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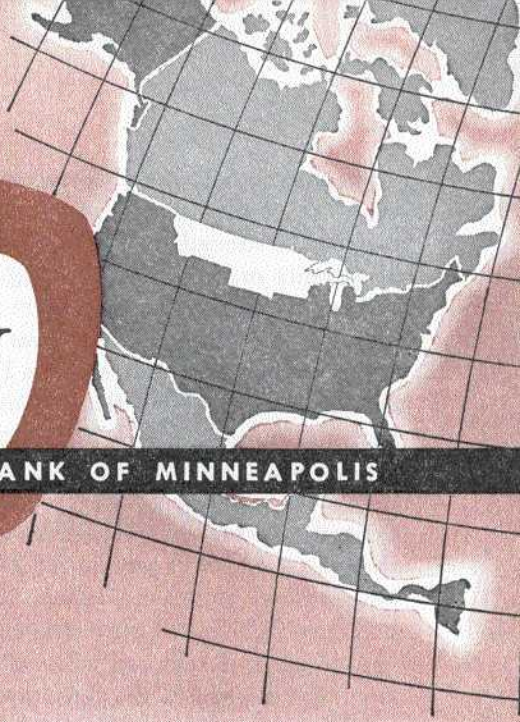


Monthly Review

OF THE FEDERAL RESERVE BANK OF MINNEAPOLIS

Economy in testing phase

Most measures of business activity, both nationally and in the Ninth district, continued to show moderate advances during the first quarter of 1960. Nevertheless, economic activity may have eased up somewhat following the upward thrust associated with resumption of steel production.

Gross National Product in the first quarter is still estimated at close to a record $500 billion. Industrial commodity prices have continued relatively stable in recent months and inflationary fears are not nearly as dominant as in late 1959. The recently announced 14 percent estimated increase in 1960 expenditures for new plant and equipment over the previous year is a definite plus factor for economic activity in the months ahead. It is also significant that new orders for durable goods have been rising in recent weeks. Inventory accumulation has been at a rate both rapid and probably unsustainable for very long—especially in the steel and automobile industries.

The Federal Reserve Board's seasonally adjusted index of industrial production for February was 8 percent higher than a year earlier but it was down 1 percent from the record output in January. Also, housing starts in February decreased further. The labor market strengthened in February with the unemployment rate declining to the lowest level since late in 1957; however, average weekly hours in manufacturing edged off slightly. Total personal income increased only slightly in January and was virtually unchanged in February.

In this issue:

Altogether, recent developments indicate that the economy may be in a testing phase regarding the relative strength of the forces of further overall advance or of decline.

In the Ninth district, cash farm income figures continued to register on the minus side from year earlier comparisons, with a minus 11.6 percent for the month of January. Bank debits in February were up 14 percent, nonagricultural employment showed a 2.2 percent gain, and department store sales were on the plus side in both January and February. Total personal income in Minnesota showed a 3.1 percent gain during January and preliminary data indicated about the same increase in February from year earlier estimate.

A glance at the accompanying table shows, however, that in spite of the generally favorable current showing in the Ninth district, many of the district economic series have not increased as much as the comparable series for the country as a whole, a phenomenon observed since about the middle of 1959.

ECONOMIC INDICATORS IN JANUARY 1960
IN PERCENT CHANGE FROM JANUARY 1959

	9th District	U. S.
Employment	+ 2.0	+ 3.4
Unemployment (insured)	—19.0	—23.9
Department store sales (adj.)	+ 6.3	+ 6.5
Building permits (value)	— 6.7	—
Electric power production	+ 4.0	—
Personal income	+ 3.1[1]	+ 6.4
Cash farm income	—11.6	— 6.7
Bank debits	+ 3.7	+ 8.9
Loans (all member banks)	+12.5	+11.9
Demand deposits (all member banks)	— 2.0	— 0.7
Time deposits (all member banks)	+ 2.0	— 0.1

[1]Minnesota only.

On the district banking scene, continued loan growth as well as seasonal or more-than-seasonal deposit losses have contributed to a tightening reserve position for city and country banks since the first of the year.

1959 farm income patterns spending

In the Ninth district, where agriculture plays an important role, the spendable income of farmers is of crucial importance to the business community. The spending stream for agriculture now and for the next few months was to a great extent determined in calendar year 1959. It is therefore of interest at this time to look at what happened to farm income in 1959. But, first what constitutes income to agriculture?

Farmers receive cash income in two forms: *cash receipts* from the sale of farm products and *direct government payments* under a number of programs. They also receive some *nonmoney incomes* in the form of farm produce consumed in the home and the rental value of the farm home (items paid for out of salaries or wages by nonfarm families). These three sources contribute to gross income. Production expenses of course act as an offset. Production expenses include both *cash spending for production items* and *depreciation* (a charge for capital used up during the year). Farmers' realized net income therefore is equal to money and nonmoney gross income less production expenses. Finally, the *net change in value of inventories* must be included to complete the accounting process and yield a figure representing agriculture's **total net income**—exclusive of off-farm income.

