, 33.
 Appliances 21, 22, 23, 26, 30.
 Chemical machinery 14.
 Electrical instruments 22, 31.
 Industrial machinery 12, 15, 16, 18, 19, 20, 21, 22, 25, 28, 32,
 34, 35, 36.
 Machine tools 22.
 Marine machinery and equipment 22.
 Mining machinery and equipment 22.

TRANSPORTATION

Electrical equipment, aircraft 42, 47, 61.
 Engines, marine 48.
 Hydraulic equipment, aircraft 47.
 Marine equipment 47.
 Ships 37, 38, 39, 40, 43, 45, 46, 49, 51 52, 53, 54, 55, 56, 58,
 59, 60, 62.
 Ships wooden 57.
 Vessel, western type, sailing 41, 44, 50.

PULP AND PAPER

Paper 63.
 Pulp 63, 64.
 Sufu 65.

APPENDIX II

RAILROAD LINES

The following railroad lines are discussed in this appendix:

1. Kagoshima Main Line.
2. Kumanobe RR.
3. Hisatsu Line.
4. Hohi Main Line.
5. Kyudai (Daito) Line.
6. Kamoto Line.
7. Yunomae Line.
8. Misumi Line.
9. Yamano Line.
10. Kyushu Hichiku Line.
11. Takamori Line.
12. Kikuchi Electric RR.
13. Kumamoto Electric Tramway.
14. Electric RR., Kawashiri-southern Kumamoto-shi.
15. Coal Mining RR., Tamana-gun.
16. Kumamoto-shi Electric Tramway.
17. Logging RR., Kuma-gun.
18. Logging RR., Kuma-gun.
19. Kaolin Mining RR., Amakusa-gun.
20. Logging RR., Kuma-gun.
21. Logging RR., Kuma-gun.

Mileages given in the tables of this appendix are correct within one percent in nearly all cases. Bridges and tunnel lengths are approximate unless carried out to inches or decimals. Bridges up to 200 feet in length are designated as "short span" bridges.

Lines 17 through 21 are not discussed in this appendix. Line 19 is a mining line on Shima-jima, Amakusa-gun. Lines 17, 18, 20 and 21 are logging railroads in Kuma-gun, on the southern border of Kumamoto-ken. They are probably all of 2' 6" gauge.

1. Kagoshima Main Line.

Passenger traffic: Fukuoka-ken border, Yatsushiro-shi: 14 trains daily each way (1937); 12 trains daily each way (estimated 1945); however an extra 6 trains daily each way between Kumamoto-shi and Uto-machi. Yatsushiro-shi, Kagoshima-ken border: 10 trains daily each (1937); 8 trains daily each way (estimated 1945).

Freight traffic: 5,600,000 metric tons (including the weight of the rolling stock) were estimated to have been hauled between Yatsushiro & Fukuoka-ken border in 1944.

Average speed for express trains is 30 mph.

TABLE 46

Stations & Important Features, Kagoshima Main Line, Kumamoto-ken

Mileage from Fukuoka-ken border	Feature
0.0	RR enters ken, Fukuoka-Kumamoto ken boundary
0.8	Manda Station
5.6	Nagasu Station
8.7	Onoshima Station
11.3	Takase Station
11.5	Spur 0.2 miles long leading south to Nihiki-gawa
16.4	Konoha Station
21.3	Ueki Station, junction with the Kamoto Line
26.7	Kami-Kumamoto Station
28.8	Kumamoto Station
29.3	Junction with Hohi main line from the east
32.0	Kawashiri Station
35.5	Uto Station
35.7	Junction with Misumi Line from the west
38.5	Matsubase Station
42.3	O-Gawa Station
45.4	Arisa Station
47.9	Sencho Station
50.8	Spur 0.8 miles long leading west to Yatsushiro
50.9	Yatsushiro Station, double track
51.8	Junction with the Hisatsu Line from south-end double track
57.2	Hinagu Station
59.4	Higo-Futami Station
65.6	Higo-Tanoura Station
69.5	Sashiki Station
71.8	Yanoura Station
77.2	Tsunaki Station
80.4	Spur to the south-east 2.7 miles long
81.7	Minamata Station
81.9	Spur 0.4 miles long leading NW to a nitrogen plant
85.3	Fukuro Station
85.8	RR. leaves ken, Kumamoto, Kagoshima ken border

TABLE 47

Bridges & Overheads*, Kagoshima Main Line Kumamoto-ken

Mileage from Fukuoka-ken border	Type & Length	Obstacle
3.4	Short Span	Ura-kawa
3.9	Short Span	Creek
4.0	200 ft.	Nakiri-gawa
5.7	Short Span	Ukusue-gawa
5.9	Short Span	Creek
11.9	Short Span	Nihiki-gawa
*12.0	Short Span	City Street
12.1	Steel 800 ft.	Kikuchi-gawa
12.3	Short Span	Creek
*15.7	Short Span	Konoha-gawa
*16.7	Short Span	Prefectural Highway
*18.2	Short Span	Prefectural Highway
24.7	Short Span	Creek
25.2	Short Span	Creek
26.3	Short Span	Creek
27.8	Short Span	Iseri-gawa
27.9	Steel	Iseri-gawa
29.5	250 ft.	Tsuboi-gawa
30.1	Steel Pratt Truss	Shira-kawa
32.3	Short Span	Creek
32.4	Steel Pratt Trusses	Kase-gawa
33.2	Steel Pratt Truss	Midori-gawa
33.7	Steel Pratt Truss	Hamato-gawa
35.1	Short Span	Creek
36.5	Short Span	Creek
38.9	200 ft.	Onogawa
*41.9	Short Span	Prefectural Highway
42.9	Short Span	Suna-kawa
45.0	Steel Pratt Truss	Hi-kawa
45.6	Short Span	Creek
46.8	Short Span	Creek
47.4	Short Span	Creek
47.6	Short Span	Creek
47.8	Short Span	Creek
48.0	Short Span	Creek
48.1	Short Span	Creek
48.2	Short Span	Creek
48.3	Short Span	Creek
*50.4	Short Span	Prefectural Highway
52.3	Steel	Creek, Kuma-gawa Hisatsu Govt. Line
*52.8	Short Span	Improved road

Restricted

Mileage from Fukuoka-ken border	Type & Length	Obstacle
59.6	250 ft.	Tidewater
65.0	150 ft.	Tidewater
65.3	Short Span	Tidewater
69.0	Short Span	Creek
69.1	250 ft.	Sashiki-gawa
72.0	Short Span	Creek
72.4	Short Span	Creek
72.7	Short Span	Noura-gawa
*72.9	Short Span	Prefectural Highway
75.4	Short Span	Creek
75.9	Short Span	Creek
76.6	Short Span	Creek
76.8	Short Span	Creek
77.4	Short Span	Creek
*77.9	Short Span	Creek and Unimproved road
78.4	Short Span	Creek
*78.6	Short Span	Improved Road
*79.2	Short Span	Unimproved road
80.1	300 ft.	Minamata-gawa
80.3	Short Span	Low lands
81.0	200 ft.	Uzuru-gawa
82.8	Short Span	Creek
84.4	Short Span	Creek
*85.0	300 ft.	Kagoshima National Highway
*85.6	Short Span	Kagoshima National Hwy.
85.7	Short Span	Sakai-kawa

TABLE 48

Tunnels, Kagoshima Main Line, Kumamoto-ken

Mileage from Fukuoka-ken border	Length (in feet)
52.2	400
57.5	600
57.7	800
60.3	200
62.4	100
62.6	200
62.8	100
63.5	200
63.8	2,000
67.0	1,000
67.7	4,600
74.0	4,000
77.5	1,500

Restricted

2. Kumanobe RR.

Personnel: 127 employees (1942).

Income: from freight, 46,000 yen; from passengers, 121,000 yen (1942).

Traffic: 746,000 passengers; 54,523 tons of freight (1942).

Rolling Stock: 16 passenger cars; 20 freight cars (1942).

TABLE 49

Stations & Important Features, Kumanobe Line, Kumamoto-ken

Mileage from Harutake Station	Feature
0.0	Harutake Station, northwestern terminal on the Hoho Main Line
1.5	Tamukae Station
2.8	Nakanose Station
3.8	Namazu Station
4.6	Uejima Station
5.6	Kokka Station
6.8	Ojika-mura Station
7.7	Mifune Station
8.2	Hetami Station
9.7	Shimo-Itoda Station
11.1	Asai Station
12.6	Kosa Station
18.0	Southeastern terminal

TABLE 50

Bridges & Overheads, Kumanobe Line, Kumamoto-ken

Mileage from Harutake Station	Type & Length	Obstacle
2.5	Short Span	Stream
2.7	Short Span	Creek
3.0	900 ft. Steel	Kase-gawa
3.3	250 ft. Steel	Mifune-gawa
10.8	Short Span	Creek

There is one tunnel 1,500 feet in length, 8.5 miles from Harutake Station.

