Monthly Review

FEDERAL RESERVE BANK OF SAN FRANCISCO

SEPTEMBER 1948

REVIEW OF BUSINESS CONDITIONS

For the most part, industrial production, construction activity, and employment continued at high levels through the summer in both the Twelfth District and the nation. Employment in the United States reached a high of 61,615,000 persons in July, but dropped seasonally in August by 400,000 as farm activity slackened. Industrial production over the nation rose again in August to about the high June level, after a dip in July. In the District, nonagricultural employment has increased steadily in recent months. In August, manufacturing employment in California and Washington, the two states for which data are available at this time, rose to the highest point since the war. Gains were widespread; in California, in addition to seasonal gains in canning, new employment peaks were reached in August in apparel, paper products, lumber and timber, stone, clay, and glass, and automobile manufacturing. Employment in iron and steel reached the highest level since April 1945. Agricultural workers were still needed in mid-September in various areas of the District for fall harvesting of fruits, nuts, vegetables, and cotton. Few, if any, significant losses because of lack of labor are expected, however.

Petroleum and maritime strikes

Crude and refined petroleum production in California continued at record or near-record levels through August, but declined in early September when a wage dispute led to a strike of refinery workers. In the two weeks ending September 18, crude oil production, on a daily average basis, amounted to 735,000 barrels, a decline of between 20 and 25 percent from previous levels of some 950,000 barrels. No recent data are available on refinery operations, but they are continuing at reduced levels.

A maritime strike in Pacific Coast ports also began in early September. Maritime commerce is at a virtual standstill, although efforts are being made to continue military shipments to Pacific areas. A rail embargo has been placed upon all freight destined for export from the West Coast.

Construction activity up but residential permits decline

Construction activity, as measured by the value of work put in place, reached a new high in August for the nation. Although August data are not yet available, construction activity was, in all probability, at or near record levels in the District also. Some question about residential construction activity in subsequent months is raised, however, by the fact that housing starts dropped sharply in August for the country as a whole. In the District, the number of dwelling units in urban areas for which permits were obtained declined through July from the March peak by an increasing amount each month. Preliminary indications are that August figures will show a further substantial decline.

Department store sales at new high

In August, the seasonally adjusted index of Twelfth District department store sales reached a new high of 382 percent of the 1935-39 average. This substantial gain followed a slight decline to 365 in July from the previous record of 372 in June.

Member bank reserve requirements raised

Under the authority granted by Congress in the recent special session, the Board of Governors of the Federal Reserve System has raised reserve requirements against member bank demand deposits by 2 percentage points and against time deposits by 1.5 percentage points. The new requirements for demand deposits are 26 percent for banks in central reserve cities, 22 percent for banks in reserve cities, and 16 percent for banks in all other locations. The new requirement for time deposits is uniform for all banks—7.5 percent. These higher requirements became effective September 16 for banks not in reserve cities, and September 24 for reserve city and central reserve city banks.

Based upon the deposits held by Twelfth District member banks in the second half of August, the new requirements will result in an increase of about $265 million in required reserves in the District, raising total required reserves to about $2,300 million. Since excess reserves were small, District member banks have had to obtain most of the increase in required reserves by the sale or run-off of Government securities. A reduction of approximately 4 percent in their Government security holdings, which totaled $6,700 million at the end of August, would provide the entire increase in reserves required. For all member banks, required reserves will be raised from about $17.7 billion to $19.7 billion. As in the District, most of this additional $2 billion in reserves is expected to be obtained by member banks by shifting out of Government securities. Reflecting primarily this shift, but also the drain upon bank reserves caused by third-quarter

tax payments, Government security holdings of the Federal Reserve System increased nearly $2 billion in the two weeks ending September 29.

Bank loans continue to expand

These increases in required reserves come at a time when bank loans are undergoing a significant expansion. The pronounced upsurge in total bank loans that occurred in August and early September, both in the District and in the United States, was due primarily to the increase in commercial, industrial, and agricultural loans. The percentage increase in these loans at weekly reporting member banks was more than twice as large in August as in any other month this year, in both the District and the country as a whole. Early September saw a continuation of this growth.

In contrast, the growth in real estate loans of District weekly reporting member banks has slowed up substantially since the middle of the year, with August experiencing the lowest relative increase for any month so far this year. For the country as a whole, although the rate of growth in real estate loans of these banks fell off in July, it picked up again in August and was only slightly below that for earlier months in the year. Consumer loans have shown steady gains each month this year in both the District and the nation. September figures will probably show a considerable expansion in consumer instalment credit, as the result of increased instalment sales, especially of used cars, before Regulation W became effective September 20.

District time deposits decline

Member bank demand deposits have risen moderately since April in both the District and the United States. Time deposits have behaved rather differently, however. In the country as a whole, member bank time deposits have declined only slightly from the June peak. In the District, member bank time deposits reached a peak at the end of February, and have declined in each subsequent month except June. This drop, although considerably larger relatively than for the nation, is not marked, and perhaps it is too soon to say that savings deposits have started their first real postwar decline. A significant decline would not be surprising, however, under the impact of present price levels.

THE AGRICULTURAL SITUATION

CONDITIONS so far in 1948 point to a favorable year for American agriculture. Cash income from the sale of farm products is continuing higher than a year ago and, although production costs are up somewhat, it appears that net income will not be far below the level of last year. The huge expected production of grains and cotton has caused their prices to drop during most of the year; the Federal support program, however, is expected to limit these price declines. On the other hand, supplies of most livestock and livestock products are smaller than last year. Farm prices of these products, consequently, have been averaging higher, especially meat animal prices which have risen to record levels. Livestock prices probably will level off or decline slightly in the next few months since meat animal marketings should increase seasonally, though less than usual. Farm prices for crops, with the large grain crops rapidly filling storage facilities, probably will continue downward, though not as sharply as in recent months.

Crop production up in United States

Crop prospects for the country as a whole have become increasingly favorable the last few months. The acreage in crops remains at the high level of recent years, and favorable weather has insured good yields. Feed grains as a group are a major factor in the huge aggregate crop production in prospect for this year. These include the largest corn crop in history, estimated at 3.5 billion bushels, near-record crops of oats and sorghum grains, and an above-average production of barley. Feed grain supplies for the 1948-49 season promise to be the most liberal per animal unit on record despite relatively small stocks of old grain. Record production is also in prospect for soybeans, peanuts, and pecans. The wheat crop is expected to be second only to last year's record; other near-record crops are indicated for rice, flaxseed, dry beans, and citrus. Of the major crops, only rye, sweet potatoes, dry peas, apples, and pears are expected to yield below-average production this year.

District crop prospects varied; wheat up sharply, fruit down from last year

In the Twelfth District, total production of all crops is likely to be about the same as last year. Production prospects for important District crops are similar to United States prospects with the exception of wheat, rice, and citrus. Expected record crops of wheat in Washington and Oregon may push District wheat production 40 percent above the 1937-46 average and 20 percent over last year's total; this would bring a new District record, due almost entirely to increases in acreage planted to winter wheat. The record United States rice crop will not be matched in California, the District's only rice-producing state. The California crop, though above average, is expected to be 19 percent less this year than in 1947. Unfavorable spring weather reduced the acreage planted, and is expected to cause some decrease in yields as well. Citrus production outside the District promises to be the greatest on record. The inclusion of District figures, however, brings the United States total down from last year, largely because of California's extended winter drought. With most of the crop already harvested, total District production appears to be only about average and considerably less than the 1946-47 crop.