Although estimates of **total net income** to agriculture will not be available for some months it is possible to make an estimate of agriculture's **net cash income** mainly on the basis of available data. Net cash income differs from total net income in three important respects. First, provisions have not been made for depreciation expense. Second, nonmoney income (the value of products consumed in the home and the rental value of farm

dwellings) is not included. These two nonmoney income items usually account for about 7 percent of total net farm income in the district. And finally, net cash income does not include changes in the valuations of farm inventories.

Thus the net cash income estimate may be most helpful in appraising the size of the spending stream from agriculture because it omits depreciation and nonmoney incomes which do not, in a practical sense, alter the spending stream of farmers. The net cash income concept also excludes changes in inventory valuation which do not typically influence the immediate spending stream.

District cash receipts from farm marketings decline in 1959

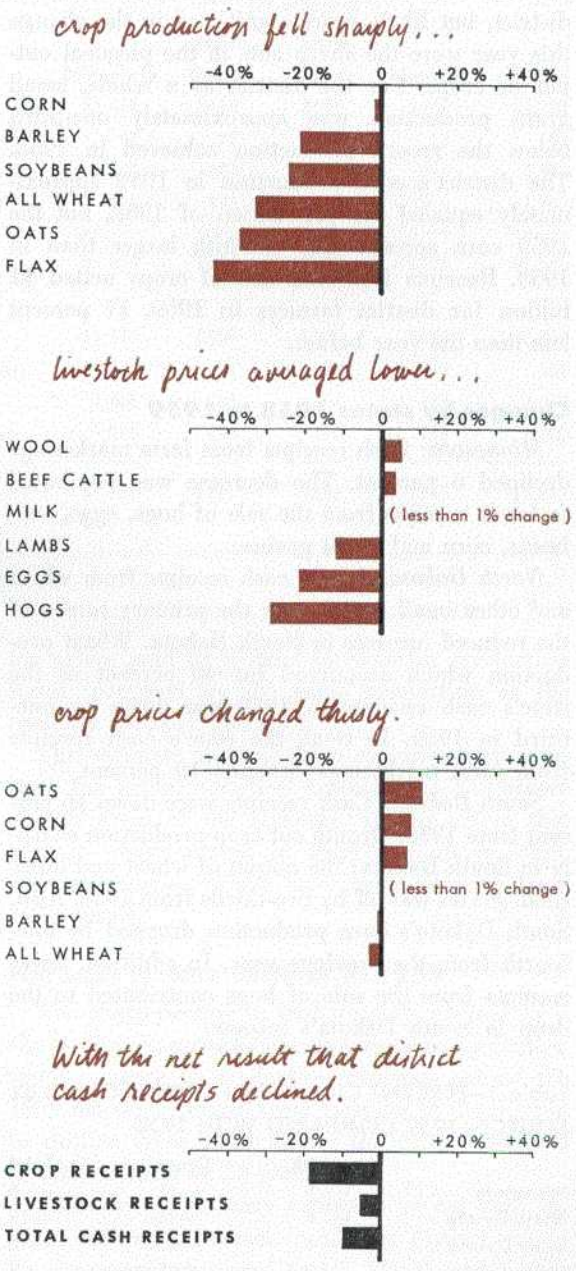
Produce from Ninth district* farms brought $2.9 billion in the market place last year, according to U. S. Department of Agriculture estimates. Cash receipts in 1959 were 10 percent below the record $3.2 billion receipts of 1958, but slightly above the level received in 1957. Drouth and lower prices, particularly for hogs, poultry products and lambs, accounted for the 1958 to 1959 decline in cash receipts. Drouth struck the Dakotas the sharpest blow, while the effects of lower prices for hogs and eggs were most sharply felt in Minnesota.

Livestock and livestock product sales accounted for $1.9 billion of the district farmers' cash receipts from marketings in 1959; this was 5 percent below the livestock receipts of 1958. Increased marketings, particularly of hogs and poultry products, depressed prices and cash receipts.

Livestock and livestock product sales have increased in relative importance as a source of cash receipts to the district since 1956. The livestock component of total farm product sales amounted to 57 percent of total sales in 1956; it increased to 60 percent in 1957, and up to 61 percent in 1958. The 1959 sales of livestock and livestock products accounted for 66 percent of the district's

*Figures based on the four full states of Minnesota, North Dakota, South Dakota, and Montana.