3. Hisatsu Line.

Passenger traffic: Yatsushiro-shi, Hitoyoshi-shi: 7 trains daily each way (1937 estimated 1945). Hitoyoshi-Kagoshima-ken border: 4 to 5 trains daily each way (1937 and estimated 1945).

Freight traffic: 5,600,000 metric tons (including the weight of the rolling stock) were estimated to have traveled over this route in the prefecture in 1944.

Average speed for fast trains is 30 mph.

TABLE 51

Stations & Important Features, Hisatsu Line.
Kumamoto-ken

Mileage from Yatsushiro Station	Feature
0.0	Yatsushiro Station, northern terminal at Yatsushiro on Kagoshima Main Line
0.9	Leaves Kagoshima Line
6.9	Aremoto Station
12.3	Setoishi Station
18.7	Shiroishi Station
24.9	Isshochi Station
26.3	Naruguchi Station
28.1	Wataru Station
32.1	Hitoyoshi Station, begin double track
33.1	Junction with Unomae Line. End double track
39.6	Okaba Station
44.9	Yatake Station
45.2	Railroad leaves ken, Kumamoto Miyazaki ken border

TABLE 52

Bridges & Overheads† Hisatsu Line
Kumamoto-ken

Mileage from Yatsushiro Station	Type & Length	Obstacle
6.0	Short Span	Creek
6.3	250 ft.	Stream
7.7	Short Span	Creek
9.8	Short Span	Creek
10.5	Short Span	Creek
10.7	Steel trusses	Kuma-gawa
13.1	Short Span	Creek

Mileage from Yatsushiro Station	Type & Length	Obstacle
14.7	Short Span	Creek
15.4	Short Span	Creek
15.7	Short Span	Creek
16.1	Short Span	Creek
*16.9	250 ft.	Stream and Prefectural Highway
17.1	Short Span	Stream
17.4	Short Span	Stream
18.8	Short Span	Creek
19.3	Short Span	Creek
*20.1	150 ft.	Prefectural Highway
20.9	200 ft. Steel	Kuma-gawa
22.1	Short Span	Creek
22.3	Short Span	Creek
23.2	Short Span	Creek
23.7	Short Span	Creek
24.6	Short Span	Creek
*24.7	Short Span	Prefectural Highway
26.5	Short Span	Nara-gawa
*27.0	Short Span	Unimproved road
27.4	Steel	Kuma-gawa
27.9	Short Span	Ogawa
*29.3	Short Span	Creek
*29.4	Short Span	Improved Road
30.3	Short Span	Creek
30.4	Short Span	Creek
30.5	Short Span	Creek
31.0	Short Span	Creek
32.5	Steel Trusses	Yamada-gawa
†33.4	Steel Schwedler Trusses	Kuma-gawa
45.0	Short Span	Creek

† The railroad uses a ferry to cross the Kuma-gawa at this point.

TABLE 53

Tunnels, Hisatsu Line, Kumamoto-ken

Mileage from Yatsushiro Station	Length (in feet)
1.5	900
4.2	1,000
4.4	300
5.2	500
6.1	600

Mileage from Yatsushiro Station	Length (in feet)
7.7	1700
9.7	500
10.8	1400
11.9	400
17.8	100
18.1	100
18.2	600
19.4	500
20.1	700
20.7	800
21.0	2100
21.6	200
23.0	200
23.1	200
25.5	210 meters
25.7	100
29.0	500
37.8	201 meters
38.1	236 meters
38.4	400
38.5	300
38.8	503 meters
39.9	400
41.9	322 meters
43.1	310 meters
43.4	200
43.6	236 meters

4. Hohi Main Line.

Passenger traffic: Kumamoto-shi, Miyaji-machi, 8 to 9 trains daily each way (1937 and estimated 1945).

Average speed for fast trains 22 mph eastbound, 18 mph westbound.

TABLE 54

Stations & Important Features, Hohi Main Line
Kumamoto-ken

Mileage from Kumamoto Station	Feature
0.0	Kumamoto Station, western terminal at Kumamoto Station on Kagoshima Main Line
0.5	Leaves Kagoshima Main Line
2.2	Harutake Station, junction with Yuen RR from the south

Mileage from Kumamoto Station	Feature
3.6	Suizenji Station
5.4	Tatsutachi Station
9.8	Sanrigi Station
11.7	Haramizu Station
14.0	Higo-Otsu Station
16.9	Seta Station
20.0	Tateno Station
24.8	Akamizu Station
28.6	Uchinomaki Station
30.9	Bochu Station
33.1	Miyaji Station
39.4	Namino Station
42.2	Takimizu Station
42.4	RR leaves ken, Kumamoto-Oita ken border

TABLE 55

Bridges & Overheads*, Hohi Main Line
Kumamoto-ken

Mileage from Kumamoto Station	Type & Length	Obstacle
0.6	200 ft	Tsuboi-gawa
*0.8	Short Span	Prefectural Highway
0.9	Steel 200 ft.	Shira-kawa
*1.0	Short Span	Kawashiri Kumamoto Elec. RR Line
1.8	Short Span	Creek
*3.2	Short Span	Kawashiri- Kumamoto Elec. RR. Line
5.2	Short Span	Shira-kawa
15.1	Short Span	Creek
17.5	200 ft.	Creek & Lowlands
18.5	250 ft.	Creek & Lowlands
18.9	300 ft.	Creek & Lowlands
23.8	250 ft.	Kuro-kawa
32.4	Short Span	Higashidake-gawa
32.7	Short Span	Lowlands
*33.5	Short Span	Improved Road
*33.6	Short Span	Unimproved Road
34.9	Short Span	Creek
*41.1	Short Span	Improved Road

TABLE 56

Tunnels, Hoho Main Line
Kumamoto-ken

Mileage from Kumamoto Station	Length (in feet)
25.4	600
36.0	800
36.3	1300
36.6	2300
37.3	6700

5. Kyudai (Daito) Line.

A branch of this line enters Kumamoto-ken from Oita-ken. The branch line terminates at Oguni-machi, 5 miles from the Oita-ken border.

6. Kamoto Line.

TABLE 57
Stations & Important Features,
Kamoto Line, Kumamoto-ken

Mileage from Ueki Station	Features
0.0	Ueki Station, southern terminal at Ueki Station on the Kagoshima Main Line
1.2	Ueki
3.4	Yamamutoga-shi Station
5.3	Higotoyoda Station
6.5	Hirashima Station
7.7	Miyabaru Station
8.8	Bunda Station
9.7	Kudami Station
12.1	Yamaga Station, northern terminal

TABLE 58

Bridges & Overheads*, Kamoto Line
Kumamoto-ken

Mileage from Ueki Station	Type & Length	Obstacle
0.7	800 ft	Creek
4.9	Short Span	Creek
6.4	Short Span	Creek
*8.7	Short Span	Prefectural Highway
8.9	200 ft.	Kikuhi-gawa

Mileage from Ueki Station	Type & Length	Obstacle
9.0	Short Span	Creek
9.1	Short Span	Creek

7. Yunomae Line.

TABLE 59

Stations and Important Features,
Yunomae Line, Kumamoto-ken

Mileage from Hitoyoshi Station	Features
0.0	Hitoyoshi Station, western terminal at Hitoyoshi Station on Hisatsu Line.
1.0	Leaves right of way of Hisatsu Govt. Line
4.6	Higonishimura Station
6.7	Ichibu Station
13.3	Tarake Station
16.4	Yunomae Station, eastern terminal at Someda

TABLE 60

Bridges & Overheads* Yunomae
Line, Kumamoto-ken

Mileage from Hitoyoshi Station	Type & Length	Obstacle
4.0	500 ft.	Kuma-gawa
4.4	Short Span	Kosade-gawa
9.8	Short Span	Menda-gawa
11.5	Short Span	Creek
12.4	Short Span	Creek
*14.3	Short Span	Unimproved Road
*14.8	Short Span	Improved Road

8. Misumi Line.

Passenger traffic; Uto-machi, Misumi-machi: 6 trains daily each way (1937 and estimated 1945).

Average speed for fast trains is 23 mph.