The outlook for Twelfth District fruit and nut production is considerably less favorable than in 1947. All crops

INDICATED 1948 PRODUCTION OF LEADING CROPS—TWELFTH DISTRICT AS OF SEPTEMBER 1, 1948

Field and Seed Crops	Indicated 1948 production (in thousands)	Percentage change —1948 compared with— 1947	1937-46 average
Barley (bu.)	90,457	+14.0	+37.3
Beans, dry (bags)	7,044	+ 2.4	+ 6.2
Corn (bu.)	6,679	+ 4.7	—17.5
Cotton lint (bales)	1,250	+24.3	+99.7
Flaxseed (bu.)	4,985	+49.6	+75.8
Grain sorghums (bu.)	6,632	+38.4	+ 8.7
All hay (tons)	13,863	— 3.6	+ 0.6
Hops (lbs.)	52,216	+ 4.2	+19.9
Oats (bu.)	30,532	— 5.0	— 1.8
Peas, dry (bags)	3,155	—45.7	—30.4
Potatoes (bu.)	108,230	+20.8	+29.8
Rice (bu.)	14,495	—18.8	+22.8
Sugar beets (tons)	4,690	—13.1	+37.1
Wheat, all (bu.)	174,862	+20.1	+39.6
Fruits			
Apples (bu.)	41,232	—17.5	+ 0.4
Apricots (tons)	250	+26.3	+ 4.1
Cherries (tons)	78	— 2.2	— 9.4
Grapes (tons)	2,859	— 1.3	+13.4
Grapefruit (boxes)	5,860[1]	—18.8	+ 3.9
Oranges (boxes)	47,380[1]	—13.4	+ 0.3
Lemons (boxes)	12,700[1]	— 8.0	+ 4.2
Peaches (bu.)	36,934	— 3.6	+19.5
Pears (bu.)	21,104	—26.4	— 6.7
Plums (tons)	66	—10.8	—12.1
Prunes, fresh (tons)	97	+ 2.3	—24.9
Prunes, dried (tons)	187	— 7.0	— 9.2
Nuts			
Almonds (tons)	30	+ 1.4	+44.5
Filberts (tons)	7	—19.3	+44.9
Walnuts (tons)	72	+10.7	+11.5

[1] Figures are for crop year beginning in October of the previous year.
Source: U. S. Bureau of Agricultural Economics, *Crop Production*, September 1, 1948.

except apricots and walnuts will yield either the same as or considerably less than last year's production; and only grapes, peaches, and nuts are expected to yield much above their 1937-46 average production.

Truck crops for summer and early fall harvest are, on the whole, expected to show a somewhat lower output this year than in 1947; but production will still be considerably higher than the 1937-46 average. A large decrease in celery production is indicated with smaller decreases in lettuce, onions, tomatoes, cabbage, and watermelons. Carrots, snap beans, green peas, and spinach show increases.

Abnormal weather conditions throughout most of the District have had considerable effect upon crop production. Persistent cool, rainy spring weather in Washington, Oregon, and Idaho caused most crops and farm operations to be two to four weeks late. The flood in late May and June further delayed farming activities and destroyed or damaged many crops. In California, the winter drought and subsequent cool weather delayed crop development and ripening, particularly in fruits. Unseasonable May rains further retarded the already late season so that most crops are about two weeks late at the present time.

Livestock and livestock products continue short

United States supplies of livestock and livestock products have been running appreciably less than last year, and are likely to continue to be in short supply the rest of the year. Total cattle numbers have continued the decrease begun in 1945—numbers on January 1, 1948, had decreased 8 percent from January 1, 1945. As a result, meat output has decreased; commercial production during the first half of 1948 was 7 percent below the same period last year, and in the second half it may be down 10 percent from last year. The small spring pig crop may be supplemented by a fall crop equal to last year's, but the total crop will still be below 1947 and the smallest since 1940. Hog slaughter in the remainder of 1948 is expected to continue below 1947 since there were fewer hogs on farms June 1 than a year earlier. With a smaller lamb crop than last year, there will be fewer lambs fed this fall and winter than in 1947.

United States production of milk and dairy products will decrease seasonally the rest of the year, though not as sharply as last year. Though production per cow is at record levels, the decreasing number of cows has kept milk output so far this year below the 1947 level. Turkey and poultry and egg supplies are also below first-half figures for 1947, so that no relief from red meat shortages can be expected from these items.

The livestock and livestock products situation in the Twelfth District, as reflected by numbers on farms, is somewhat more favorable than in the United States as a whole. Though the swine industry is not too important in the District, hog and pig numbers as of January 1 were slightly over those of last year while United States numbers decreased. The same was true for chickens—numbers on farms decreased in the United States but increased slightly in the District. The number of turkeys raised on District farms as of August 1 was also up some over last year—about 4 percent. However, swine and turkey numbers in the District are still below their 1937-46 averages. As in the United States, District sheep, lamb, and cattle numbers were down from last year. Cattle numbers continued declining from their 1944 high, and sheep and lamb numbers continued the decrease begun over ten years ago.

Actual production of meat and other livestock, poultry, and dairy products in the District reflects, of course, the number of livestock on farms. District Federally-inspected slaughter for January-August this year is down between 9 and 12 percent from the same period last year for cattle, calves, and sheep. Swine slaughter, in line with increased District numbers, is up about 6.5 percent from last year; this increase is not too significant, however, since most of the pork products consumed in the District are imported. Egg production for the January-August period is also up from the same period last year, reflecting an increase both in the number of layers and in the rate of lay. The number of milk cows on Twelfth District farms in June was down about 2 percent from a year ago. In most District states, however, milk output per cow was higher during June, July, and August than in the corresponding months of 1947. Production, therefore, was only slightly less this summer than last and was somewhat greater than the 1937-46 average. Because of the fewer sheep on hand this year as well as reduced yields, the Twelfth District wool clip is estimated at less than the 1947 clip, and one-third less than the average for the ten years preceding. This decline in District production has been following the national pattern.

Effects upon meat supply of large grain crops will be delayed

Bumper feed crops in prospect will not increase United States total meat production for some time to come. In fact, marketings of some livestock are likely to be delayed for extra fattening on the new crops. More cattle probably will be grain fed this fall and winter; the demand for feeding stock should strengthen as a result. Though somewhat heavier weights may be marketed later this year, an increase in cattle numbers could not occur much before 1950. Consequently, any substantial increase in meat production will not be possible until late 1950.

The effect of the larger prospective crops upon hog slaughter will be felt somewhat sooner than for cattle. As with cattle, however, there may be some delay in marketings of 1948 spring pigs for feeding out on new crop grains. Hog slaughter weights in the 1948-49 hog marketing year are expected to be extremely heavy. However, slaughter in the remainder of 1948 is expected to continue below 1947 since there were fewer hogs on farms June 1 than a year earlier. Delayed marketing of the 1948 spring pig crop and a fall crop about equal to that in 1947 would increase hogs on farms January 1, 1949, moderately above those on January 1 this year. A sharp increase in next year's spring pig crop is probable, but that crop will not be ready for market until the fall of 1949.