Ninth district's total cash income picture: 1959 compared with 1958



cash receipts, a jump of 5 percentage points. This sharp increase in part reflects an increase in the physical volume of livestock production in the district, but likely more significant in the change this year were the sharp cuts in the physical output of crops. For the district as a whole, small grain production was approximately one-third below the record production achieved in 1958. The district's corn production in 1959 approximately equaled the production of 1958, but the 1959 corn acreage was one-fifth larger than in 1958. Receipts from the sale of crops netted $1 billion for district farmers in 1959, 17 percent less than the year before.

Changes by states 1958 to 1959

Minnesota: Cash receipts from farm marketings declined 6 percent. The decrease was attributed to lower receipts from the sale of hogs, eggs, soybeans, corn and small grains.

North Dakota: Lower cash receipts from wheat and other small grains were the primary causes of the reduced incomes in North Dakota. Wheat production which accounted for 40 percent of the state's cash receipts in 1958 was down by one-third in 1959. In total, the state's cash receipts from farm marketings declined 19 percent.

South Dakota: Cash receipts were down 16 percent from 1958. Drouth cut crop production sharply in South Dakota; the output of wheat and other small grains was off by two-thirds from 1958. Also, South Dakota's corn production dropped by one-fourth from the previous year. In addition, lower receipts from the sale of hogs contributed to the drop in South Dakota's income.

Table 1—PERCENT CHANGE IN CASH RECEIPTS BY SOURCE; 1959 COMPARED WITH 1958

	Livestock	Crops	Total
Minnesota	— 5	—11	— 6
North Dakota	— 4	—26	—19
South Dakota	— 4	—43	—16
Montana	—10	+ 5	— 3
Ninth District	— 5	—19	—10

Montana: Total cash receipts from farm marketings were off 3 percent; this was mainly caused by smaller receipts from the sale of cattle and calves.

Government payments decline slightly

Direct government payments to district farmers in 1959 made under the soil bank program, the agricultural conservation program, the wool program, and the Great Plains conservation program totaled $103 million in 1959, $4 million less than the payments made in 1958. Soil bank payments declined $16 million between 1958 and 1959 with the termination of the acreage reserve program. Payments to district farmers under the wool program increased from $2 to $14 million. This increase occurred without change in the legislation; it was primarily attributable to a hold-over of the 1957 wool crop into the 1958 marketing season. Thus, two wool crops were marketed during the 1958 marketing season for which payments were made in calendar year 1959.

Table 2—GOVERNMENT PAYMENTS TO NINTH DISTRICT* FARMERS BY PROGRAMS

	1958	1959**
	(millions)	
Agricultural conservation program	$ 21	$ 21
Sugar program	6	5
Wool program	2	14
Soil bank program (acreage and conservation reserve)	78	62
Great Plains program	***	1
Total	$107	$103

*Includes only four full states.
**Estimated.
***Less than $.1 million.

Government payments to Minnesota farmers dropped $11 million between 1958 and 1959; this drop was explained by the termination of the acreage reserve portion of the soil bank program.

Direct government payments to farmers in other district states increased during the same period; the increases were $4 million in North Dakota, $1 million in South Dakota, and $2 million in Montana. The western district states were much less affected by the cessation of the acreage reserve program than was Minnesota.

Production expenses

Cash production expenses increased approximately 1 percent during 1959, based on the average index of prices paid for production items which increased from 264 to 266 (1910-14=100). Farm produced components of the production costs, for example, replacement livestock and feed, exhibited declines in 1959, while the other items such as farm machinery, motor vehicles, building materials, interest charges, taxes and wages increased.

Cash production expenses presented in table 3 were estimated for 1959 on the basis of the assumptions that the pattern of production expenses remained unchanged from 1958. And, second that the prices paid by district farmers for production items increased by the same proportion as the national average increase.

This estimate of production expenses may overstate the actual situation especially in the severe drouth areas of the Dakotas. To the extent that acreage abandonment in 1959 was above 1958, harvest expense would have been reduced from 1958 levels.

Table 3—FARM CASH PRODUCTION EXPENSES* IN THE NINTH DISTRICT**

	1958	1959***
	(millions)	
Minnesota	$ 876	$ 885
North Dakota	331	334
South Dakota	360	363
Montana	216	218
Total	$1,783	$1,800

*Excludes depreciation expense.
**Includes only the four full states.
***Estimated.

Table 4—CASH RECEIPTS, GOVERNMENT PAYMENTS, PRODUCTION EXPENSES AND NET CASH INCOME

(in millions)

1958	Minnesota	North Dakota	South Dakota	Montana	District
Cash receipts	$1,468	$658	$685	$441	$3,252
+Government payments	42	27	25	13	107
=Total cash	1,510	685	710	454	3,359
—Production expenses*	876	331	360	216	1,783
Net cash	$ 634	$354	$350	$238	$1,576
1959 Estimated					
Cash receipts	$1,374	$534	$578	$428	$2,914
+Government payments	31	31	26	15	103
=Total cash	1,405	565	604	443	3,017
—Production expenses*	885	334	363	218	1,800
Net cash	$ 520	$231	$241	$225	$1,217

*Cash production expenses include only current expense; depreciation of capital equipment is not included.