Restricted

TABLE 61

Stations & Important Features, Misumi Line,
Kumamoto-ken

Mileage from Uto Station	Feature
0.0	Uto Station, northeastern terminal is at Kumamoto-shi. This line uses Kagoshima Main Line as far as Uto
0.2	Leaves Kagoshima Main Line
4.6	Sumiyoshi Station
7.2	Higonagahama Station
9.2	Oda Station
11.6	Akase Station
16.1	Misumi Station, in Kawasaki
16.4	Southwestern terminal

TABLE 62

Bridges & Overheads*, Misumi Line, Kumamoto-ken

Mileage from Uto Station	Type & Length	Obstacle
0.6	Short Span	Creek
13.8	Short Span	Creek
14.3	Short Span	Creek
14.6	Short Span	Creek
14.9	Short Span	Creek

There are 2 tunnels, one 2,200 feet long, the other 400 feet long, 11.7 miles and 14.7 miles respectively from Uto Station.

9. Yamano Line.

TABLE 63

Stations & Important Features, Yamano Line,
Kumamoto-ken

Mileage from Jinnai	Feature
0.0	Jinnai, western terminal of line at Jinnai
0.6	Crosses Kagoshima Main Line
11.5	RR leaves ken. Kumamoto-Kagoshima ken border

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Restricted

Restricted

10. Kyushu Hichiku Line.

TABLE 64

Stations & Important Features, Kyushu Hichiku Line,
Kumamoto-ken

Mileage from Fukuoka-ken border	Features
0.0	RR enters ken, Fukuoka-Kumamoto ken boundary
0.2	Hokame Station
1.2	Nankan Station
5.4	Southeastern terminal in Nishikuchi

On this line there are 2 overheads spanning prefectural highways and one tunnel 400 feet in length.

11. Takamori Line.

TABLE 65

Stations & Important Features, Takamori Line,
Kumamoto-ken

Mileage from Tateno Station	Features
0.0	Tateno Station, western terminal at Tateno Station on Hohi Main Line
	Spur 0.2 mile long leading north
1.0	Choya Station
3.1	Aso-Shimada Station
4.6	Nakamatsu Station
6.7	Aso-Shira Kawa Station
8.5	Takamori Station, eastern terminal
11.0	

TABLE 66

Bridges & Overheads*, Takamori Line,
Kumamoto-ken

Mileage from Tateno Station	Type & Length	Obstacle
*0.2	400 ft.	Lowland and spillway from Kuro Kawa Power Plant
1.0	Steel Truss	
1.7	Steel Truss	
2.0	Short Span	Shira-kawa
3.5	Short Span	Creek
5.0	Short Span	Creek
*6.4	Short Span	Improved Road

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Mileage from Tateno Station	Type & Length	Obstacle
*8.1	Short Span	Improved road
8.6	Short Span	Creek
8.9	Short Span	Creek
*9.1	Short Span	Unimproved Road
9.2	Steel	Shira-kawa

There are 2 tunnels, one 700 feet, the other 2,600 feet in length, 0.8 mile and 1.0 mile, respectively, from Tateno Station.

12. Kikuchi Electric RR.

TABLE 67

Stations & Important Features, Kikuchi
Electric RR, Kumamoto-ken

Mileage from Kamikumamoto Station	Features
0.0	Kamikumamoto Station, southwestern terminal at station opposite Kamikumamoto Station Kagoshima Main Line
2.3	Muroeno Station
3.0	Matsuzaki
4.0	North Kumamoto
5.2	Suya
7.1	Goshi-mura
7.9	Miyoshi
8.9	Tsujikubo
10.0	Takae Station
10.6	Tomi Station
11.5	Kuroki Station
12.3	Hanafusa Station
13.3	Hirose Station
14.4	Kikuchi
15.4	Waifu Station

On this line are 2 bridges, one 200 feet in length across the Hori-kawa, the other a short span across the Kikuchi-gawa.

13. Kumamoto Electric Tramway.

The total length of this tramway in the prefecture is 9.7 miles. In addition to the 3' 6" gauge branch listed in the table below, there is a 4' 8 1/2" gauge branch between Mukai-machi and Kawabara-machi.

Personnel: 114 employees (1942).

Income: from passengers, 32,000 yen (1942).

Traffic: 568,000 passengers (1942).

TABLE 68

Stations & Important Features,
Kumamoto Electric RR., Kumamoto-
ken

Mileage from Eastern Terminal	Features
0.0	Eastern terminal at station near junction of Hohi and Kagoshima Main Line.
2.0	Takahashi
2.4	Station
2.8	Station
3.8	Western terminal

14. Electric RR.

The southern terminal of this line is in Kawashiri in Kumamoto-shi. It proceeds northward through Yoyasu, and terminates just after it crosses the Shira-kawa in the southern section of metropolitan Kumamoto-shi. The total length is 4.4 miles.

15. Coal Mining RR, Tamana-gun.

This railroad enters the prefecture from Fukuoka-ken in the northwest, travels for 1.6 miles in Kumamoto-ken, and then re-enters Fukuoka-ken.

There are 2 overheads and one short-span bridge on this section of line in Kumamoto-ken.

16. Kumamoto-shi Electric Tramway.

This tramway has 3 branches running south and 2 branches running north for a total length of 7.9 miles in Kumamoto-shi.

Income: 673,000 yen from passengers (1942).

Traffic: 11,825,000 passengers (1942).

Rolling stock: 47 passenger cars (1942).

APPENDIX III.

Electric Generating Plants
(1,000 KW Capacity and Over)

The following abbreviations are used in this appendix:

Technical terms

a	ampers
ac	alternating current
adv	advertisement
ave	average
Btu	British thermal unit
C	centigrade
cap	capacity
conn	connection
cont	continuous
cm ²	centimeter
cm	square centimeter
cyc	cycles
dc	direct current
D-D	delta-delta (transformer connection)
D-Y	delta-Y (transformer connection)
econ	economical
eff	effective
est	estimated
F	Fahrenheit
ft	feet
ft ²	square feet
hp	horsepower
in	inch
inc	includes
in ²	square inch
kg	kilogram
kg/cm ²	kilograms per square centimeter
km	kilometer
kv	kilovolt
kva	kilovolt-ampere
kw	kilowatt
kwh	kilowatt-hour
lb	pound
lbs/in ²	pounds per square inch
m	meter
m ²	square meter
m ³	cubic meter
m ³ /sec	cubic meters per second
max	maximum
max pk	maximum peak
min	minute
mini	minimum

no	number
opp	opposite
pf	power factor
ph	phase
qv	which see
reg	regular capacity
reg pk	regular peak
res	reserve, reserve capacity
rpm	revolutions per minute
sec	second
spec	special capacity
supp	supplement, supplementary capacity
t	ton
t/hr	tons per hour
v	volt
Y-Y	transformer connection
@	each
*	indicates that kw have been estimated from kva at 80 percent power factor

Non-Japanese trade names

AC	Allis-Chalmers Mfg. Co.
AEG	Allgemeine Elektrizitäts-Gesellschaft
ASEA	Allmänna Svenska Elektriska Aktiebolag
B	Boving & Co., Ltd.
BBC	Brown, Boveri & Co., Ltd.
BTH	British Thomson-Houston Co., Ltd.
B & W	Babcock & Wilcox Co.
D	Dicker
EC	Erie City Boiler Co.
EE	English Electric Co., Ltd.
EW	Escher, Wyss Co.
G	Green Economizer Co.
GE	General Electric Co.
H	Heine
IPM	I. P. Morris Co.
MV	Metropolitan-Vickers Electrical Co., Ltd.
P	Pelton Steel Casting Co.
R	Russell
S	Shepardson
SB	Sulzer Brothers, Ltd.
SS	Siemens Schukert Werke A. G.
STAL	Svenska Turbin fabriks Aktiebolaget Ljungstrom
V	Voith
W	Westinghouse Electric & Mfg. Co.
WE	Western Electric Co.

ITSUKI NO. 2 HYDRO PLANT

Location: Plant: 6342, Ono-oaza, Itsuki-mura, Kuma-gun
Kumamoto-ken.

Capacity commonly in use (in kw): 3,920 (see Date of Construction).
 Source of power: Itsuki-gawa of the Kuma-gawa system.
 Date of construction: Construction was begun Dec. 1938 and completed in 1940.
 Details: Particular capacities (in kw) - 1,870 reg; 2,050 spec

KAWABASHIRIGAWA NO. 1 HYDRO PLANT

Location: Plant: Kusakabe-mura, Aso-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 1,649, as of Dec. 1934.
 An unconfirmed report lists capacity at 3,080 in 1928.
 Source of power: Kawabashiri-gawa.
 Date of construction: Unknown; in operation as early as June 1928 and as recently as Mar. 1940.
 Details: Particular capacities (in kw) - 737 reg; 912 spec
 Plant operates on 50 cyc.

