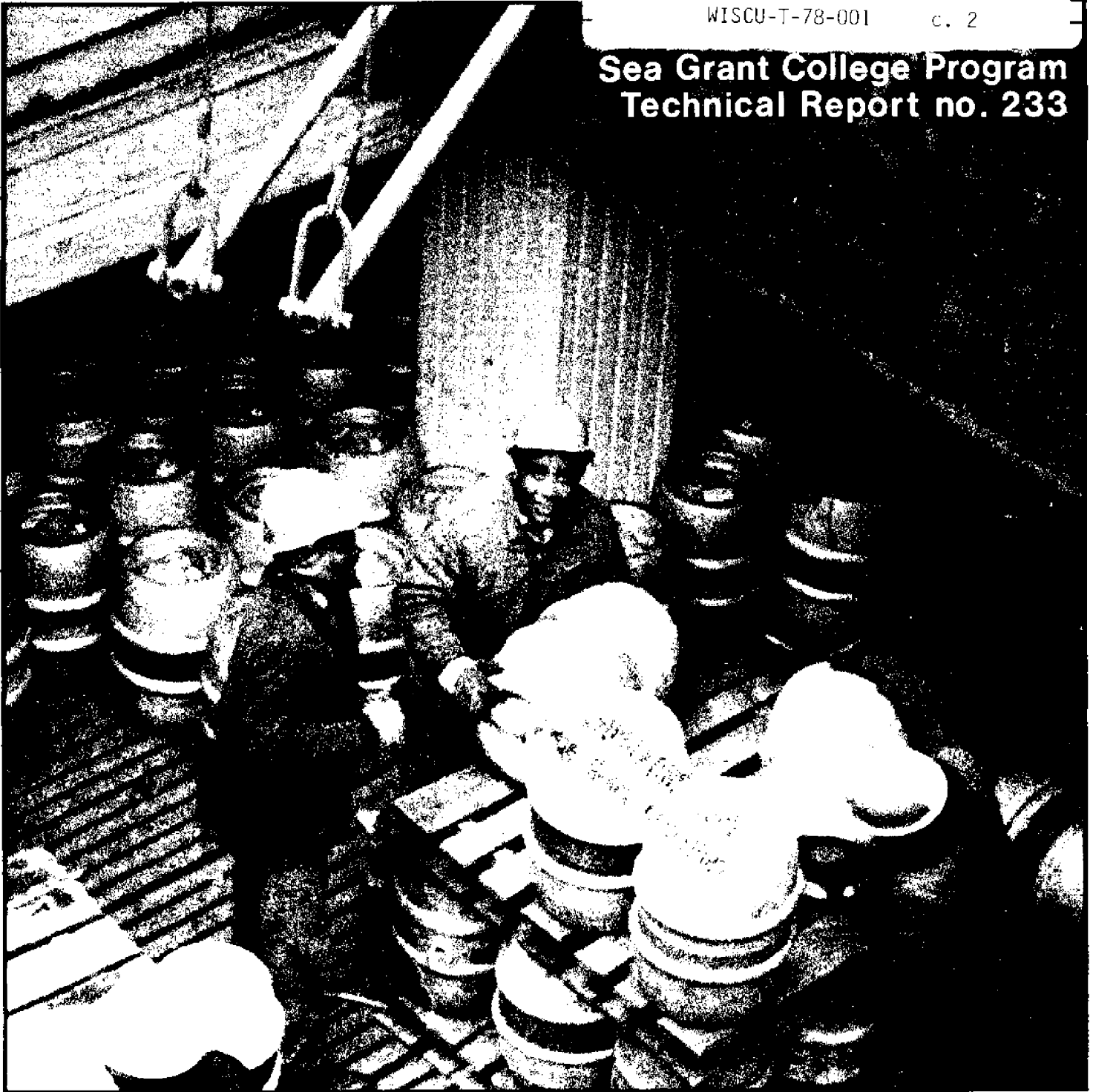


**Sea Grant College Program
Technical Report no. 233**



**Maritime Labor Organizations on the
Great Lakes - St. Lawrence Seaway System**

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MARITIME LABOR ORGANIZATIONS ON THE GREAT
LAKES - ST. LAWRENCE SEAWAY SYSTEM

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Preface

Prior to the opening of the St. Lawrence Seaway, union representation of labor on the Great Lakes was described as being disorganized and fragmented.¹ No longer is this description accurate. Instead, the degree of organization is quite sophisticated and the evolving labor-management relations system has reduced fragmentation.