Net cash income declines in 1959

The sharp decline in cash receipts abetted by a slight drop in government payments and a further small increase in production expenses caused the 1959 net cash income from farming in the district to decline from 1958 levels; the drop amounted to $359 million or 23 percent.

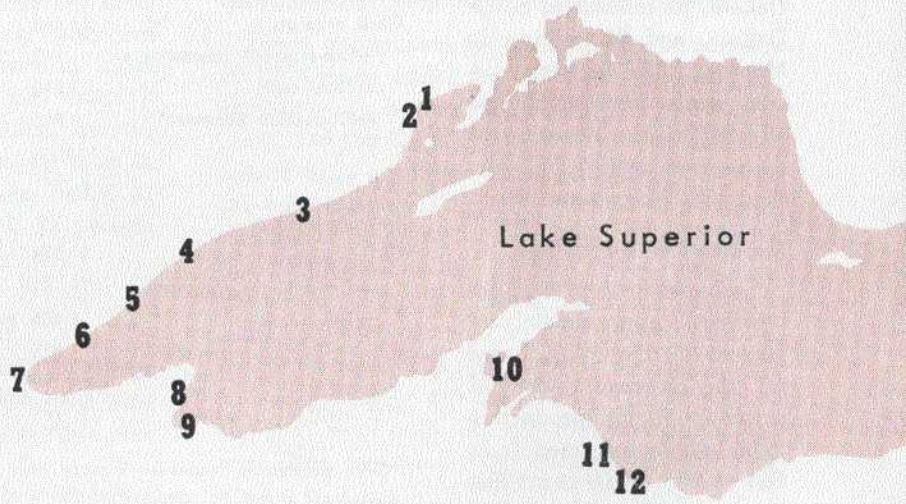
Thus the preliminary estimates of net cash income indicate decreases in all four district states; the decreases amounted to 18, 35, 31 and 5 per-

Continued on page 12

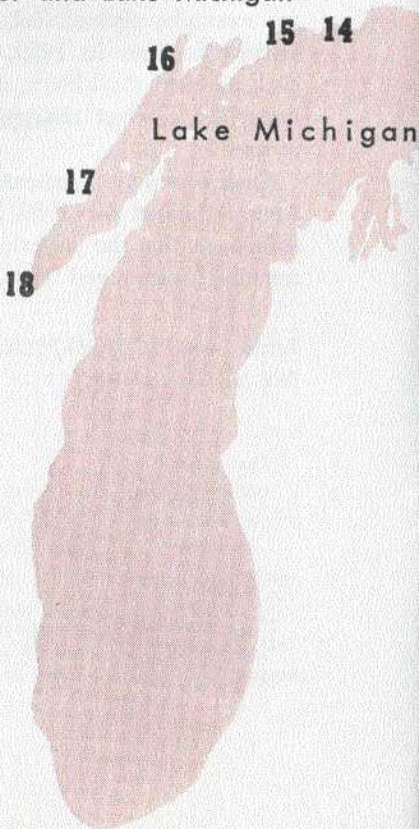
Seaway and the Ninth district economy

Since the days of early settlements, the St. Lawrence River and Great Lakes have served as a water route to the interior of the United States. Now, however, the construction of a twenty-seven foot channel for the first time has opened Great Lakes ports to large ocean vessels. Direct ocean transportation between the interior of the nation and foreign ports has, in effect, brought the regions served by Great Lakes ports closer to such consuming markets as Western Europe, West Indies and South America. At the same time, it has also opened the markets in this region to the competition of more foreign products.

The movement of commodities during the first season of the St. Lawrence Seaway may be taken as an indication of changes that are taking place in the flow of commerce as this waterbourne route is integrated into the regional, national and world transportation network. Although the adjustments in the movement of commerce are expected to extend over several decades, even now it is possible to gain a glimpse of the influence this cheaper transportation route may have on the economy adjacent to the Great Lakes.



Ninth district ports on Lake Superior and Lake Michigan



	Port	1957 Shipments 000 tons	
1	Port Arthur	7,733	(30%)
2	Fort William	2,921	
3	Grand Marais	—	
4	Taconite Harbor	3,561	(100%)
5	Silver Bay	3,640	(100%)
6	Two Harbors	19,017	(100%)
7	Duluth-Superior	54,015	(92%)
8	Bayfield	—	
9	Ashland	3,859	(100%)
10	Keweenaw Waterway	1	
11	Presque Isle	4,717	(100%)
12	Marquette	403	(99%)
13	Sault Ste. Marie	18	
14	Port Inland	4,569	
15	Manistique	184	(17%)
16	Escanaba	6,552	(100%)
17	Menominee	—	
18	Green Bay	47	

Figures in ( ) = percent iron ore.