KAWABASHIRIGAWA NO. 2 HYDRO PLANT

Location: Plant: Kashiwa-mura, Aso-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 2,908, as of Dec. 1936.
 Source of power: Kawabashiri-gawa.
 Date of construction: Unknown; in operation as early as June 1928 and as recently as Mar. 1940.
 Details: Particular capacities (in kw) - 1,300 reg; 1608 spec. Plant operates on 50 cyc.

KAWABEGAWA NO. 1 HYDRO PLANT

Location: Plant: 6 of 10, Sakarasegawa-oaza, Itsuki-mura, Kuma-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 2,300 as of July 1937.
 Source of power: Kawabe-gawa of the Kuma-gawa system.
 Date of construction: Completed July 1937; in operation Mar. 1940.
 Details: Particular capacities (in kw) - 650 reg; 1650 spec
 Layout - Aqueduct-type. Plant operates on 60 cyc.

KAWABEGAWA NO. 2 HYDRO PLANT

Location: Plant: On the right bank of the Kawabe-gawa at 540, Rokutsuaza, Youra-mura, Kuma-gun, Kumamoto-ken.
 Dam: Seiraku-aza, Itsuki-mura, Kuma-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 6,900, as of May 1935.
 Source of power: Kawabe-gawa of the Kuma-gawa system.
 Date of construction: Construction was begun Jan. 1934 and completed June 1935; in operation Mar. 1940.
 Details: Particular capacities (in kw) - *8,000 installed cap; 2,900 reg; 4,000 spec; 8,200 max pk
 Layout: Aqueduct-type.
 Eff head: 58.4 m; flow - 14.47 m³/sec
 Dam: 70 m long, about 7 m high at deepest part, of concrete and rock construction, overflow-type.
 Intake: 3 gates on right bank, above dam.

Aqueduct: 7,508.8 m long, incl 45.1 m aqueduct bridge across the Nohara-tani and 2 culvert aqueduct bridges totaling 43 m across the Fukamizu-tani and Hatsukami-tani.
 Forebay: 22.1 m wide and 23.6 m long, 3.9 m ave depth, of reinforced concrete.
 Penstocks: 2 @ 159.24 m long.
 Excess water spillway: 3.64 m wide, 2.42 m high, 188 m long, of stone.
 Log chute: Of concrete.
 Fishway: 3 m wide.
 Plant: external features - Of concrete, 3 stories high with peaked roof, a bridge is located above plant.
 Plant: equipment:
 Turbines: 2 @ 7,000 hp, vertical-shaft, Hitachi-make.
 Generators: 2 @ 5000 kva, 3-ph, 6600 v, 60 cyc, Hitachi-make.
 Transformers: 4 @ 3300 kva, 6.6/66 kv
 Area served: Transmits power via 66 kv line 36 km long to the Yatsushiro and Kumamoto areas.

KIKUCHIGAWA NO. 1 HYDRO PLANT

Location: Plant: Waifu-machi, Kikuchi-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 1,200 as of Dec. 1934.
 Source of power: Kikuchi-gawa.
 Date of construction: Unknown; in operation as early as Dec. 1926 and as recently as Mar. 1940.
 Details: Particular capacities (in kw) - *1,200 installed cap; 460 reg; 740 spec
 Eff head - 182 ft
 Plant: equipment:
 Turbines: 1 @ 2,000 hp, Francis-type, Dengyosha-make
 Generators: 1 @ 1,500 kva, 3-ph, 6,600 v, 600 rpm, 60 cyc, Shibaura-make.

KIKUCHIGAWA NO. 2 HYDRO PLANT

Location: Plant: Waifu-machi, Kikuchi-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 2,400, as of Dec. 1936.
 Source of power: Kikuchi-gawa.
 Date of construction: Unknown; in operation as early as Dec. 1926 and as recently as Mar. 1940.
 Details: Particular capacities (in kw): 745 reg; 1655 spec
 Eff head: 235 ft.
 Plant: equipment:
 Turbines: 2 @ 2,200 hp, Francis-type, Okumura-type.
 Generators: 2 @ 1,500 kva, 3-ph, 720 rpm, 60 cyc, Okumura-type.

KIKUCHIGAWA NO. 3 HYDRO PLANT

Location: Plant: 826, Hara-oaza, Waifu-machi, Kikuchi-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 2,000, as of Dec. 1936.
 Source of power: Kikuchi-gawa.

Date of construction: Founded Sept. 1918; in operation Mar. 1940.

Details: Particular capacities (in kw): *2,000 installed cap; 1,500 reg; 500 spec
 Eff head: 280 ft
 Plant: equipment:
 Turbines: 2 @ 1,500 hp, Francis-type, Dengyosha-make.
 Generators: 2 @ 1,250 kva, 3-ph, 6,600 v, 720 rpm, 60 cyc, Shibaura-make.
 Transformers: 7 (incl 1 res) @ 2,200 kva, 3-ph, 6.36, 6.6, 6.84/66 kv, D-D conn, water-cooled, 60 cyc, shell-type, Shibaura-make. 4 (incl 1 res) @ 600 kva, 3-ph, 6.6/19--kv, D-D conn, water-cooled, 60 cyc, shell-type, Shibaura-make.

KIKUCHIGAWA NO. 4 HYDRO PLANT

Location: Plant: Waifu-mura, Kikuchi-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 1,800, as of Dec. 1934.
 Source of power: Kikuchi-gawa.
 Date of construction: Unknown; in operation as early as Dec. 1926 and as recently as Dec. 1934.
 Details: Particular capacities (in kw): *2,000 installed cap; 640 reg; 1160 spec
 Eff head: 204.4 ft.
 Plant: equipment:
 Turbines: 2 @ 1,500 hp, Francis-type, Hitachi-make.
 Generators: 2 @ 1,250 kva, 3-ph, 7,000 v, 600 rpm, 60 cyc, Hitachi-make.

KIKUCHIGAWA BANGAI NO. 1 HYDRO PLANT

Location: Plant: Waifu-machi, Kikuchi-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 1,200, as of Dec. 1934.
 Source of power: Kikuchi-gawa.
 Date of construction: Unknown; in operation as early as Dec. 1926 and as recently as Mar. 1940.
 Details: Particular capacities (in kw): *1,200 installed cap; 550 reg; 650 spec
 Eff head: 294 ft
 Plant: equipment:
 Turbines: 1 @ 2,100 hp, double-spiral Francis-type, Okumura-make.
 Generators: 1 @ 1,500 kva, 3-ph, 7,000 v, 720 rpm, 60 cyc, Okumura-make.

KOGUNI HYDRO PLANT

Location: Plant: 1642, Harise-aza, Shimonoki-oaza, Koguni-machi, Aso-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 6,000, as of Dec. 1936.
 Source of power: Kitasato-gawa and Oguni-gawa.
 Date of construction: Founded Mar. 1927; in operation Mar. 1940.
 Details: Particular capacities (in kw): 1050 reg; 4950 spec

KUROFUCHI HYDRO PLANT

Location: Plant: Imono-aza, Kurofuchi-oaza, Oguni-machi, Aso-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 7,000, as of Dec. 1936.
 Source of power: Tsue-gawa of the Tsuetate-gawa system.
 Date of construction: Completed May 1932; in operation Mar. 1940.
 Details: Particular capacities (in kw): *7,200 installed cap; 3,275 reg; 3,275 spec
 Plant: equipment:
 Turbines: 2 @ unknown cap, vertical-shaft, Dengyosha-make.
 Generators: 2 @ 4,500 kva, 3-ph, 11,000 v, 50/60 cyc, Shibaura-make.
 Other equipment: Automatic equipment installed.

KUROGAWA NO. 1 HYDRO PLANT

Location: Plant: On the right bank of the Kuro-gawa at 1612, Tateno-oaza, Seta-mura, Kikuchi-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 15,000, as of Dec. 1936.
 Source of power: Kuro-gawa of the Shira-kawa system.
 Date of construction: Completed Feb. 1918; in operation Mar. 1940.
 Details: Particular capacities (in kw): *15,300 installed cap; 10,000 reg; 5000 spec
 Layout: Aqueduct-type
 Eff head: 243 m; flow: 8.4 m³/sec
 Penstocks: 5
 Plant, external features: Of concrete construction, 3 stories high, with cultivated fields nearby and bridge a short distance upstream.
 Plant, equipment:
 Turbines: 2 (incl 1 res) @ 7,500 hp, Pelton-type, B-make - 4 @ 2,150 hp, Pelton-type, EW-make.
 Generators: 2 (incl 1 res) @ 6,250 kva, 3-ph, 6600 v, 360 rpm, 60 cyc, Shibaura-make. 4 @ 1,660 kva, 3-ph, 6,600 v, 450 rpm, 60 cyc, SS-make.
 Transformers: 15 (incl 6 res) @ 2,200 kva, 1-ph, 6.6/66 kv, D-D conn, water-cooled, 60 cyc, shell-type, Shibaura-make.
 Other equipment: 2 exciters @ 150 kw; 1 exciter @ 200 kw
 Area served: Kumamoto-ken, as of 1933.