Two transportation systems and two labor-management relations systems operate concurrently in the Great Lakes-St. Lawrence Seaway System (hereafter referred to as the System). One transportation system is the movement of general cargo overseas with the largest proportion carried in foreign flag registered vessels.² Registered vessels engage in international trade. They are prohibited from loading cargo in one port and discharging that same cargo in a port of the same country. General cargo is high value per unit cargo both intrinsically and in the method of handling. The other transportation system is the intralake and lake-river movement of bulk cargo in enrolled vessels. Enrolled vessels engage in intracoastal and domestic movement of cargo. Although U.S.-Canadian movements are technically international, they are exempt from registry requirements and can be made in enrolled vessels. Bulk cargo is low value per unit cargo, and it is usually handled by automated methods. The labor-management relations systems are directly related to the type of cargo carried and whether the vessel is registered or enrolled.

Rapid transit of registered vessels through the system is dependent upon several labor groups, but the vessel operator does not directly interact with any of these groups. The vessel's movement depends upon third party labor-management relations. Pilots must have reached agreement with the appropriate authority; lock operators, tug crews and longshoremen must have signed contracts. In addition, the vessel's own crew usually needs to be under contract.

Enrolled vessels, on the other hand, are exempt from pilotage requirements, seldom transit east of Three Rivers, and because of familiarity with some of the harbors, do not require tug assistance as frequently as registered vessels. Their shoreside labor relations are simpler because, in most instances, shoreside operations are owned and operated by the same company. The enrolled vessel's operator deals directly with the relevant labor groups. Third party negotiations are seldom crucial.³

Labor-management relations in the System are undergoing significant alterations due to rapid changes in transportation technology. Technological developments have decreased the need for some types of labor, but they have also increased the potential costliness of a breakdown in any of the labor-management relations. For example, advancement in the design of bulk vessels has led to the reduction of the number of unskilled and

unlicensed seamen required to man the vessel. But, work stoppages by any of the parties would result in much greater lost production relative to the idling of an older vessel.

The Great Lakes-St. Lawrence Seaway is the fourth seacoast of the United States and an important international waterway for Canada. The System presents an alternative transportation route--a competing route--to shippers who may generally use the Atlantic, Gulf or Pacific Coasts. Stability in labor-management relations is one factor in the competition.

FOOTNOTES

¹Charles Larrowe, Maritime Labor Relations on the Great Lakes (East Lansing, Michigan: Michigan State University Press, 1959), p. 78.

²This statement is subject to several qualifications: some general cargo such as paper moves from Canada to the United States in Canadian vessels; some finished steel products have been transported between Great Lakes ports on enrolled vessels; Lykes and Farrell, two U.S. flag lines have recently initiated overseas service to U.S. Great Lakes ports.

³This statement is subject to the qualification that the Shipping Federation of Canada does negotiate with some of the labor groups involved in the interlake and intralake movement of bulk cargo.

I. PILOTAGE

A. Introduction

The Great Lakes-St. Lawrence Seaway is an international waterway under the joint operation of Canada and the United States. Certain support services, such as pilotage, are provided by both countries through parallel systems. Although parallel, they appear fully integrated. However, substantial differences do exist and on occasion they are sufficient to threaten closure of the waterway.

Pilotage has a long history on the Coasts and was also quite common on the eastern section of the St. Lawrence River. Prior to the opening of the Seaway, the small oceangoing vessels that entered the Lakes could usually engage a "Sailing Master" to assist in unfamiliar or hazardous waters;¹ but the concept of the entrepreneurial pilot was unknown on the Lakes. Upon completion and opening of the Seaway, more vessels entered the System, many of them unfamiliar with the narrow channels and Rules of the Road of the Great Lakes. Canadian and United States authorities felt that some form of pilotage system had to be established. Before this could occur, three problems had to be resolved.