Influence of Seaway on port cities

Naturally, the first visible economic activity in conjunction with the Seaway has taken place at Great Lakes ports. At leading ports, many preparations were made in anticipation of the arrival of larger ocean vessels, and much is still left to be done before these vessels can be loaded to the maximum draft of 27 feet. The deepening of channels and harbors requires extensive dredging. In fact, it has been estimated that more cubic yards of earth and rock will be removed in these projects than were excavated in the entire United States portion of the St. Lawrence seaway.[1] Although facilities for the handling of bulk cargo had been developed to a very high degree of efficiency in interlake transportation, some modifications were necessary to accommodate the larger ocean vessels. At many ports it was imperative to build new facilities for the handling of general cargo. The total of expenditures at Great Lakes ports and at interconnecting channels has been estimated at $425 million[2] which is nearly three and one-half times the $130 million spent by the United States government for the construction of the United States portion of the Seaway itself.

Altogether the Seaway has added 4,649 miles of new 'coastline' to the United States, and more than a fourth of this is in the Ninth district on Lake Superior. In this district, there are seven principal ports on Lake Superior and three on Lake Michigan. On the accompanying map, these ports and a number of minor ones are plotted to depict their location.

To date, the major preparations made for the arrival of deep-draft ocean vessels in this district have been at the Duluth-Superior port. Minor preparations are being made at some of the other ports. One of these is the city of Ashland, Wisconsin that has purchased the foundation of a former ore dock and plans to build on it a dock for the handling of general cargo. At other district port cities in Upper Michigan general harbor improvements have been scheduled for this year and as general cargo movement expands on the Great Lakes, the essential facilities will be built.

An idea of the economic activity that has grown out of the preparation of a major Great Lakes port to accommodate ocean shipping may be gained by a brief description of the development undertaken at Duluth and Superior. Some modifications were necessary in the bulk cargo facilities. Slips alongside a number of grain terminal elevators were dredged deeper so ocean vessels can be loaded to the full seaway depth. Higher loading spouts had to be installed on terminal elevators to accommodate ocean vessels with holds extending 36 feet above the water level whereas in former years the maximum height of vessels calling at this port was 28 feet. Highspeed platform truck dumpers were installed at two terminal elevators to handle a rapidly growing volume of grain shipped by truck, and new railroad car dumpers were installed to speed up the receiving of grain by rail.

The efficient facilities long in use at the Duluth-Superior port for the handling of bulk cargo were in marked contrast to the meager, inefficient equipment available for the handling of general cargo. Nearly all of the cargo handled before the opening of the Seaway was of such bulk items as iron ore, grain, coal and limestone.

Interested citizens in Duluth spearheaded the promotion of port facilities for general cargo. The

[1] Wall Street Journal, March 3, 1959
[2] Ibid.

Seaway Port Authority of Duluth was established to supervise the construction and to manage terminal facilities for general cargo as well as to promote the movement of both bulk and general cargo through the port. A public marine terminal has been under construction at Duluth. The first of three phases of the terminal is completed. A 180,000 square foot transit shed and 54,000 square foot warehouse, heated and sprinkler controlled, is equipped with proven cargo handling equipment for quick loading and unloading of vessels. This includes two 90 ton gantry cranes which, in tandem, have a lifting capacity of 180 tons; the largest capacity on the Great Lakes. The pier will accommodate four ships simultaneously.

Warehouse facilities were designed for storage of cargo during the closed navigation season as well as for goods in transit. The interlake navigation season at the Duluth-Superior harbor averages about 8 months. The earliest opening of navigation on record was March 26, 1942, and the latest was May 15, 1882. The average opening date falls on April 22. The earliest closing occurred on November 15, 1880, and the latest on December 22, 1909, with the average on December 10.

The construction cost of the entire terminal has been estimated at $40 million. The first phase entailed the expenditure of approximately $10 million which was financed by public funds. The city of Duluth has assumed $1 million; St. Louis county, $4 million, and the state of Minnesota, $5 million.

The construction of the two additional phases of the terminal is planned when the movement of general cargo has risen to a sufficient volume to warrant it. The entire plan includes eight closed and two open berths which will provide space to berth ten ships at one time in a single and compact terminal.

In addition to these facilities, Duluth has been selected as the site for a private marine terminal in anticipation of a rapid growth of commerce in the large region served. Some preliminary work has been done by the International Duluth Seaport corporation, composed of a group of American, Canadian and English investors, to construct a private marine terminal to complement the public facilities by providing grain elevators, bulk liquid storage tanks, bonded warehouses and office buildings. If the corporation undertakes the building of these terminal facilities, Duluth-Superior will have the sole Great Lakes port with facilities partly financed by private capital.