KUROGAWA NO. 2 HYDRO PLANT

Location: Plant: On the right bank of the Kuro-gawa in Seta-mura, Kikuchi-gun, Kumamoto-ken.
 Capacity commonly in use (in kw): 1,800, as of June 1928.
 Source of power: Shira-kawa and Kuro-gawa of the Shira-kawa system.
 Date of construction: Unknown; in operation as early as Dec. 1926 and as recently as Mar. 1940.
 Details: Particular capacities (in kw): *2,000 installed cap; 900 reg; 900 spec

Layout: Aqueduct-type.

Eff head: 75.4 ft

Penstocks: 2

Plant: external features: 2 stories high with peaked roof and forebay regulating building, 1 story high, directly in back.

Plant: equipment:

Turbines: 2 @ 1,500 hp, Francis-type, Dengyosha-make.

Generators: 2 @ 1,250 kva, 3-ph, 6600 v, 600 rpm, 60 cyc, Shibaura-make.

KUROGAWA NO. 3 HYDRO PLANT

Location: Plant: On the right bank of the Kuro-gawa in Seta-mura, Kikuchi-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 2,000, as of Dec. 1936.

Source of power: Kuro-gawa of the Shira-kawa system.

Date of construction: Unknown; in operation as early as Dec. 1926 and as recently as Mar. 1940.

Details: Particular capacities (in kw): *2,000 installed cap; 1,500 reg; 500 spec

Eff head: 66.5 ft

Plant: equipment:

Turbines: 2 @ 1,500 hp, Francis-type, Hitachi-make.

Generators: 2 @ 1,250 kva, 3-ph, 6,600 v, 257 rpm, 60 cyc, Hitachi-make.

MAMIHARA HYDRO PLANT

Location: Plant: Mmamihara-machi, Aso-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 4,000, as of Dec. 1936.

Source of power: Gokase-gawa system.

Date of construction: Unknown; in operation as early as June 1928 and as recently as Mar. 1940.

Details: Particular capacities (in kw): 1,500 reg; 2,500 spec

MIDORIKAWA HYDRO PLANT

Location: Plant: Higashitomochi-mura, Shimomashiki-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 4,700, as of June 1928.

Source of Power: Midori-kawa.

Date of construction: Unknown; in operation as early as June 1928 and as recently as Mar. 1940.

Details: Plant operates on 50 cyc

MIYASONO HYDRO PLANT

Location: Plant: Shimo Arata-oaza, Kinoe-mura, Kuma-gun, Kumamoto-ken; between the Kawabega No. 1 and No. 2 Hydro Plants.

Capacity commonly in use (in kw): 2,150 (see Date of construction).

Source of power: Itsuki-kawa of the Kawabe-gawa system.

Date of construction: Construction was begun Dec. 1927; no evidence of completion has been received.

NAIDAIJINGAWA HYDRO PLANT

Location: Plant: 3 of 3856, Memaru-oaza, Shiraito-mura, Kami Mashiki-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 2,450, as of June 1928.

Source of power: Naidaijin-kawa.

Date of construction: Founded Dec. 1916; in operation Mar. 1940.

Details: Plant operates on 50 cyc

NANATAKIGAWA NO. 1 HYDRO PLANT

Location: Plant: Takio-mura, Kami Mashiki-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 1,380 (see Date of construction).

Source of power: Nanataki-kawa of the Midori-kawa system.

Date of construction: Unknown; under construction Sept. 1927; in operation Mar. 1940.

Details: Particular capacities (in kw): 850 reg; 530 spec

Layout: Aqueduct-type.

This plant operates on 50 cyc

NANATAKIGAWA NO. 2 HYDRO PLANT

Location: Plant: Takio-mura, Kami Mashiki-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 2,650 (see Date of construction).

Source of power: Nanataki-kawa of the Midori-gawa system.

Date of construction: Unknown; under construction Sept. 1937; in operation Mar. 1940.

Details: Particular capacities (in kw): 1,340 reg; 1310 spec

Layout: Aqueduct-type.

This plant operates on 50 cyc

OIHAYA HYDRO PLANT

Location: Plant: 3506, Oihaya-oaza, Higashitomochi-mura, Shimomashiki-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 4,200, as of Dec. 1936.

Source of power: Midori-gawa and Chitaki-gawa of the Midori-gawa system.

Date of construction: Founded June 1922; in operation Mar. 1940.

Details: Particular capacities (in kw): *4,160 installed cap; 2,900 reg; 1,300 spec

Eff head: 181 ft.

Plant: equipment:

Turbines: 2 @ 3,000 hp, Francis-type, EW-make.

Generators: 2 @ 2,600 kva, 3-ph, 6,600 v, 600 rpm, 60 cyc, W-make.

Transformers: 4 (incl 1 res) @ 4,000 kva, 1-ph, 6.6/38.106 kv, D-Y conn, water-cooled, 60 cyc, shell-type, Hitachi-make.

OMUKAI HYDRO PLANT

Location: Plant: Eshiro-oaza, Minakami-mura, Kuma-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 1,200 (see Date of construction).

Source of power: Yokohoko-gawa and Kawaguchi-gawa of the Kuma-gawa system.

Date of construction: Construction was begun Aug. 1930; no evidence of completion has been received.

Details: Particular capacities (in kw): 660 reg; 540 spec

SHIMBASHI HYDRO PLANT

Location: Plant: Tateno-aza, Yuyama-oaza, Minakami-mura, Kuma-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 1,850, as of Dec. 1934.

Source of power: Kuma-gawa.

Date of construction: Completed Feb. 1928; in operation Mar. 1940.

Details: Particular capacities (in kw): *2,000 installed cap; 864 reg

Eff head: 143.6 ft

Plant: equipment:

Turbines: 1 @ 3,000 hp, Francis-type, vertical-shaft, AC-make.

Generators - 1 @ 2,500 kva, 3-ph, 11,000 v, 450 rpm, 60 cyc, GE-make.

SHIMOTSURU HYDRO PLANT

Location: Plant: Sakamoto-oaza, Kakisako-mura, Yatsushiro-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 1,680 (see date of construction).

Source of power: Itsuki-kawa.

Date of construction: Construction was begun Dec. 1927 and has probably been completed since.

Details: Particular capacities (in kw): 680 reg; 1,000 spec

SHIRAKAWA HYDRO PLANT

Location: Plant: 801, Hokamaki-aza, Nishikino-mura, Aso-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 6,400, as of June 1928.

Source of power: Shira-kawa.

Date of construction: Completed Nov. 1914; in operation Mar. 1940.

Details: Plant operates on 50 cyc

SHIRAMIZUTAKI HYDRO PLANT

Location: Plant: Furuyashiki-aza, Ejiro-oaza, Minakami-mura, Kuma-gun, Kumamoto-ken.

Dam: Tamukai-aza, Ejiro-oaza, Minakami-mura, Kuma-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 1,300, as of Dec. 1931.
Source of power: Shiramizutaki-gawa of the Kuma-gawa system.
Date of construction: Completed Apr. 1927; in operation Mar. 1940.

Details: Particular capacities (in kw): *2,000 installed cap; 700 reg; 600 spec; 1,400 reg pk; 2,000 max pk
Layout: Aqueduct-type.

Eff head: 1,045 ft

Dam: 22.7 m high, 98.5 m long, overflow, gravity-type

Plant, equipment:

Turbines: 1 @ 3,000 hp, Pelton-type, Voith-make.

Generators: 1 @ 2,500 kva, 3-ph, 11,000 v, 600 rpm, 60 cyc, SS-make.

TAKASE STEAM PLANT

Location: 478, Naka-oaza, Tamana-machi, Tamana-gun, Kumamoto-ken.

Installed capacity (in kw): 8,000, as of 1933.

Date of construction: Completed Dec. 1924; in operation Mar. 1940.

Details: Plant: equipment:

Boilers: 5 (incl 3 res) @ B&W-type, 220 lbs/in², 660°F, 5540 ft², B&W-make

Turbines: 2 (incl 1 res) @ 6,000 hp, Ljungstrom-type, STAL-make

Generators: 2 (incl 1 res) @ 5,250 kva, 3-ph, 6600 v, 3600 rpm, 60 cyc, STAL-make.