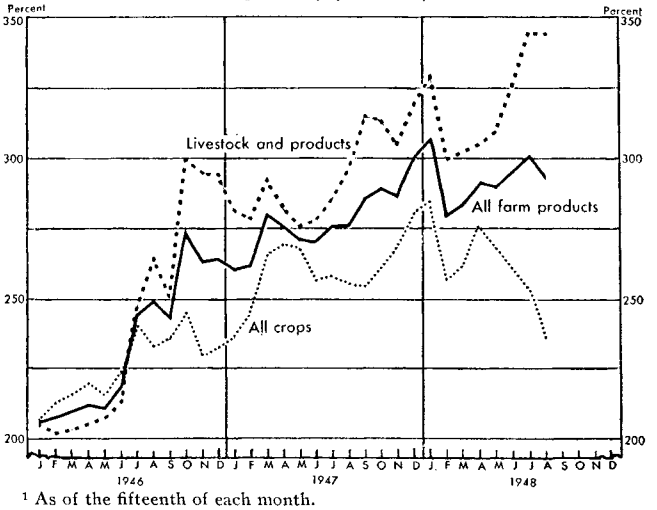
Again, the prospective increase in grain and feed supplies probably will not have an immediate effect on market supplies of turkeys and chickens. The favorable relationships between feed and turkey and chicken prices will provide considerable incentive for farmers to feed turkeys and young chickens to heavier weights than in previous years. Poultry numbers, however, will probably not increase appreciably until 1949. Egg production cannot be materially affected by the expected large feed supplies until 1949. The immediate effect will be a retention of a larger than usual proportion of laying stocks for 1949 production.

Milk production may experience the most immediate effect from the good harvest prospects of small grains and corn. Farmers have been drawing liberally from available feed supplies to help retard summer declines in production. The rate of feeding the last few months has been unusually high. Dairy farmers may also cull their herds less closely than was done in 1947. The large crops, together with good pasture conditions, are likely to bring further increases in the rate of production per cow. Consequently, the seasonal decline in milk production will be smaller than last year, and production toward the end of the year may exceed that of the closing months of 1947.

Farm prices leveling off

The prices received by United States farmers for all farm products have been markedly affected, so far in 1948, by three significant developments: the February price break, the increasing shortage of meat animals, and the expected record or near-record crops of the major food and feed grains. The effects of these developments

INDEX OF PRICES RECEIVED BY FARMERS—UNITED STATES, 1946-48[1]
(August 1909–July 1914 = 100)



[1] As of the fifteenth of each month.
Source: U. S. Bureau of Agricultural Economics, *Agricultural Prices.*

are evident in the behavior of the index of prices received by farmers for all farm products and its two major components: the index of prices received for all crops and the index of prices received for livestock and livestock products. The February break dropped the index for all farm products from the January record of 307 to 279. The fall in the commodity prices of the major grains was accompanied by sympathetic price declines in livestock, cotton, and most other food and feed grains; both the all crops and the livestock and livestock products indexes decreased sharply as a result. Partial recoveries were made by all affected crop and livestock items during both March and April.

Following the moderate recovery in the index for all farm products, the two component indexes came under the influence of two separate developments: the short supply of meat animals and the large expected production of certain major crops. The increasingly favorable prospects for the grain crops began depressing prices paid to farmers. The all-crops index began sliding downward and has continued to decrease through August. The decline in food and feed grain prices as well as the seasonal drop in prices received for truck crops was largely responsible[1].

The opposite trend in the index of prices received for livestock and livestock products has been due to the great increases in the prices received for meat animals. Prices received for poultry and dairy products have increased some in the last three months but not nearly as sharply as meat animal prices. Cattle numbers have decreased steadily since January 1, 1945, and slaughter has been declining correspondingly. As meat supplies have decreased, prices paid farmers have increased. The index of prices received for meat animals has been at record levels the last three months; these high meat prices have been the major factor in the sharp rise of prices received for all livestock and livestock products.

[1] September 15 figures were received too late for inclusion in the text. The indexes of prices received for all farm products stood at 290, for all crops at 231, for livestock and products at 343. The index of prices paid was 250 and the parity ratio 116.

These trends—down for crops, up for livestock and livestock products—have been operating since May. The continued gains in prices received by farmers for meat animals and dairy and poultry products more than offset declines in prices of grains, soybeans, and cotton, to raise the prices received for all farm products through July. During August, however, the prices of most meat animals declined or remained unchanged while crop prices continued downward. This resulted in a drop for the all farm products index from 301 to 293.

Index of prices paid unchanged since June

Prices paid by farmers for all commodities, interest, and taxes fluctuated little during the first months of 1948. From the high of 251 in January, the index decreased 4 points by March. A gradual rise brought the index back to 251 in June; it has remained at that level through both July and August. This steadiness is the result of compensating changes in the component subgroups. Production items decreased some with the lowering of feed prices. On the other hand, prices paid by farmers for consumption items have continued to advance.

The parity ratio—the relationship between prices received and prices paid by farmers—has continued to be favorable to farmers. The February break in some commodity prices dropped the ratio 10 points from the January figure of 122. But with the subsequent recovery of these prices at a faster rate than the increase in prices paid, the ratio gradually increased to 120 in July. The decline in prices received in August, however, dropped the ratio to 117, one point below a year ago.

Some farm prices near support levels

During the last few years, Government price support activities have been on a relatively small scale. The prices of the majority of eligible commodities have approached support levels only occasionally. There has been no real test of the ability of the support program to maintain farm prices. This year, however, support operations are likely to be extensive.

The average United States prices of most major crops on August 15 were at or below their support levels. So far this year, an estimated 100 million dollars has been spent by the Government for purchases of potatoes and eggs under support programs. New-crop wheat prices fluctuated somewhat below support prices in July and August as storage space rapidly filled; other grains—oats, barley, and sorghums—are also slightly below support. With indications that the corn crop may be even bigger than the 3.5 billion bushels currently estimated, corn prices may soon fall close to support levels, especially with storage space seriously short.

Livestock prices probably will level off or decline slightly the next few months since meat animal marketings should increase seasonally; however, this increase in supply will not be as great as last year's. Livestock products eligible for support include chickens, turkeys, eggs, hogs, and wool; all except eggs were well above support in August. Even so, record sums are likely to be expended through the Government support program, almost entirely for price maintenance of crops. In addition to those prices already at support levels, cotton and corn prices may drop to those levels under the influence of the huge crops of this year. Under the recently announced support program for dried fruits, the Government will purchase surplus tonnages to hold up producer prices.

These commitments, coupled with the huge crops expected, are causing increasing concern. Lack of sufficient storage space further aggravates the situation. Available storage is largely filled for most grains, and farmers are hurriedly attempting to construct temporary facilities. In Washington and Oregon, the record wheat crop is being stored in sack and in bulk in the open field. If the storage space necessary for Government loan or purchase agreement programs is not available, farmers will have to sell the unstored portion of their crop soon after harvest. This could force farm prices below support levels for a short time until these unstored stocks have been taken off the market. The storage shortage is reflected in the futures markets. Corn can be bought for December delivery in Chicago at about $1.39 a bushel, about 5 cents below the support level. Because of these conditions, there is considerable question whether or not certain crop prices can actually be kept consistently at or above support levels through the Government purchase and loan programs. Farm prices for crops as a whole probably will continue downward through the fall and winter, though not as sharply as in recent months.

United States and District cash receipts slightly higher

Cash receipts from farm marketings in the United States as a whole will probably be somewhat larger this year than the $30 billion received in 1947. Total cash receipts during the first half of 1948 were 6 percent higher than in the same period last year. Though marketings of livestock and livestock products are likely to continue below last year, this reduction in quantity may be more than offset by higher average prices. Continued large receipts from the marketings of crops are expected; record volumes are to be sold at prices averaging not far below those of a year ago. Government payments to farmers so far this year have been at about the same rate as in 1947.

Though total cash receipts of United States farmers thus far in 1948 are above last year, total production costs for the average farmer probably have risen more. Consequently, farmers' net income for the year may be somewhat lower than last year. Also, it is probable that the increase in costs has been more evenly distributed among individual farmers than the increase in receipts.

During the first six months of this year, total Twelfth District receipts from farm marketings increased somewhat less over the first half of 1947 than did United States receipts. Receipts from livestock and livestock products accounted for practically the entire increase in total receipts; District crop income was virtually unchanged from January-June of last year largely because of Washington's decreased crop income.