First season's activity at Duluth-Superior port

Commerce at the Duluth-Superior port during the first season of the St. Lawrence Seaway led to mixed feelings. The export of grain to overseas ports exceeded expectations of most men engaged in the grain handling business. On the other hand, the movement of general cargo, both imports and exports, was disappointing.

The opening of the Seaway added a considerable volume of foreign commerce to the total handled at this port, although the largest volume continued to be in domestic commerce. The foreign commerce at the Duluth-Superior port fortunately offset much of the decline in domestic commerce due to the termination of iron ore shipments during the 116 day steel strike. During the 1959 navigation season, the 4,912 vessels which arrived and departed from this harbor were 204, or 4 percent less than the number in 1958. The increased employment and income derived from foreign commerce in these port cities offset, in a large measure, the loss sustained in domestic shipping.

The 1959 navigation season on the Great Lakes was opened on April 18 and closed on December 23, extending over a period of 250 days. In this interim, 235 ocean vessels (approximately 20 percent of all ocean vessels entering the Seaway) either delivered or picked up cargo at the Duluth-Superior port. Only two vessels were registered under the United States; the others were registered under seventeen different nations.

The volume of foreign commerce was of a type

quite similar to the domestic commerce. The tonnage received at the port continued to be far below the total shipped. In 1958, the receipts of domestic commerce at the Duluth-Superior port aggregated 4,875,000 short tons. The principal tonnage consisted of coal, limestone, cement, clinkers and salt, petroleum products, and steel products. The receipts of foreign commerce totaled only 166,000 tons, over half consisted of grain from Canadian ports. In 1959 the receipts of domestic commerce totaled 5,459,000 tons with the same commodities received in the former year constituting the bulk of the tonnage. The receipts of foreign commerce totaled 143,000 tons. Of the latter volume 45,000 tons was received from overseas ports by way of the Seaway; approximately 33,000 tons was bulk and 12,000 was general cargo.

Domestic shipments from the Duluth-Superior port in 1958 totaled 26,778,000 short tons. The two principal commodities were iron ore and grain. Foreign shipments totaled 2,669,000 tons which consisted largely of iron ore and grain shipments to Canadian ports. In 1959 a total of 22,568,000 tons were shipped in domestic commerce and 3,310,000 tons in foreign. Of the latter volume 2,488,000 was dispatched directly to overseas ports on the Seaway route; nearly 2,481,000 tons was bulk and 7,000 tons was general.

The largest volume of exports, by far, consisted of grain. A large number of ocean vessels came into this port without cargo to load grain for delivery to foreign ports. By the close of the season, 71.7 million bushels had been exported directly to overseas ports (Europe, West Indies and South America) as compared with only 641,070 bushels exported directly to Europe in 1958. One ocean vessel alone, a Danish ship christened the Asia, loaded 639,000 bushels of grain which was almost equal to the total exported by 12 small tramp vessels through the 14-foot St. Lawrence canal system in 1958.

In addition to the grain exported directly to overseas ports, 13.9 million bushels were exported to Canada and 63.8 million bushels were shipped in domestic commerce, making a grand total of 149.3 million bushels. The first season of the Seaway established a record for a peacetime economy. The all-time record was established at this port toward the end of World War II in 1945, when 169 million bushels were shipped. This compares favorably with other peak years in the movement of grain — 1949 with 143 million bushels, 1951 with 129 million and 1956, with 126 million.

General cargo exports from the Duluth-Superior port were a bare trickle. In the 1959 season they totaled only 7,227 tons. The principal commodities included bentonite, machinery, dried milk, flour, honey and tin-plate.

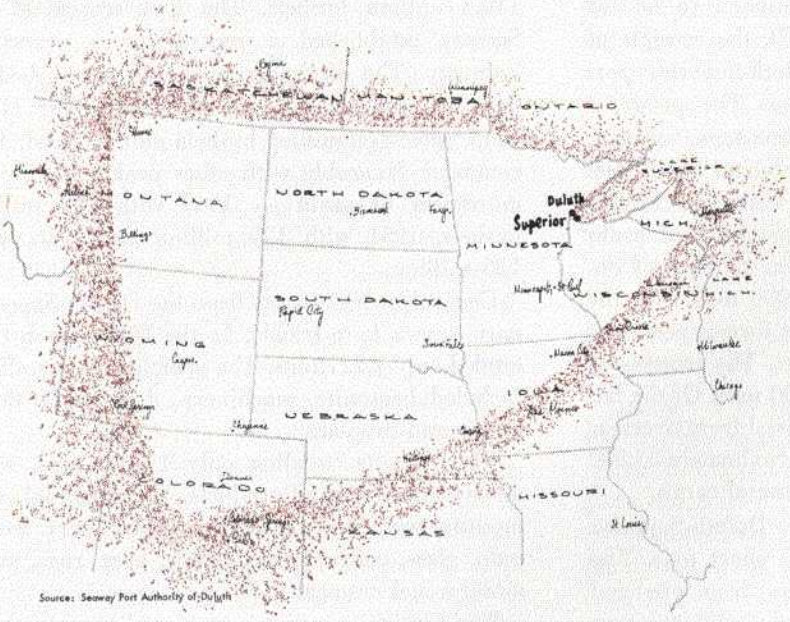
The imports, totaling only 12,188 tons, were mostly manufactured products. The principal commodities were steel, ferrosilicon, machinery, woodpulp, glass, coffee, twine, liquor, beer, rugs, automobiles and oatmeal.