Transformers: 4 (incl 1 res) @ 3,500 kva, 1-ph, 6.6, 6.3/66, 60 kv, D-D conn, water-cooled, 60 cyc, shell-type, Okumura-make.

Other equipment: 2 exciters @ 35 kw; 2 contraflow surface condensers; 10 superheaters; 2 chain-grate stokers and 8 underfeed stokers; 4 economizers.

Area served: Kumamoto-ken.

TAKENOKAWA HYDRO PLANT

Location: Plant: Itsuki-mura, Kuma-gun, Kumamoto-ken.

Capacity commonly in use (in kw): Est. 1585, as of Dec. 1934.

Source of power: Believed to be Takeno-kawa of the Itsuki-kawa system.

Date of construction: Unknown; in operation as early as June 1928 and as recently as Mar. 1940.

Details: Particular capacities (in kw): *2,320 installed cap

Plant equipment:

Turbines: 1 @ est. 2,320 kw; vertical-shaft, Dengyosha-make.

Generators: 1 @ 2,900 kva, 3-ph, 6,600 v, 50 cyc, Shibauro-make.

TAMUKAI HYDRO PLANT

Location: Plant: Tamukai-aza, Ejiro-oaza, Minakami-mura, Kuma-gun, Kumamoto-ken.

Dam: Furakawa-aza, Ejiro-oaza, Minakami-mura, Kuma-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 2,240, as of Dec 1936.

Source of power: Kuma-gawa.

Date of construction: Construction was begun Mar. 1930 and completed Mar. 1935; in operation Mar. 1940.

Details: Particular capacities (in kw): 820 reg; 1420 spec

Layout: Aqueduct-type.

Eff head: 67.536 m; flow - 3.595 m³/sec

Dam: 6.89 m high, 52.42 m long, of stone and concrete construction with 2 tainter gates @ 9.09 m wide and 4.39 m high.

Aqueduct: Covered ditch and tunnel 2833.97 m long.

Forebay: 28.63m long, 3.94 to 6.77 m wide, and 2.44 to 4.55 m deep.

Penstocks: 1 @ 166.7 m

Plant: external features: Of concrete construction, 3 stories high with peaked roof.

Plant: equipment:

Turbines: 1 @ unknown cap

Generators: 1 @ unknown cap

TOCHI HYDRO PLANT

Location: Plant: 301, Kuryo-aza, Tochi-oaza, Itsuki-mura, Kuma-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 2,471, as of Dec 1936.

Source of power: Itsuki-kawa and Nishimata-kawa.

Date of construction: Completed May 1928; in operation Mar. 1940.

Details: Particular capacities (in kw): 1,235 reg; 1236 spec

TSUETATE HYDRO PLANT

Location: Plant: Kobatake-aza, Shimonjo-oaza, ōguni-machi, Aso-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 3,200, as of Dec. 1936.

Source of power: Tsuetate-gawa.

Date of construction: Unknown; in operation as early as 1928 and as recently as Mar. 1940.

Details: Particular capacities (in kw): *3,200 installed cap; 960 reg; 2,240 spec

Plant: equipment:

Turbines: 1 @ est 3,200 kw, vertical-shaft.

Generators: 1 @ 4,000 kva, 3-ph, 11,500 v, 50/60 cyc

TSURU HYDRO PLANT

Location: Plant: 102, Tsuru-oaza, Shiraito-mura, Kami Mashiki-gun, Kumamoto-ken.

Capacity commonly in use (in kw): 10,700, as of Dec. 1936.

Source of power: Kikuchi-gawa, Sasawara-gawa and Oya-gawa of the Midori-gawa system.

Date of construction: Completed Nov. 1927; in operation Mar. 1940.

Details: Particular capacities (in kw): *11,200 installed cap; 4450 reg; 6,250 spec

Eff head: 147.5 m; flow - 8.6 m³/sec

Dam: 13.20 m high, overflow gravity-type

Plant: equipment:

Turbines: 2 @ 6,500 hp, Francis-type, horizontal-shaft, Hitachi-make.

Generators: 2 @ 7,000 kva, 3-ph, 6,600 v, 514.3 rpm, 60 cyc, Hitachi-make.

Transformers: 4 (incl 1 res) @ 4,000 kva, 1-ph, 6.6/38.108 kv, D-Y conn, water-cooled, 60 cyc, shell-type, Hitachi-make.

Area served: Kumamoto-ken.

UMEDO STEAM PLANT

Location: Minamata-machi, Ashikita-gun, Kumamoto-ken.

Installed capacity (in Kw): 14,000, as of 1936.

Date of construction: Completed Nov. 1929; in operation Mar. 1940.

Details: Plant, equipment:

Boilers: 2 @ water-tube type, 23 kg/cm², 900 m², Mitsubishi-make.

Turbines: 2 @ 9380 hp, STAL-Lungstrom-type, horizontal-shaft, Mitsubishi-make.

Generators: 2 @ 8750 kva, 3-ph, 3300 v, 3000 rpm, 50 cyc, Mitsubishi-make.

Transformers: 3 @ 6250 kva, 3-ph, 3.3, 3.15, 3/19 kv, D-D conn, 50 cyc, water-cooled, core-type, Mitsubishi-make.

Other equipment: 2 surface condensers; 2 chain-grate compartment stokers; 2 economizers; 1 feedwater heater; 2 superheaters; 2 exciters @ 60 kw

Serves the Nippon Chisso Hiryo KK nitrogen fertilizer factory at Minamata.

APPENDIX IV.

PLACE NAMES AND LOCATIONS

<u>SHI</u>	<u>LAT.N.</u>	<u>LONG.E.</u>
Arao	32.46	130.40
Hitoyoshi	32.13	130.46
Kumamoto	32.48	130.42
Yatsushiro	32.30	130.36

<u>MACHI</u>	<u>GUN NO.*</u>	<u>LAT.N.</u>	<u>LONG.E.</u>
Arao	10. (See note 4.)		
Asahino	7.	32.58	130.53
Eta	10.	32.58	130.36
Futae	1.	32.33	130.08
Hama	5.	32.41	130.59
Hinagu	2.	32.26	130.35
Hitoyoshi	8. (See note 8.)		
Hondo	1.	32.27	130.11
Ikura	10.	32.54	130.34
Kagami	12.	32.34	130.39
Kawaharu	7.	32.58	130.50
Kawashiri	4. (See note 1.)		
Kiyama	5.	32.47	130.49
Kosa	5.	32.39	130.49
Kumanosho	9.	32.42	130.44
Kutami	6.	33.00	130.44
Mamihara	3. (See Umamihara-machi.)		
Matsubase	9.	32.39	130.40
Matsuyai	11.	32.38	130.36
Menda	8.	32.14	130.54
Mifune	5.	32.43	130.48
Minamata	2.	32.11	130.25
Minaminoseki	10.	33.03	130.32
Misumi	11.	32.37	130.27
Miyaji	3.	32.57	131.07
Miyanohara	12.	32.33	130.41
Nagasu	10.	32.56	130.27
Nankan	10. (See Minaminoseki-machi.)		
Noboritate	1.	32.35	130.26
Ogawa	9.	32.35	130.42
Oguni	3.	33.11	131.00
Ohama	10.	32.54	130.33
Oshima	4.	32.46	130.28
Otago	12. (See note 2.)		
Otsu	7.	32.53	130.52
Sashiki	2.	32.20	130.33

<u>MACHI</u>	<u>GUN NO.*</u>	<u>LAT.N.</u>	<u>LONG.E.</u>
Takahashi	4.	32.47	130.39
Takamori	3.	32.49	131.08
Takase	10. (See note 6.)		
Tamana	10.	32.55	130.43
Taragi	8.	32.21	130.54
Tomioka	1.	32.31	130.02
Tomochi	9.	32.36	130.54
Uchinomaki	3.	33.01	130.54
Ueki	6.	33.53	130.42
Umamihara	3.	32.41	131.09
Ushibuka	1.	32.12	130.01
Uto	11.	32.41	130.40
Waifu	7.	32.59	130.49
Yamaga	6.	33.01	130.41
Yatsushiro	12. (See note 2.)		
Yunomae	8.	32.16	130.58

<u>MURA</u>	<u>GUN NO.*</u>	<u>LAT.N.</u>	<u>LONG.E.</u>
A	1.	32.31	130.26
Aita	8. (See note 8.)		
Akasaki	1.	32.29	130.19
Akitsu	5.	32.47	130.46
Amitsu	11.	32.41	130.36
Ariake	10. (See note 4.)		
Arasa	12.	32.33	130.39
Asahi	5.	32.44	131.05
Bairin	10.	32.56	130.36
Bunsei	12.	32.33	130.40
Chida	6.	32.58	130.42
Choyo	3. (See Nagakita-mura.)		
Daido	6. (See Omichi-mura.)		
Fujidomi	4.	32.45	130.39
Fukada	8.	32.46	130.51
Fukami	1.	32.15	130.06
Fukuda	5.	32.46	130.51
Fukuregi	1.	32.25	130.04
Fumoto	10. (See note 4.)		
Futami	2.	32.24	130.33
Gonce	9.	32.36	130.43
Goryo	1.	32.31	130.11
Goshi	7.	32.53	130.47
Goshonoura	1.	32.31	130.20
Gunchiku	12. (See note 2.)		
Hachika	10.	32.54	130.36
Hafuji	4. (See Hoji.)		
Hagi	12.	32.25	130.39
Hajiuto	1.	32.25	130.12
Hakusui	3. (See Shirami-mura.)		
Hakusui	5. (See Shirami-mura.)		