Nevada and Washington were the only District states which failed to show an increase in total cash receipts.

CASH RECEIPTS FROM FARM MARKETINGS—TWELFTH DISTRICT
JANUARY-JUNE, 1948
(amounts in thousands)

	Livestock and products	Crops	Total	Percentage change 1947 to 1948: Livestock and products	Crops	Total
Arizona	$ 39,235	$ 63,027	$ 102,262	+ 4.3	+17.2	+11.9
California	379,859	493,977	873,836	+ 2.6	+ 1.7	+ 2.1
Idaho	66,429	69,114	135,543	+ 9.3	+ 9.6	+ 9.5
Nevada	11,236	2,108	13,344	—17.2	+12.2	—13.6
Oregon	73,883	49,993	123,876	+ 6.6	+ 3.9	+ 5.5
Utah	45,377	15,875	61,252	+ 4.9	+48.4	+13.5
Washington	98,693	93,886	192,579	+13.3	—24.2	— 8.7
Twelfth District	714,712	787,980	1,502,692	+ 4.8	+ 0.1	+ 2.3
United States	8,347,277	4,404,170	12,751,447	+ 8.8	+ 1.5	+ 6.2

Source: U. S. Bureau of Agricultural Economics, *Farm Income Situation*, June-July, 1948.

Nevada's decrease was due to a drop in receipts from livestock and livestock products. On the other hand, the decline from last year in Washington's total receipts was caused by a decrease in crop receipts. Extremely cold, wet spring weather in the Northwest retarded crop development and delayed harvesting of many crops, particularly vegetables. Consequently, the March, April, and May crop income in Washington was about half the income in the same months last year.

All other District states showed moderate increases in total cash receipts, varying from a 2.1 percent increase in California to a 13.5 percent increase in Utah. With the exception of Nevada, each state's income from livestock and livestock products marketings was up moderately over first half of 1947 figures. Though livestock numbers in most states are down, prices have been enough over last year's to result in some increase in receipts. Crop receipts in individual District states showed a wider range of increase than receipts from livestock, except for Washington's substantial decrease. Receipts from crop marketings during the first half of 1948 varied from an increase of only 1.7 percent in California to 48.4 percent in Utah.

During the second half of 1948, total cash receipts in the District should match last half 1947 receipts. Though production of some crops, particularly fruits, is down, many District crops are being marketed later this year than last. As a result, the last-half 1948 volume of marketings should not differ much from the last-half 1947 volume. Though many crop prices have been adjusting downward to a new-crop basis, average prices should at least equal last year's. Total cash receipts in the Twelfth District for the year, then, will probably equal or slightly exceed 1947's total of $3.9 billion.

INCOME PAYMENTS TO INDIVIDUALS—TWELFTH DISTRICT, 1939-47[1]

TOTAL income payments to individuals increased from 1946 to 1947 in the Twelfth District, but not by as much as in the nation as a whole. The proportion of total United States income payments received in the District, which was 12.5 percent in 1947, has decreased slightly every year since 1944 when it was 13.5 percent. The 1947 proportion, however, is still 2 percentage points above 1939. The decline from 1944 is a carryover from the tremendous impact of the war industries in the West. From 1939 to 1944 income payments in the District rose 174 percent, compared with a mere 114 percent in the nation, or 107 percent if District figures are excluded. Then from 1944 to 1947, Twelfth District income payments rose only 17 percent while national income payments rose 25 percent, or 27 percent if District figures are excluded. Per capita income payments are generally higher in the District than in the nation, but they, too, have been rising more slowly since 1944.

[1]The present discussion is based on the data from the annual survey of income payments by states by the Office of Business Economics of the Department of Commerce. The article appears in the August 1948 issue of the *Survey of Current Business*.

Postwar shrinking pains not as severe as might have been expected

The readjustment from abnormal wartime production in the Twelfth District is particularly evident in total manufacturing payrolls. Although they increased substantially from 1946 to 1947, they were still nearly one-third below their 1944 level. The 1946 figure had been approximately 60 percent below 1944. The decline from 1944 to 1946 had been exclusively in the "war" manufacturing payrolls. Few, if any, other areas had experienced such declines; in fact, in most of them manufacturing payrolls had increased. All Twelfth District states except Utah and Idaho suffered these declines, with Washington and Oregon experiencing the most important of them. Manufacturing payrolls have, however, increased relatively more in the District since before the war than in the nation as a whole.

Another important reason for the smaller increase in total District income payments since 1944 is the smaller increase in District agricultural income—about 12 per-

TOTAL INCOME PAYMENTS TO INDIVIDUALS—TWELFTH DISTRICT, 1939-47
(amounts in millions)

	Arizona	California	Idaho	Nevada	Oregon	Utah	Washington	Twelfth District	United States
1939	$227	$5,047	$213	$ 84	$ 587	$243	$1,012	$ 7,413	$ 70,601
1940	237	5,606	232	92	633	265	1,100	8,165	75,852
1941	287	7,044	278	107	824	329	1,501	10,370	92,269
1942	445	9,315	419	207	1,193	527	2,211	14,317	116,433
1943	598	12,302	477	211	1,572	687	2,894	18,741	140,021
1944	582	13,472	587	206	1,636	635	3,203	20,321	151,217
1945	594	13,649	525	210	1,631	649	3,052	20,310	155,201
1946	631	15,164	595	239	1,753	696	3,122	22,100	171,200
1947	721	16,121	677	256	1,936	773	3,289	23,773	189,734
				Percent increase					
1939-47	218	219	218	205	230	218	225	221	169
1939-44	156	167	176	145	179	161	217	174	114
1944-47	24	20	15	24	18	22	3	17	25

Source: U. S. Department of Commerce.

cent, compared with the national increase of 36 percent. The large drop in fruit prices from 1946 to 1947 brought about a substantial decline in agricultural income in the latter year for California and Oregon. Agricultural income in the District is, however, relatively much further above its prewar level than in the nation.

In view of the great impact of the war upon the District, as shown by the increases in income payments from 1939 to 1944, it is important to note that with the exception of a slight decline from 1944 to 1945 income payments have continued to grow. An increase in peacetime activities, then, more than made up for the sharp declines in production for war. This was made possible by the expansion of trade and services and "nonwar" manufacturing associated with the continuing increase in population. The three Pacific Coast states have led the nation in population growth since 1939, with an increase of more than 40 percent. From 1944 to 1947 the increase was more than 10 percent.

Per capita income payments higher in the District than in the nation, but rising more slowly

Between 1939 and 1947 total income payments in the District rose 220 percent, compared with the 40-percent increase in population. Per capita income payments in the District, as shown in the accompanying table, rose more from 1939 to 1944 than in the nation, and less from 1944 to 1947. The over-all per capita income increase from 1939 to 1947 was actually less in the District than in the nation.

Ever since 1929, the first year for which the data are available, Twelfth District per capita incomes have been considerably higher than those for the country as a whole. In 1929 they were 20 percent higher, in 1939 they were 22 percent higher, and in the midst of the peak of wartime activity, 1943, they were 31 percent higher. Since then the differential has been declining, dropping to 20 percent in 1946 and 15 percent in 1947. The Pacific Coast states have been responsible for the narrowing of this differential. On the Coast, the expansion of income-generating activities has not kept pace with population growth.

Nevada, with the smallest total income payments, has the highest per capita income in the nation, $1,842, compared with second-place New York, the state with the largest total income payments, which has a per capita income of $1,781. North Dakota was next, with $1,678, followed by Connecticut with $1,671, and California was fifth, with a per capita income of $1,643.