The foreign commerce generated more activity in several Duluth and Superior port-linked industries than would have a comparable volume of domestic commerce. At least 15 new companies opened offices in the Twin Ports during 1959. Additional freight forwarders, stevedores, and vessel agents were needed to expedite the business. They, in turn, called on other firms to render specific services requested by vessel captains.

The arrival of ocean vessels thrust new obligations and duties on U. S. Custom and Immigration Service and on federal and state agricultural and health departments. These services have required additional staffs at their offices located at this port.

The loading of cargo into an ocean vessel involves more clerical work than does a lake vessel. A number of bills of lading are drawn up as the vessel generally carries a consignment of cargo for a number of importers who may be located at different ports. An export declaration is drawn up for the U. S. Customs. An inspection and weight certificate is supplied to the vessel captain. A statement of fact, supplied by the vessel agent, in regard to the delays in port and time required to

Duluth-Superior port trade area



Source: Seaway Port Authority of Duluth

load the cargo is transmitted by the freight forwarder to the exporter.

There is also more labor involved in the actual loading of cargo on an ocean vessel, and this is contracted to a stevedore company. The freight forwarder works closely with the stevedores as the consignments of cargo must be loaded in the order that they will be unloaded.

Some of the ocean vessels chartered to transport grain were outfitted for this type of cargo in the Duluth-Superior port. Vessel agents entered into contracts with local stevedore companies for this work. In an ocean vessel, the grain must be prevented from shifting or it could spell doom to the vessel on high seas and even on the Great Lakes. A separating wall of three-inch lumber was installed down the center of holds or tanks of vessels to prevent the grain from shifting from side to side. Bins were built at the top of the holds which serve as feeders to maintain the correct balance as the grain settles. The cost of outfitting vessels through the handling of different types of cargo for grain has ranged from $5,000 to $13,000 per ship which is largely for lumber and the labor to install it.

The loading of an ocean vessel with grain requires a crew of men known as grain trimmers. They distribute the grain as it is delivered from the elevator through spouts to all areas of the holds to fill the vessel evenly.

Employment and income in port area

The port activities described above create both employment and income in a port area. The American Association of Port Authorities[3] has estimated the income derived by the port area through the handling of different types of cargo in foreign commerce. In terms of 1955 costs and wage rates, it is estimated that a ton of grain loaded at a U. S. port produces $4.66 of direct expenditures in the port area. This includes the expenditure of railroad and truck lines and their crews in the port area, the cost of handling grain in elevators, stevedoring charges in loading grain into vessels, clerical work in conjunction with the cargo transaction, and supplies and services needed by vessels and their crews. The 71.7 million bushels of grain exported from the Duluth-Superior port directly to overseas ports were slightly more than 1½ million tons. Applying this estimated value per ton to the port area, an expenditure of slightly over $7 million was made in the Duluth-Superior port area in the handling of grain for export in 1959. One must hasten to

[3] See the Statement of Stacey Bender, Jr. on behalf of the American Association of Port Authorities before the Subcommittee on Customs, Tariffs, and Reciprocal Trade Agreements of the Committee on Ways and Means in the House of Representatives, September 22, 1956.

add that this does not represent the amount of new income in this port area traced to the opening of the Seaway. Much of this grain was formerly handled at this port and shipped by lake vessel to Buffalo, New York and by rail to Baltimore for export. However, it does indicate the importance of the grain handling business to a port area.

The handling of general cargo involves more income per ton for a port area than does the handling of bulk cargo. The American Association of Port Authorities estimates that the loading and unloading of a ton of general cargo results in an approximate expenditure of $12.46 in the port area as compared with $2.32 per ton of iron ore and $1.99 per ton of coal. With the handling of 16,381 tons of general cargo in 1959, the expenditures in the Duluth-Superior port area from this operation was approximately $204,000. This figure indicates that the promotion of a significant volume of general cargo at this port will add materially to the income of the area.

The Seaway Port Authority of Duluth has estimated that foreign shipping in 1959 created from 300 to 400 new jobs during the shipping season and has added about $2 million to the aggregate income of the Duluth-Superior port area.