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<u>MURA</u>	<u>GUN NO.*</u>	<u>LAT.N.</u>	<u>LONG.E.</u>
Hamada	4.	32.45	130.38
Hanabusa	7.	32.57	130.47
Hanamure	10.	32.57	130.37
Hanazono	11.	32.41	130.42
Haraka	10.	32.55	130.28
Haramizu	7.	32.52	130.48
Harutomi	10.	33.06	130.35
Hashirigata	4.	32.42	130.38
Hataguchi	4.	32.45	130.37
Hayaura	1.	32.16	130.03
Hazama	7.	33.01	130.51
Higashitomochi	9.	32.38	130.55
Himedo	1.	32.26	130.23
Hinoshima	1.	32.23	130.25
Hirai	10. (See note 4.)		
Hiramagi	7.	32.54	130.55
Hiraogi	6. (See Hirosa-mura)		
Hirohata	4.	32.48	130.45
Hiromi	6.	33.05	130.41
Hirosa	6.	33.01	130.40
Hiroyasu	5.	32.47	130.47
Hishigata	6.	32.52	130.39
Hoji	4.	32.43	130.38
Hon	1.	32.27	130.07
Ichibu	8.	32.12	130.51
Iino	5.	32.45	130.49
Ikariishi	1.	32.22	130.08
Ikenouse	4.	32.47	130.40
Imatsu	1.	32.31	130.25
Inada	6.	33.00	130.45
Ishinuki	10.	32.57	130.33
Isshochi	8.	32.13	130.37
Itchoda	1.	32.19	130.05
Itsuki	8.	32.25	130.44
Iwa	1.	32.33	130.28
Iwano	6.	33.08	130.41
Jogawara	1.	32.30	130.09
Jin	5.	32.43	130.47
Jinnai	7.	32.52	130.52
Joyama	4.	32.46	130.39
Jozan	4. (See Joyama-mura.)		
Kaito	9.	32.35	130.44
Kakisako	12.	32.47	130.51
Kameba	1.	32.26	130.11
Kameura	1.	32.16	130.01
Kami	1.	32.28	130.16
Kamimatsukuma	12.	32.24	130.40
Kamio	10.	33.02	130.37
Kamogawe	7.	32.58	130.44
Kashiwa	3.	32.44	131.11
Kawa	8.	32.15	130.50

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<u>MURA</u>	<u>GUN NO.*</u>	<u>LAT.N.</u>	<u>LONG.E.</u>
Kawabe	6.	33.01	130.39
Kawachi	4.	32.49	130.36
Kawaguchi	4.	32.43	130.38
Kawaharu	5.	32.48	130.54
Kawakami	4.	32.53	130.42
Kawamata	12.	32.30	130.44
Kawazoe	10.	33.00	130.36
Kikuchi	7.	32.58	130.48
Kince	8.	32.10	130.53
Kinokura	5.	32.43	130.49
Kitagoshi	7.	32.57	130.53
Kiyosato	10.	32.57	130.27
Koda	12.	32.28	130.37
Kojo	3.	33.00	131.09
Komeda	6.	33.00	130.35
Kongo	12.	32.28	130.35
Konoha	10.	32.55	130.37
Konose	8.	32.21	130.39
Konoura	11.	32.39	130.29
Kotsura	1.	32.30	130.19
Kudaragi	2.	32.23	130.37
Kugino	2.	32.10	130.32
Kugino	3.	32.51	130.59
Kume	8.	32.15	130.58
Kureko	12.	32.27	130.55
Kurigi	12.	32.31	130.50
Kurohiji	8.	32.21	130.56
Kurokawa	3.	33.04	131.08
Kusakabe	3.	32.51	131.11
Kusubo	1.	32.30	130.23
Kusuura	1.	32.25	130.12
Kutami	1.	32.13	130.03
Kyoragikawachi	1.	32.27	130.37
Kyozumi	7.	33.01	130.44
Matsuo	4.	32.48	130.37
Matsutaka	12. (See note 2.)		
Menodake	6.	32.59	130.40
Midori	10.	32.05	130.37
Midorigawa	11.	32.41	130.37
Minamioguni	3.	33.04	131.05
Minakami	8.	32.23	130.58
Minamogo	7.	33.02	130.55
Mitake	5.	32.42	131.00
Mitake	6.	33.04	130.42
Mitama	6.	32.02	130.43
Miyada	1.	32.24	130.19
Miyaji	1.	32.22	130.10
Miyaji	12.	32.31	130.40
Miyajidake	1.	32.23	130.08
Miyanokawachi	1.	32.18	130.07

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<u>MURA</u>	<u>GUN NO.*</u>	<u>LAT.N.</u>	<u>LONG.E.</u>
Miyauchi	5.	32.40	130.51
Miyuki	4.	32.45	130.43
Mizukoshi	5. (See note 7.)		
Momiki	12.	32.31	130.58
Morikawa	7.	32.55	130.52
Moritomi	9.	32.42	130.41
Mutsuai	10.	32.55	130.30
Nabe	10.	32.54	130.29
Nagakita	3.	32.53	131.00
Nagamizu	3.	32.55	130.58
Naka	1.	32.29	130.17
Nakabaru	8. (See note 8.)		
Nakadomi	6.	32.59	130.44
Nakadori	3.	33.02	131.07
Nakaharu	4. (See note 5.)		
Nakamidori	4.	33.44	130.40
Nakashima	4.	32.46	130.38
Nakashima	5.	32.44	130.57
Nakata	1.	32.21	130.09
Nakayama	9.	32.38	130.47
Nameishi	10.	32.54	130.32
Namino	3.	32.55	131.12
Namitate	4.	32.45	130.38
Nanataki	5.	32.46	130.53
Narekawa	5.	32.44	130.59
Nishi	8.	32.10	130.50
Nishigoshi	7.	32.53	130.44
Nishikino	3.	32.52	130.55
Nishise	8. (See note 8.)		
Nishizato	4.	32.51	130.41
Nitao	12.	32.31	130.42
Nojiri	3.	32.50	131.14
Nozu	12.	32.34	130.41
Oama	10.	32.15	130.36
Oda	10.	33.01	130.34
Oda	11.	32.40	130.34
Odadoko	1. (See note 3.)		
Odo	1.	32.23	130.21
Oe	1.	32.20	130.00
Ogaishi	3.	32.57	130.59
Otome	5.	32.40	130.50
Ohara	10.	33.02	130.34
Okabaru	8.	32.13	130.56
Okishin	4. (See note 5.)		
Okukoga	4.	32.44	130.37
Omichi	6.	33.01	130.42
Omine	3.	32.41	131.05
Oniki	1.	32.14	130.01
Oninoike	1.	32.33	130.11
Ono	2.	32.15	130.34