Washington and Oregon show greatest effects of the war

Of all the states in the nation, it was Washington whose income payments were affected most by the war and preparation for war. From 1939 to 1944 income payments in Washington rose 217 percent, compared with the national increase of 114 percent and the District increase of 174 percent. But with the slackening of demand for aircraft and ships after the end of the war, Washington's income payments fell markedly—5 percent in the one year from 1944 to 1945. They recovered some in 1946 and again in 1947, to reach a figure 3 percent higher than in 1944. The effect of the war was somewhat less noticeable in Oregon, where income payments rose 179 percent from 1939 to 1944, fell only fractionally from 1944 to 1945, and were 18 percent higher in 1947 than in 1944. Both Washington and Oregon had experienced large drops in "war" manufacturing payrolls from 1944 to 1946, Washington's payrolls dropping 74 percent and Oregon's, 80 percent. But in those same two years, Washington's "nonwar" manufacturing payrolls rose only 15 percent against Oregon's 22-percent rise. Adding the over-all increase in 1947, then, shows Washington's total manufacturing payrolls down 41 percent from 1944 to 1947, and Oregon's down only 24 percent. On top of that, Washington has experienced a decline of 4 percent in government payrolls since 1944, while Oregon's government income payments have risen 27 percent. Again, agricultural income, which accounted in 1947 for about 11 percent of total income in both states, rose only 10 percent in Washington from 1944 to 1947, compared with Oregon's 20 percent. And this in spite of a 4-percent decline from 1946 to 1947 in Oregon, and a 1 percent gain in Washington.

Per capita income payments in Washington were 5 percent above national per capita income payments in 1947, while in Oregon they were 5 percent below. Although in both states they increased from 1946 to 1947, Washington's per capita income payments were still 8 percent below their high 1944 level, and Oregon's in 1947 just matched theirs of 1944.

Income payments in California

The changes that have occurred in California's income payments since 1939, although not so great as in the two states to its north, are nevertheless considerable. Total

PER CAPITA INCOME PAYMENTS—TWELFTH DISTRICT, 1939-47

	Arizona	California	Idaho	Nevada	Oregon	Utah	Washington	Twelfth District	United States
1939	$ 461	$ 741	$ 411	$ 767	$ 544	$ 443	$ 588	$ 657	$ 539
1940	473	805	440	836	579	480	632	711	575
1941	538	955	533	907	722	578	826	859	693
1942	749	1,185	801	1,580	1,028	881	1,152	1,120	870
1943	895	1,469	892	1,486	1,251	1,068	1,422	1,373	1,045
1944	977	1,558	972	1,401	1,252	1,057	1,522	1,451	1,145
1945	1,046	1,508	1,040	1,533	1,235	1,078	1,399	1,414	1,177
1946	1,645	1,574	1,133	1,770	1,220	1,076	1,326	1,451	1,213
1947	1,120	1,643	1,290	1,842	1,253	1,208	1,395	1,521	1,323
				Percent change					
1939-47	+143	+122	+214	+140	+130	+173	+137	+132	+145
1939-44	+112	+110	+136	+ 83	+130	+139	+159	+121	+112
1944-47	+ 15	+ 5	+ 33	+ 31	0	+ 14	— 8	+ 5	+ 16

income payments in California have been the second highest in the nation ever since 1942. They rose 6 percent from 1946 to 1947, which is considerably below the national increase, but stood at 219 percent above their 1939 level, while in the United States they were 169 percent above 1939. They had risen 167 percent from 1939 through the end of the war years, and continued to rise, gaining 20 percent from 1944 to 1947. The important factor in the smaller increase in California income payments than in national income payments from 1946 to 1947 is the sharp drop in fruit prices last year. Agricultural income in California, which formed 7 percent of total income in the state, dropped 12 percent in 1947.

California ranks fifth among all the states in per capita income payments. It had reached first place in 1944, was third in 1945 and again in 1946. Per capita income in California had fallen 3 percent from 1944 to 1945, but rose again the next year, and in 1947 was 5 percent above 1944. In 1947 it stood 22 percent higher than the national per capita income. In 1939 it was 37 percent higher, and the 1944 differential nearly matched that. Since 1944, California's per capita income has been declining relative to the nation's, as population in California has continued to increase relatively faster than in the nation.

Income payments in the intermountain States

Total income payments to individuals increased in 1947 in all these states, with Arizona and Idaho experiencing the largest gains—14 percent over 1946. Arizona, Nevada, and Utah had the largest gains in the District from 1944 to 1947. Among these states Idaho had experienced the greatest gains during the war, its total income payments rising 176 percent from 1939 to 1944, the third-largest gain in the District. Its 15 percent gain from 1944 to 1947 is noteworthy in view of the fact that from 1944 to 1945 its total income payments dropped 11 percent.

Per capita income payments in each state rose from 1946 to 1947, with Idaho experiencing the greatest gain (14 percent) in the District. Idaho is also the District leader in respect to per capita income increase since 1939, having increased 211 percent compared with the next-highest increase of 173 percent in Utah. From 1944 to 1947, Idaho had the fifth largest per capita income increase in the nation. This is a reflection of the increased farm income in the wheat-growing states of the Northwest. Idaho's population has increased only 1 percent since 1939 while its total income payments have risen 218 percent since then. In 1939 Idaho's per capita income was 24 percent below the nation's, but in 1947 it was only 2 percent below. Arizona's per capita income has remained in virtually the same relation to the nation's—15 percent below. Utah's per capita income is now only 9 percent below the nation's, compared with 18 percent below in 1939. Per capita income in Nevada, which in 1939 was 42 percent higher than in the nation, was 39 percent higher in 1947.

FISHERIES IN THE PACIFIC COAST STATES AND ALASKA

THIS is the first of a series of articles reviewing the developments in the commercial fisheries of California, Oregon, Washington, and Alaska in recent years. (Hereafter these fisheries, when considered as a unit, are referred to as Pacific area fisheries.) Commercial fisheries within these several areas differ with regard to the volume, value, composition, and utilization of the catch. Fisheries in each state and in Alaska have their special problems and require separate treatment. Some general issues pertain, however, to the industry in the whole area, and are treated in this introductory article.

Pacific area's share in fresh fish production

The Pacific area fisheries play a leading part in the general framework of the fishery industry of the United States and Alaska. In the period 1940-44, this area landed 50 percent of the total catch of fresh fish and shellfish, representing 40 percent of the total value. The production of shellfish in the area was, however, only 7 percent of the total quantity and value of the catch in the United States and Alaska. What little whaling is carried on in the United States waters is done in this area. The accompanying table shows the position of the three Pacific Coast states and Alaska in relation to each other and to the United States as a whole.

LANDINGS OF FISH AND SHELLFISH AND VALUE TO THE FISHERMEN, 1940-44 AVERAGES

	Landings (in millions of pounds—round weight basis)	Value (in thousands)
California	1,331	$27,100
Oregon	72	6,460
Washington	151	13,952
Alaska	596	16,901
Pacific area	2,150	64,413
All other states	2,194	99,680
Total—United States and Alaska	4,344	164,093
Pacific area as percent of total	49.5	39.3

Source: U. S. Department of the Interior, Fish and Wildlife Service, *Fishery Statistics of the United States* for 1940, 1941, and 1942, and various mimeographed reports on current fishery statistics.

Pacific area's share in canned fish and byproducts output

The Pacific Coast states and Alaska supply the bulk of the nation's leading canned fishery products and byproducts, as shown in the accompanying table. Thus during the 1942-46 period, four-fifths of the output of canned fish and shellfish was produced in the Pacific area.