1. A workable solution had to be found for joint administration of pilotage.
2. Federal compulsory pilotage legislation covering just the Great Lakes-St. Lawrence Seaway System exclusively had to be enacted.
3. An organizational and administrative structure had to be established to administer pilotage throughout the 1,500 mile system.²

What evolved were two parallel systems. The United States passed the Great Lakes Pilotage Act of 1960 and Canada enacted the Canada Shipping Act, Part VIa.³ Both pieces of legislation included several reciprocal agreements that created an almost uniform system. The Royal Commission Report describes the system that evolved.

Each country licenses its own pilots according to its own procedure and retains exclusive jurisdiction over them; the pilot's territorial competency is extended to the waters of the other country through reciprocal legislation; unification of pilotage requirements for shipping is to be achieved through parallel and reciprocal legislation; the provision of services is to be shared equitably between all pilots irrespective of their nationality; both countries are to take steps that the required organization for the provision of services is coordinated to serve all pilots in each locality, regardless of their nationality.⁴

Both Acts required compulsory pilotage for registered vessels of the United States, Canada, and foreign countries throughout the Seaway System. For the United States, this was the first piece of federal legislation mandating compulsory pilotage. Previously, although pilotage was under federal jurisdiction, the federal government had delegated responsibility for pilotage regulations to the respective states.⁵ Because the pilot's marketable skill was his knowledge of local conditions and because he usually operated in only one region, conflicts seldom arose. However, after the opening of the Seaway, it was considered impractical for pilotage to be regulated by the individual state. This would have required the Master of the vessel to be knowledgeable of the pilotage requirements of eight states, in addition to the Canadian statutes.

The necessity of maintaining local knowledge over a 1,500 mile system presented an organizational and administrative problem. The solution, for the United States and a somewhat similar one for Canada, was to divide the System into three pilotage districts. Within the district, several subdivisions also evolved.

Because not all segments of the St. Lawrence Seaway and Great Lakes are equally hazardous, both Acts allowed segments for the purposes of pilotage to be classified as designated waters or undesignated waters. Designated waters include all of the following.⁶

1. Cornwall District, being the Canadian waters of the St. Lawrence River between the northern entrance to St. Lambert Lock and the pilot boarding station near St. Regis in the Province of Quebec;
2. International District 1, being the waters of the St. Lawrence River between the pilot boarding station near St. Regis in the Province of Quebec and a line drawn from Carruther's Point light in Kingston Harbor on a true bearing of 127° through Wolfe Island south side light and extended to the State of New York;*

* Both Canadian and U.S. Acts refer to their respective national waters.

3. International District 2, being
 - a. all of the waters of the Welland Canal between the following geographical limits:
 - i. in the southern approach, within an arc drawn one mile southward of the outer light on the western breakwater at Port Colborne, and
 - ii. in the northern approach, within an arc drawn one mile northward of the western breakwater light at Port Weller,
 - b. the waters of Lake Erie westward of a line running approximately 206° true from the Southeast Shoal light to Sandusky Pierhead light at Cedar Point in the State of Ohio, and*
 - c. the waters of the connecting channels between Lake Erie and Lake Huron;*
4. International District 3, being the waters of St. Mary's River connecting Lake Huron and Lake Superior as far as, in the northern approach, longitude $84^{\circ}33'W$ and in the southern approach, latitude $45^{\circ}59'N$.

It is compulsory for all registered vessels to be navigated by a registered pilot while in designated waters, and it is necessary that a registered pilot be on board the registered vessel as it transits undesignated waters.⁷ Enrolled U.S. vessels and Canadian vessels, those vessels engaged exclusively in cargo movements west of the mouth of the St. Lawrence River ("coastal trade"), are not subject to the compulsory pilotage requirement. Registered vessels may be exempted from taking on a pilot in undesignated waters if the Master of the vessel has a Great Lakes Navigational Certificate.** Great Lakes Navigational Certificates are issued by the Great Lakes Pilotage Authority, a Canadian crown corporation, and are honored by the United States Coast Guard. The United States Coast Guard also has the authority to issue Great Lakes Navigational Certificates, although it has not chosen to use the authorization.⁸

The remainder of this chapter will be devoted to a detailed description of the United States and Canadian systems of pilotage and to a discussion of some of the more important issues of pilotage relating to the Great Lakes-St. Lawrence Seaway System.