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<u>MURA</u>	<u>GUN NO.*</u>	<u>LAT.N.</u>	<u>LONG.E.</u>
Ono	10.	32.55	130.31
Onobeta	9.	32.36	130.43
Oshima	5.	32.45	130.44
Otake	11.	32.38	130.34
Otao	1.	32.22	130.13
Oura	1.	32.31	130.22
Oyamatoshima	4.	32.49	130.49
Ozaka	5.	32.44	130.47
Rikigo	4. (See note 1.)		
Rokka	5.	32.45	130.46
Rokuei	10.	32.56	130.28
Rokugo	6.	33.03	130.44
Ryuhō	12.	32.31	130.40
Ryumon	7.	33.03	130.51
Saitsu	1.	32.24	130.19
Sakaki	10.	33.01	130.31
Sakanashi	3.	32.55	131.08
Sakanoshita	10.	33.00	130.34
Sakasegawa	1.	32.29	130.06
Sakurai	6.	32.53	130.41
Santo	6.	32.54	130.42
Seisen	7. (See Kyojumi-mura.)		
Sencho	12.	32.32	130.38
Seta	7.	32.53	130.56
Shibarū	12.	32.30	130.55
Shigaki	1.	32.27	130.13
Shiki	1.	32.31	130.03
Shikimi	3.	32.50	131.07
Shimago	1.	32.28	130.17
Shimizu	4. (See note 1.)		
Shimoda	1.	32.24	129.59
Shimomatsukuma	12.	32.27	130.42
Shimotake	12.	32.33	130.46
Shimotsufukae	1. (See note 3.)		
Shimotsura	1.	32.28	130.18
Shimoura	1.	32.25	130.14
Shimoyabe	5.	32.41	130.55
Shingo	1.	32.21	130.07
Shirahata	5.	32.41	130.48
Shiraito	5.	32.40	130.59
Shirami	3.	32.51	131.04
Shirami	5.	32.50	130.50
Shiranui	11.	32.39	130.38
Shiroishi	4.	32.42	130.38
Shirokita	7.	33.01	130.47
Shisui	7.	32.56	130.47
Showa	12.	32.32	140.00
Sugeno	3.	32.42	131.08
Sugiai	9.	32.43	130.40
Sugikami	9.	32.43	130.43
Sue	8.	32.18	130.53

<u>MURA</u>	<u>GUN NO.*</u>	<u>LAT.N.</u>	<u>LONG.E.</u>
Suigen	7. (See Minamogo-mura.)		
Suji	1.	32.30	130.20
Sumoto	1.	32.26	130.18
Tabaru	6.	32.55	130.40
Takado	1.	32.24	130.23
Takahama	1.	32.22	129.59
Takaki	5.	32.44	130.48
Takamichi	10.	32.54	130.31
Takema	6.	33.07	130.43
Takemiya	4. (See note 1.)		
Takimizu	5.	32.42	130.51
Takio	5. (See note 7.)		
Tamamizu	10.	32.53	130.35
Tamana	10.	32.57	130.44
Tamukae	4.	32.46	130.43
Tanasoko	1.	32.25	130.21
Taneyama	12.	32.32	130.43
Tanoura	2.	32.21	130.31
Tashima	7.	32.56	130.44
Tasoko	6.	32.58	130.43
Tatsuno	5.	33.41	130.50
Tatsuta	4.	32.50	130.45
Teno	1.	32.31	130.09
Tobase	11.	32.36	130.29
Todoroki	11.	32.41	130.37
Togo	10.	33.01	130.37
Tomitsu	1.	32.20	130.01
Tomoi	4.	32.50	130.48
Tono	9.	32.40	130.43
Toride	7.	32.59	130.46
Tororo	1.	32.28	130.03
Tosaki	7.	32.57	130.49
Toshine	9.	32.35	130.50
Toyooki	5.	32.43	130.46
Toyoda	9.	32.41	130.44
Toyofuku	9.	32.37	130.41
Toyokawa	9.	32.37	130.39
Toyomizu	10.	32.54	130.33
Toyono	9.	32.38	130.45
Tsuda	7.	32.51	130.48
Tsukise	10.	32.58	130.35
Tsukiyama	10.	32.57	130.32
Tsumori	5.	32.49	130.50
Tsunagi	2.	32.14	130.27
Ubuyama	3.	32.59	131.13
Uchida	4.	32.44	130.38
Uchida	6.	33.04	130.44
Ue	8.	32.12	130.55
Ujiguchi	4.	32.44	130.36
Ura	1.	32.25	130.22
Uyanagi	12. (See note 2.)		

<u>MURA</u>	<u>GUN NO.*</u>	<u>LAT.N.</u>	<u>LONG.E.</u>
Wakashima	12.	32.35	130.39
Watari	8.	32.16	130.41
Yachiwa	12.	32.31	130.57
Yahata	10. (See note 4.)		
Yamada	3.	33.01	131.05
Yamae	8.	32.21	130.43
Yamakita	10.	32.53	130.38
Yamamoto	6.	32.56	130.40
Yamanishi	3.	32.51	130.56
Yamauchi	6.	32.57	130.38
Yatomi	10. (See note 6.)		
Yawata	6.	33.02	130.41
Yokoshima	10.	32.52	130.34
Yoneda	6. (See Komeda-mura.)		
Yonedomi	10.	33.00	130.32
Yoshimatsu	6.	32.56	130.43
Yoshino	4.	32.51	130.38
Yoshino	12.	32.33	130.42
Yoshio	2.	32.21	130.35
Youra	8.	32.21	130.49
Yunoura	2.	32.16	130.29
Yushima	1.	32.36	130.20
Zendomo	4.	32.44	130.38

*GUN

1. AMAKUSA
2. ASHIKITA
3. ASO
4. HOTAKU
5. KAMIMASHIKI
6. KAMOTO
7. KIKUCHI
8. KUMA
9. SHIMOMASHIKI
10. TAMANA
11. UTO
12. YATSUSHIRO

- (1) Incorporated into Kumamoto-shi.
- (2) Incorporated into Yatsushiro-shi.
- (3) Shimotsufukae-mura was amalgamated with Odadoke-mura and re-named Shimoda-mura.
- (4) Incorporated into Arao-shi.
- (5) Incorporated into Nakashima-mura.
- (6) Incorporated into Tamana-machi.
- (7) Incorporated into Takimizu-mura.
- (8) Incorporated into Hitoyoshi-shi.

TABLE OF WEIGHTS AND MEASURES

Weight

1 momme (10 fun)	- 0.1323 oz.	- 3.750 grams
1 kin (160 momme)	- 1.323 lb.	- 0.600 kilograms
1 kan (1000 momme)	- 8.267 lb.	- 3.750 kilograms
1 koku (fish) - 40 kan		
1 ounce	- 7.560 momme	
1 pound	- 120.958 momme	
1 short ton	- 241.916 kan	
1 gram	- 0.266 momme	
1 kilogram	- 266.666 momme	
1 metric ton	- 1666.66 kin	

Length

1 shaku (10 sun)	- 11.930 inch	- 30.303 centimeters
	- 0.994 foot	- 0.303 meter
1 ken (6 shaku)	- 5.965 feet	- 1.818 meters
1 cho (60 ken)	- 0.678 mile	- 109.090 meters
1 ri (36 cho)	- 2.440 miles	- 3.927 kilometers
1 shaku (cloth measure)	- 1.25 shaku	
1 tan (a roll of cloth)	- approx. 25-30 shaku	
1 hiki (cloth)	- 2 tan	
1 inch	- 0.084 shaku	
1 foot	- 1.006 shaku	
1 yard	- 3.017 shaku	
1 mile	- 885.123 ken	- 0.4098 ri
1 meter	- 3.300 shaku	
1 kilometer	- 550,000 ken	- 0.2546 ri

Area

1 sq. shaku	- 0.988 sq. foot	
1 tsubo (36 sq. shaku)	- 3.954 sq. yards	
1 se (30 tsubo)	- 118.614 sq. yards	- 0.992 are
1 cho (100 se)	- 2.45 acres	- 0.0099 sq. kilo- meter
1 sq. ri	- 5.955 sq. miles	- 15.424 sq. kilo- meters
1 tan - 10 se		
1 sq. foot	- 1.0116 sq. shaku	
1 sq. yard	- 9.105 sq. shaku	
1 acre	- 40.804 se	
1 sq. mile	- 261.147 cho	
1 are	- 30.250 tsubo	
1 hectare	- 1.008 cho	
1 sq. kilometer	- 100.833 cho	

Capacity

1 sho (10 go)	- 3.812 pints (U.S.)	- 1.804 litres
1 cu. shaku	- 0.983 cu. foot	- 27.826 litres
1 cu. tsubo	- 7.861 cu. yards	- 6.010 kilolitres
1 koku (dry)	- 4.960 bushels (British)	
	- 5.119 bushels (U.S.)	
1 koku (timber)	- approx. 10 cu. feet	
1 shakujime (timber)	- approx. 12 cu. feet	
1 cu. foot	- 1.0176 cu. shaku	
1 cu. yard	- 27.474 cu. shaku	
1 gallon (U.S.)	- 2.098 sho	
1 bushel (British)	- 1.305 cu. shaku	
1 litre	- 0.554 sho	
1 kilolitre	- 35.937 cu. shaku	
1 cu. metre	- 35.937 cu. shaku	
1 koku (liquid)	- 10 to - 100 sho - 1000 go	