Possible expansion resulting from the Seaway

The Seaway will most likely add to the economic growth of Great Lakes ports. It is a foregone conclusion that not all of these ports will benefit from the Seaway. At the same time, it cannot be predicted with any degree of certainty which ones will become great Seaway ports and which may not.

The geographic location of a port city, the nature of the economy served in the immediate vicinity and the existing transportation and port facilities are bound to be important factors in determining the growth of any particular seaport. In the future, other port cities may rise to prominence. The inducement of direct water transportation to world ports may cause industrial firms to locate in cities now unimportant as ports or on suitable rural sites along the Great Lakes.

Some expansion already has been observed at Duluth and Superior. However, activity during the first season indicates that expansion may be at a slow rate following the initial construction surge of harbor facilities. The improved water route can expand economic activity only as more commerce moves through Great Lakes ports and as manufacturing in these metropolitan areas is stimulated through the availability of low cost raw materials, enlarged markets or both.

The growth in port activity depends, in a large measure, on the handling of general cargo which involves more labor than the handling of bulk cargo. To obtain an objective estimate of the potential volume of foreign commerce that may be handled at Duluth-Superior in future years, a survey was conducted among manufacturers in the upper midwest to ascertain the volume and kind of products exported and imported as well as the destination or origin of these products.

The trade area served by the Duluth-Superior port was established by using the existing rail class-rate "break-even points" to establish the periphery of the territory. In addition to the Ninth Federal Reserve district, it includes parts of Wyoming, Colorado, Kansas, Nebraska and Iowa as outlined on the map. Of course, truck and barge transportation does alter somewhat the boundary of this area. On the north it was extended only to the Canadian border. However, there is some evidence that the rail and highway connections will play a prominent part in attracting much overseas traffic from this neighboring country, particularly from the prairie provinces of Saskatchewan and Manitoba.

The results of the survey disclosed that in this geographic area about 351,000 tons of general cargo moved into foreign trade channels and was received from foreign sources. In the tabulations exports constituted 92 percent of the total tonnage and imports only 8 percent. General knowledge of the ratio between exports and imports leads to the conclusion that imports actually constitute a

larger tonnage than these figures indicate. Undoubtedly, some commodities imported through Atlantic and Gulf ports lose their identity as imports before reaching this area. Thus, when foreign commodities are imported directly to ports in this region, the tonnage of foreign trade may be larger. Of course, as general cargo begins to move by the Seaway, other Great Lakes port cities will begin to compete for it.

Great Lakes ports will become attractive centers to manufacturers to the extent that lower freight rates make it feasible to import or export bulk commodities on a large scale and open new markets which were not as readily accessible previously. Freight rates on the Seaway must be sufficiently lower than those by other means of transportation to enable manufacturers to secure a competitive advantage.

Seaway transportation may not benefit manufacturers whose labor costs are the principal item. It primarily benefits those who produce bulk products or heavy units where transportation costs are a significant part of the delivered price. Such commodities generally consist of industrial items, that is, raw materials used by manufacturers or equipment used by mining companies and construction contractors. At present, Duluth and Superior have a small volume of this type of manufacturing. In fact, employment in the manufacture of all types of durable products in January was only 6,500 out of a total employment of 42,000. It is quite likely that more manufacturers of this type may move to this port area; a few already have purchased harbor sites to take advantage of the improved water transportation route.

The benefits of cheap transportation do not all accrue to local interests. A few manufacturers have also experienced greater competition from foreign products. During the first season most of the tonnage of general cargo imports consisted of steel products.

Great Lakes ports may have more favorable freight rates on all competing media of transportation, on land as well as on water. Lower freight rates on the Seaway already have caused railroads and truck lines to change their rate structures. The changes in rates tend to favor shippers and receivers of freight in Great Lakes ports, such as Duluth-Superior. Out of these changes may come a schedule of rates offered by ship lines, railroads and truck lines so products can be moved into and out of port areas at a lower relative cost than formerly. In the final analysis, these indirect benefits of the Seaway may prove to be the greatest benefit to producers and distributors in port areas.

—Oscar F. Litterer

Statistical review available

Copies of the **1959 Annual Statistical Review,** presenting data for principal statistical series relating to the Ninth Federal Reserve district, are now available from the Research Department of this bank.

1959 FARM INCOME . . .

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cent, respectively, in Minnesota, North Dakota, South Dakota and Montana.

Summary

Farmers' spending is largely determined by their income stream. When the income stream flows full, the spending stream for both the farm business and the farm household flows heavier; it is at such times that the large postponable and discretionary purchases are made. When the income flow is reduced spending is dampened or postponed.

The net cash estimate is a useful income concept in appraising the spending stream from agriculture in that it includes only the cash operations of the farm. During the last half of 1959 and the first half of this year the net cash income stream has been and will be below the level of a year ago because of reduced district output in 1959.

—Arvid C. Knudtson