VALUE OF CANNED FISHERY PRODUCTS AND BYPRODUCTS, 1942-46 AVERAGE
(in millions)

	Canned products	Byproducts	Total
California	$58.2	$24.9	$83.1
Oregon	11.2	.4	11.6
Washington	8.1	5.9	14.0
Alaska	52.0	3.1	55.1
Pacific area	129.5	34.3	163.8
All other states	34.3	27.3	61.6
Total—United States and Alaska	163.8	61.6	225.4
Pacific area as percent of total	79.0	55.7	72.7

This area produced over one-half of all byproducts of the fishery industry of the United States such as fish oil and meal, livers for vitamin production, and the like. Essentially the same relationship prevailed during the whole interwar period. Owing to the fall in the sardine catch in California during the past three years, the relative share of the Pacific area in the nation's production of canned fish and byproducts has presumably been somewhat reduced.

The Pacific area is the chief source of fishery products exported from this country. The United States average annual imports and exports of fishery commodities during the period 1942-46 were as follows (in millions):

	Edible products	Nonedible products	Total
Imports	$58.5	$24.7	$83.2
Exports	34.7	9.9	44.6

Exports of canned salmon, coming exclusively from the area under consideration, averaged $14.5 million during this period, and exports of canned sardines, of which the greater part was probably supplied by this area, averaged $13.9 million. These two items accounted for 82 percent of the value of all edible fishery products exported. A large portion of fish oils which form the bulk of nonedible products exports comes also from the Pacific area. Most of the imported fishery products, consisting of fresh and frozen fish and shellfish, come from Canada, Newfoundland, and Iceland, and are marketed in the eastern metropolitan areas of this country. Besides supplying the bulk of canned fish products for export, the Pacific Coast states and Alaska serve as the leading suppliers of these products within the country itself, and thus these products are an important favorable item in their interregional trade.

Some characteristics of the industry

The fishery industry of the Pacific area displays greatly varied sizes of enterprise. Large units produce the bulk of the pack of canned salmon, sardines, and tuna. Thus, for example, in 1947 about 180 salmon-canning plants were in operation in the Pacific Coast states and Alaska. Four leading packers, out of a total number of 120, operated 36 canneries and produced 32 percent of the total United States salmon pack of 5.6 million cases.[1] But because fishing grounds cover vast areas, and transportation costs of fresh fish are high, and capital investment in canneries is not unduly high, there are in the fishery industry of the Pacific area many medium and small units. Great demand and high prices for canned fish in recent years have led not only to the enlargement of producing facilities of various established companies, but also to the creation of many new medium- and small-size units. While the overwhelming majority of salmon canneries pack only salmon, most canneries in California are equipped to handle several varieties of fish, primarily sardines, tuna, and mackerel. Moreover, most of them have reduction installations for sardines and offal.

In the fishing phase of the industry small and medium enterprises prevail. In many cases fishing has a purely subsistence character. As a rule, the fishing enterprise is separated from the processing enterprise. Fishermen deliver fish to processors and wholesalers on the basis of a seasonal contract which sets the price of fresh fish in advance. Uneven delivery of fresh fish for their plants is perhaps the chief operational problem for the processors. To secure more regular delivery, to participate in the profits of the fishing end of the industry, and to have a stronger position in price bargainings with fishermen, some processors engage in financing of boat purchases and outfitting.

The prevailing method of remuneration for the crew and the boatowner is the system of shares, namely a prearranged system of sharing of proceeds of every fishing trip after the operating expenses have been met or of sharing expenses in cases of unsuccessful trips. In times of good catches and good prices for fresh fish this results in quite large income per fisherman, but when the "luck" or the particular species gives out, it may result in privation.[1]

Consumption and prices of fish

The domestic per capita consumption of commercial fish, both fresh and processed, between 1930 and 1947 averaged 10.2 pounds, edible weight, ranging between the peak of 12.0 pounds in 1936 and 8.2 pounds in 1943. Of this about 60 percent was fresh and frozen and about 40 percent was canned and cured fish. During the 1930's consumption of fish showed a rise. After a fall between 1942 and 1944 when the United States Government was a heavy buyer of fishery products, the civilian per capita consumption during the past three years has risen almost to the prewar level.[2]

The outstanding change in recent years in regard to fish consumption is the greatly increased consumption of frozen or packaged fish fillets. Improved techniques in preparing, preserving, transporting, and storing of frozen fish make it possible to market such fishery products in all inland areas of the country. Wartime scarcities of certain

[1] *Pacific Fisherman Yearbook 1948*, pp. 97-107.

[1] It is interesting to note that various Pacific area fisheries display marked nationality complexions. In the Pacific halibut fishery, which is a bottom line fishery, most fishermen are of Scandinavian, especially Norwegian, origin. Purse seine fishery in salmon, tuna, mackerel, and sardine fisheries is to a considerable extent in the hands of fishermen of Italian and Yugoslav (Dalmatian) birth or origin. Tuna live bait fishery, on the other hand, is mostly in the hands of fishermen of Portuguese origin.

[2] U. S. Department of Agriculture, Bureau of Agricultural Economics, "Supply and distribution of fishery products in the Continental United States, 1930-47," *The National Food Situation*, July-September 1948, pp. 19-40.

INDEX NUMBERS OF AVERAGE MONTHLY RETAIL PRICES OF SPECIFIED FOODS IN LEADING CITIES[1] IN THE UNITED STATES, 1935-48

(1935-39 average=100)

Year	Fresh and frozen fish	Meats	Dairy products	Eggs
1939	99.8	96.6	95.5	91.0
1940	106.7	94.4	101.4	93.8
1941	119.2	106.5	112.0	112.2
1942	160.0	122.5	125.4	136.5
1943	209.0	124.2	134.6	161.9
1944	209.6	117.9	133.6	153.0
1945	220.4	118.0	133.9	164.4
1946	240.6	150.8	165.1	168.8
1947	243.4	214.7	186.2	200.8
1948—Jan.-July	307.5	237.0	205.2	194.0

[1] 51 cities covered prior to February 1943, 56 cities thereafter.
Source: U. S. Department of Labor, Bureau of Labor Statistics.

foods and high meat prices during the past three years were important factors contributing to a wider spread of consumption of seafood.

It is interesting to note that prices of fresh and frozen fish, as shown in the table on page 81, have increased more in recent years than prices of meat, dairy products, or eggs, foods with which fishery products most directly compete. Fish prices rose much more during 1942 and 1943 than prices of these other commodities. Already in 1943 fish prices were more than 100 percent above the 1935-39 level, while in the same year meat prices were 24, dairy prices 35, and egg prices 62 percent above the same period. The causes for this course of fish prices are to be found in several factors. Price control for most fresh and frozen fish products fixed only margins that could be added to the net cost of fish, and most cost elements were on the increase. Available fish supplies were reduced and demand for fish products increased. After the abolition of price control in 1946 and during 1947 retail prices of fresh and frozen fish rose little while the prices of meat, dairy products, and eggs rose very sharply. But any rise in prices of these products, especially meat, has a tendency to increase the demand and thereby also the prices of fish. Thus, prices of fresh fish during the first seven months of this year rose sharply and were more than 200 percent above those of 1935-39. The seasonal effect of lower fish supply during the first half of the year should, however, not be forgotten (the seasonal factor operates in the opposite direction in the case of eggs and dairy products).