B. Description of the System of Pilotage

Sailing from the mouth of the St. Lawrence River to Duluth, a vessel passes through eight pilotage zones. Of these eight zones, four are served

* Both Canadian and U.S. Acts refer to their respective national waters.

** The Great Lakes Navigational Certificate is discussed in more detail in Section C of this Chapter.

exclusively by Canadian pilots; the other four are served by both United States and Canadian pilots. One U.S. and two Canadian operating authorities supervise pilotage along this route.

The Laurentian Pilotage Authority (LPA), a Canadian crown corporation, has managing authority over the Corporation of Lower St. Lawrence River Pilots who operate from the mouth of the St. Lawrence River to Quebec; the Corporation of Mid-St. Lawrence River Pilots who work the Quebec to Montreal section; and the Montreal Harbor Pilots who operate in the Harbor of Montreal to the St. Lambert Lock.⁹

The Great Lakes Pilotage Authority, Ltd. (GLPA), also a Canadian crown corporation, oversees four pilotage groups. The GLPA oversees the Corporation of St. Lawrence River and Seaway Pilots who operate from the St. Lambert Lock to the Snell Lock (Cornwall District); the Corporation of Upper St. Lawrence Pilots who operate between the Snell Lock and Lake Ontario (District 1); Lake Ontario Pilots who pilot vessels just on Lake Ontario; and the Corporation of Professional Great Lakes Pilots who work from the Welland Canal to the Lakehead (Districts 2 and 3).¹⁰

The Great Lakes Pilotage Staff (GLPS) of the United States Department of Transportation administers pilotage in the U.S. waters of the Great Lakes and St. Lawrence Seaway. The GLPS operates under the direction of the United States Coast Guard, Ninth Coast Guard District. Three pilotage groups are authorized to operate in the three districts. The St. Lawrence Seaway Pilots Association serves the area from the Snell Lock through Lake Ontario (District 1); the Lakes Pilots Association, Inc. operates from the Welland Canal to Lake Huron (District 2); and the Upper Great Lakes Pilots, Inc., serves vessels in Lakes Huron, Michigan, Superior and the connecting channels (District 3).¹¹

This chapter will concentrate on the Canadian pilots operating under the Great Lakes Pilotage Authority and the U.S. pilots operating under the Director, Great Lakes Pilotage Staff. Pilots in the Laurentian Pilotage Authority are crucial to the smooth movement of registered vessels into the System, but they work solely in Canadian waters and have no interaction with U.S. pilots.

All U.S. pilots are entrepreneurs. They operate under the direction of the Coast Guard, but they are not employees of the federal government. They earn their incomes by providing pilotage services, and their incomes are directly proportional to the quantity of pilotage services provided. Canadian pilots, with the exception of one pilotage group, are employees (civil servants) of the Great Lakes Pilotage Authority. Only the Corporation of Upper St. Lawrence Pilots (operating between the Snell Lock and Lake Ontario) consists of entrepreneurs who contract their services with the GLPA.¹²

The difference in the source of income can generate conflicts especially when the number of transits by registered vessels is declining. Because U.S. pilots' earnings are directly proportional to the number of

trips they make, and because Canadian pilots have a guaranteed income, irrespective of the number of trips they make, the method of assignment rotation becomes a crucial issue. A vessel transit from the Snell Lock to Chicago and back, without any intermediate stops, results in 26 assignments of six hours each. Approximately 16 pilots would be employed during such a round trip.