The rise in prices of canned fish, especially salmon, tuna, and sardines was very pronounced during 1941 and 1942. Through price control their prices were kept stable during the following three years, but after the lifting of price control they rose very sharply in 1946 and 1947 and the rise is continuing in 1948. The initial prices[1] of Alaska red salmon, the most important component of the annual salmon pack, were as follows (per case of 48 tall 1-pound cans):

1939	$ 8.60 - $ 9.00
1940	9.60
1941	13.40 - 13.60
1942	15.00
1943-45	15.00
1946	20.00 - 22.00
1947	22.65 - 24.50

Intensity of fishing effort

The total catch in a fishery depends on two factors, if continuous demand at satisfactory prices is assumed: namely, on the relative abundance of the respective species of fish, and on the fishing effort, that is to say on the amount of manpower, gear, and time employed. Because of the differences and changes in the types and size of fishing craft, in types and efficiency of gear, in distances of various fishing grounds from the landing ports, in refrigeration and transportation installations on fishing craft, in weather conditions prevailing during the fishing operations, and in many other factors, exact measurement of the fishing effort is extremely difficult if not impossible, save in a few cases such as halibut fishery. The tonnage of fishing vessels, the number of fishing boats, and the number of fishermen employed give, however, a rather close approximation to the degree of the intensity of fishing effort. All these factors increased rather steadily from 1928 to 1940 in all sections of the area under consideration, although there was a reduction during the early 1930's.

As we have up-to-date information for California, its data are used for illustration. The number of licensed fishermen in the state rose from 6,844 in 1928 to 9,255 in 1940. The total tonnage of fishing vessels increased during the same period from 10,281 to 29,295 tons, and the number of boats of all types from 2,087 to 2,566.[1] During the war there was a temporary reduction in the number of fishing craft and the number of fishermen, but, as in agriculture, reduced facilities and manpower were more intensively employed. High prices of fishery products during recent years have led to a large expansion in the number of fishing craft and the number of licensed fishermen, and along with this, in the amount of gear. The table shows the development of the first two factors from the 1939-40 season (April 1 to March 31 of the following year), to the season of 1946-47. The considerable reduction of larger vessels from 1940-41 to 1942-43 was due to the fact that many of these vessels were taken over by the Navy for patrol work.

COMMERCIAL FISHING FLEET AND COMMERCIAL FISHERMEN IN CALIFORNIA, 1939-40 TO 1946-1947

Season	Commercial fishing fleet: Under 40 feet	Commercial fishing fleet: 40 feet and over	Commercial fishing fleet: Total number of craft	Com'l fishing licenses
1939-40	2,253	857	3,110	8,724
1940-41	2,510	944	3,454	9,047
1941-42	2,331	871	3,202	9,344
1942-43	2,264	701	2,965	9,043
1943-44	2,929	797	3,726	11,804
1944-45	2,852	930	3,782	10,871
1945-46	3,103	1,042	4,145	11,747
1946-47	3,558	1,299	4,857	12,312
Percent increase, 1939-40 to 1946-47	58	52	56	41

Source: State of California, Department of Natural Resources, Division of Fish and Game, Bureau of Marine Fisheries, Fish Bulletin No. 67, *The Commercial Fish Catch of California for the Years 1945 and 1946*, 1947, pp. 32, 36.

It can be safely assumed that a considerable increase in the efficiency of boats and gear has also taken place during these years. The increase in the fishing effort is therefore presumably somewhat greater than shown by the relative increase in the number of fishermen and in the size of the fishing fleet. At the same time, according to a widespread view, the abundance of many species has been reduced, so that the same fishing effort has tended to yield smaller catches.

Recent changes in the industry

Changing conditions both in the productivity of various fisheries and in the demand for and marketing of fish products have produced considerable changes in recent years. Thus, for example, the demand for vitamins led to the utilization of livers and viscera of such fish as halibut

[1] *Pacific Fisherman Yearbook 1948*, p. 133. The initial price is defined as the "earliest price in each season at which a large percentage of the pack has been sold."

[1] Data from U. S. Department of the Interior, Fish and Wildlife Service, *Fishery Statistics of the United States*, annually.

and sablefish and improved the situation in this fishery. It also led to the development of a large shark fishery. The development of a large market for fish fillets led to a great increase in the catch of various types of rockfishes. The California fishing fleet which used to fish for cod in the Alaska waters has dropped this venture. On the other hand, the size of tuna operations off Latin America has been greatly expanded and explorations for the expansion of fishing operations over other areas of the Pacific Ocean are under way. The drastic fall in the sardine catch in California, and persistent high demand for canned fish products has apparently induced sardine fishermen to increase their catch of squid and anchovies, and sardine canners to can much more squid, anchovies, and also some herring. There has also been a great increase in the catch and canning of jack mackerel (until recently packed and marketed under the name of horse mackerel), which is a lower-grade substitute for Pacific mackerel. Albacore tuna which made a surprise appearance off the Oregon and Washington coasts in the late 1930's has developed in recent years into one of the most important fisheries in both states. This year albacore appeared in the waters of Southeast Alaska. The Pacific oyster which was extensively planted in Washington in the early 1930's has developed into an important fishery of that state.

These remarks indicate quite clearly that the fishery industry of the Pacific area has remained a highly dynamic and, one could almost say, an exciting industry.

The issue of conservation

Conservation is an issue of basic importance confronting the whole fishery industry of the Pacific area, as signs of depletion are evident in many fisheries. Depletion is basically caused by overfishing, although, in the case of salmon in the Pacific Coast states, the contraction of suitable spawning grounds (due to pollution of water, sliming of river beds, building of power dams, etc.) contributed materially to the depletion. In order to compensate for lower yields as a result of progressive depletion of fish resources, the fisheries industry has expanded the area of fishing grounds effectively exploited and tapped less valuable fish species. However, to catch the same amount of fish it has become necessary to expand the fishing effort, namely, to use more gear, more time, and/or more manpower. This has resulted in increased costs per unit of product.

The latest case of depletion of a large and exceedingly important Pacific fishery which attracted widespread attention is that of the California pilchard or sardine. Between the seasons of 1941-42 and 1944-45 the sardine catch averaged 526,685 tons. In the 1945-46 season the catch fell to 396,090, in 1946-47 to 227,716, and in 1947-48 season to 110,237 tons. The reasons for the "disappearance" of the sardine are not yet established. Most probably a series of factors was responsible for this development, but two of these are prominently mentioned by experts: great intensity in the sardine fishery during the past 10 to 15 years and changed hydrographic conditions unfavorable to sardine propagation. More will be said about the sardines in the article on California fisheries.

Depletion of various species has already led to the adoption of rather strict conservation policies in certain fisheries, e.g., Pacific halibut, Frazer River sockeye salmon, Alaska salmon fisheries, in which the total catch and often even the fishing operations of individual boats throughout the season are strictly regulated. Regulated exploitation which takes from the sea only the net annual increment of the individual fishery seems to be the only feasible policy of exploitation of these exhaustible, but renewable, natural resources. The important point is, however, to inaugurate such a policy before the depletion of a fishery has gone too far, as the process of building up a badly depleted fishery is long and tedious and causes great hardship to the fishing industry.

Correction: On page 64 of the August 1948 MONTHLY REVIEW, the figure 14 percent appears on the sixth line of the section entitled *Increases in maximum reserve requirements*. The correct figure is 18 percent.

BUSINESS INDEXES—TWELFTH DISTRICT[1]

(1935-39 average = 100)

Year and Month	Industrial production (physical volume)[2]								Total mf'g employment[5]	California factory payrolls[5]	Carloadings (number)[2]	Dep't store sales (value)[2]	Dep't store stocks[3,6] (value)	Retail food prices[4,7]
	Lumber	Petroleum[3,4] Crude	Petroleum[3,4] Refined	Cement	Lead[4]	Copper[4]	Wheat flour[4]	Electric power						
1929	148	129	127	110	171	160	106	83	.....	111	135	112	134	132.0
1930	112	101	107	96	146	106	100	84	.....	93	116	104	127	124.8
1931	77	83	90	74	104	75	101	82	.....	73	91	92	110	104.0
1932	46	78	84	48	75	33	89	73	.....	54	70	69	86	89.8
1933	62	76	81	54	75	26	88	73	.....	53	70	66	78	86.8
1934	67	77	81	70	79	36	95	79	.....	64	81	74	83	93.2
1935	83	92	91	68	89	57	94	85	88	78	88	86	88	99.6
1936	106	94	98	117	100	98	96	96	100	96	103	99	96	100.3
1937	113	105	105	112	118	135	99	105	112	115	109	106	108	104.5
1938	88	110	103	92	96	88	96	102	96	101	96	101	101	99.0
1939	110	99	103	114	97	122	107	112	104	110	104	109	107	96.9
1940	120	98	103	124	112	144	103	122	118	134	110	119	114	97.6
1941	142	102	110	164	113	163	103	136	155	224	127	139	137	107.9
1942	141	110	116	194	118	188	104	167	230	460	137	171	190	130.9
1943	137	125	135	160	104	192	115	214	306	705	133	203	174	143.4
1944	136	137	151	128	93	171	119	231	295	694	140	223	179	142.1
1945	109	144	160	131	81	137	132	219	229	497	134	247	183	146.3
1946	130	139	148	165	73	109	128	219	175	344	135	305	238	167.4
1947	141	147	159	193	98	163	133	256	184	401	142	330	300	200.3
1947														
June	134	147	156	186	105	166	138	251	182	394	141	334	285	194.8
July	140	148	156	184	90	168	126	252	181	397	141	331	273	196.5
August	142	148	166	185	96	164	125	252	183	407	141	352	251	197.9
September	143	147	162	193	98	168	123	259	184	413	139	345	264	206.6
October	148	148	166	187	96	141	133	260	187	419	141	340	293	204.8
November	154	150	163	205	107	151	133	263	188	421	143	348	327	209.4
December	162	149	160	215	98	161	116	275	188	423	144	361	353	213.0
1948														
January	144	150	166	218	106	163	114	278	187	418	141	348	360	215.4
February	152	150	166	207	112	166	104	283	187	417	130	327	377	213.0
March	148	151	164	216	109	157	101	274	187	406	131	339	388	211.6
April	124	152	166	216	110	165	116	275*r*	184	396	130	362	386	216.0
May	122	152	172	202	102	165	108	263*r*	180	406	123	364	347	217.6
June	128	153	168	196	106	165	115	266	185*p*	424	134	372	335	216.6
July	138	152	167	202	.....	.....	123	284	190*p*	439	137	365	328	218.1

BANKING AND CREDIT STATISTICS—TWELFTH DISTRICT

(amounts in millions of dollars)

Year and month	Condition items of all member banks[8]				Member bank reserves and related items[9]					Bank debits index 31 cities[4,12] (1935-39 = 100)[2]
	Loans and discounts	U.S. Gov't securities	Demand deposits adjusted[10]	Total time deposits	Reserve bank credit[11]	Commercial operations[11]	Treasury operations[11]	Coin and currency in circulation[11]	Reserves	
1929	2,239	495	1,234	1,790	− 34	0	+ 23	− 6	175	146
1930	2,218	467	1,158	1,933	− 16	− 53	+ 89	+ 16	183	126
1931	1,898	547	984	1,727	+ 21	− 154	+ 154	+ 48	147	97
1932	1,570	601	840	1,618	− 42	− 175	+ 234	+ 30	142	68
1933	1,486	720	951	1,609	− 2	− 110	+ 150	− 18	185	63
1934	1,469	1,064	1,201	1,875	− 7	− 198	+ 257	+ 4	242	72
1935	1,537	1,275	1,389	2,064	+ 2	− 163	+ 219	+ 14	287	87
1936	1,682	1,334	1,791	2,101	+ 6	− 227	+ 454	+ 38	479	102
1937	1,871	1,270	1,740	2,187	− 1	− 90	+ 157	− 3	549	111
1938	1,869	1,323	1,781	2,221	− 3	− 240	+ 276	+ 20	565	98
1939	1,967	1,450	1,983	2,267	+ 2	− 192	+ 245	+ 31	584	102
1940	2,130	1,482	2,390	2,360	+ 2	− 148	+ 420	+ 96	754	110
1941	2,451	1,738	2,893	2,425	+ 4	− 596	+1,000	+ 227	930	134
1942	2,170	3,630	4,356	2,609	+ 107	−1,980	+2,826	+ 643	1,232	165
1943	2,106	6,235	5,998	3,226	+ 214	−3,751	+4,486	+ 708	1,462	211
1944	2,254	8,263	6,950	4,144	+ 98	−3,534	+4,483	+ 789	1,706	237
1945	2,663	10,450	8,203	5,211	− 76	−3,743	+4,682	+ 545	2,033	260
1946	4,068	8,426	8,821	5,797	+ 9	−1,607	+1,329	− 326	2,094	298
1947	5,363	7,243	8,928	6,006	− 302	− 443	+ 630	− 206	2,202	326
1947										
July	4,755	7,375	8,366	5,904	− 234	− 213	+ 381	− 23	1,963	305
August	4,879	7,353	8,462	5,903	− 48	+ 78	+ 124	− 23	2,078	323*r*
September	4,997	7,364	8,600	5,924	− 87	− 85	+ 172	− 10	2,095	325
October	5,158	7,361	8,722	5,964	+ 23	− 39	+ 35	− 16	2,137	346
November	5,240	7,361	8,797	5,922	− 4	0	+ 33	+ 3	2,130	344
December	5,363	7,243	8,928	6,006	− 25	− 5	+ 49	− 18	2,202	365
1948										
January	5,413	7,264	8,854	6,021	+ 14	+ 48	− 253	− 113	2,113	352
February	5,467	7,021	8,495	6,063	+ 20	+ 153	− 244	− 2	2,045	354
March	5,510	6,945	8,452	6,044	− 49	+ 29	− 19	− 37	2,066	347
April	5,509	6,943	8,461	6,019	+ 9	− 75	+ 29	− 17	2,048	353
May	5,569	6,883	8,445	6,008	+ 30	− 14	+ 45	+ 26	2,068	342
June	5,598	6,859	8,464	6,057	− 14	− 50	+ 28	− 13	2,061	348
July	5,640	6,816	8,556	6,010	+ 15	− 38	+ 43	− 11	2,075	354
August	5,743	6,712	8,555	6,005	− 23	+ 1	+ 12	+ 17	2,065	356

[1] All monthly indexes but wheat flour, petroleum, copper, lead, and retail food prices are adjusted for seasonal variation. Excepting for department store statistics, all indexes are based upon data from outside sources, as follows: Lumber, various lumber trade associations; Petroleum, Cement, Copper, and Lead, U.S. Bureau of Mines; Wheat flour, U.S. Bureau of the Census; Electric power, Federal Power Commission; Manufacturing employment, U.S. Bureau of Labor Statistics and cooperating state agencies; Factory payrolls, California State Division of Labor Statistics and Research; Retail food prices, U.S. Bureau of Labor Statistics; and Carloadings, various railroads and railroad associations. [2] Daily average. [3] Revised series. Data for earlier periods, by months, available on request. [4] Not adjusted for seasonal variation. [5] Excludes fish, fruit, and vegetable canning. Factory payrolls index covers wage earners only. [6] At retail, end of month or year. [7] Los Angeles, San Francisco, and Seattle indexes combined. [8] Annual figures are as of end of year; monthly figures as of last Wednesday in month or, where applicable, as of call report date. [9] End of year and end of month figures. [10] Demand deposits, excluding interbank and U.S. Gov't deposits, less cash items in process of collection. Monthly data partly estimated. [11] Changes from previous month or year. [12] Debits to total deposit accounts, excluding interbank deposits. *p*—preliminary. *r*—revised.