The method of rotating assignments is established by the Secretary of Transportation of the United States and the Minister of Transport of Canada through the Memorandum of Arrangements, Great Lakes Pilotage. Currently assignments are rotated according to the following criteria;¹³

a. District 1

- 1) Between Cape Vincent and St. Regis:
Vessels entering the District, either upbound or downbound, shall be numbered in blocks of 34, 20 of which will be designated for Canadian pilots and 14 for United States pilots. Assignment will be made on the basis of a straight tour de role according to the nationality designated for each.
- 2) Between Cape Vincent and Port Weller:
A dispatching role of 12 positions shall be established, 6 of which shall be designated for Canadian pilots and 6 for United States pilots. Assignment shall be divided equally between United States and Canada over the course of the shipping season.

b. District 2

- 1) Welland Canal: Canadian pilots only.
- 2) Between Port Colborne and Port Huron, with no intermediate ports of call (the Detroit Pilot Boat is not a "port"):
Vessels entering the District, either upbound or downbound, shall be numbered in blocks of 8, the number assigned depending strictly on sequence of arrival at Port Colborne upbound or Port Huron downbound. United States vessels will serve vessel numbers 1, 3, 5, and 7 between Port Colborne and the Detroit Pilot Boat and Canadian pilots will serve numbers 2, 4, 6, and 8 in that reach. Between Port Huron and the Detroit Pilot Boat, United States pilots will serve vessel numbers 1, 3, 5, 7, and 8 while Canadian pilots will serve numbers 2, 4, and 6 in that area.
- 3) Vessels stopping at ports within the District excluding the Welland Canal (the Detroit Pilot Boat is not a "port"):
Canadian pilots will serve vessels bound for Canadian ports within the District and United States pilots will serve vessels bound for United States ports within the

District. A vessel leaving a United States port bound for a Canadian port within the District will be served by a United States pilot to the Detroit Pilot Boat and by a Canadian pilot from there, except that no change will be made for a vessel bound for Windsor from a United States port. A vessel leaving a Canadian port bound for a United States port within the District will be served by a Canadian pilot to the Detroit Pilot Boat and by a United States pilot from there, except that no changes will be made for vessels bound for Detroit from a Canadian port.

c. District 3

Canadian pilots will be assigned to serve vessels in such numbers over the course of the shipping season as to realize 18.9% of the total revenue for the District for the season.

The number of transits by vessels engaged in overseas trade and therefore the number of trip assignments, has declined since 1971. In 1971, a total of 2,613 transits were made in the Montreal to Lake Ontario section of the Seaway by vessels engaged in overseas trade. By 1974, the number of transits declined to 1,373, but in 1976, 1,835 transits were made in this segment of the Seaway. Table I.1 records the number of vessel transits by vessels engaged in overseas trade (or by ocean vessels) since 1959. Of course, the number of vessel transits is not an accurate measure of System activity because the average carrying capacity of vessels has been increasing since the opening of the Seaway. In fact, a current problem is that the Seaway locks are too small to handle an ever-increasing proportion of the world's general cargo and bulk fleets.

As mentioned in the Preface, the Great Lakes-St. Lawrence Seaway System is a transportation route that competes with the Atlantic, Gulf and Pacific Coasts. It has been argued that instability on the other Coasts results in profitable times for the Seaway System. In 1971, ports on the other three Coasts were shut down by longshoremen's strikes for part of the shipping season. Vessel transits through the System increased by 20 percent, although this increase may have been due to other factors.¹⁴ In 1974, in addition to other difficulties for the Seaway System, the ILA announced early in the shipping season that they would not strike against Atlantic and Gulf Coast ports if an agreement had not been reached by the contract expiration date. During the 1974 shipping season, the Seaway System experienced a 40 percent decline in the number of overseas vessel transits.

Gross revenue also dropped during this period, but because pilotage rates were increased, the decline was not of the same magnitude as was the decrease in the number of vessel transits. Table I.2 provides the gross revenue figures for United States and Canadian pilots who worked from the Snell Lock to the Lakehead.¹⁵ The gross revenue figure for U.S. pilots is a misleading indicator of the individual pilot's income. This figure does not include the expenses incurred by pilots in the course of providing

TABLE I.1

VESSEL TRANSITS OF OVERSEAS OR OCEAN VESSELS IN THE MONTRÉAL-
LAKE ONTARIO SECTION-ST. LAWRENCE SEAWAY

Year	Upbound	Downbound	Total
1959	1,094	1,048	2,142
1960	1,118	1,101	2,219
1961	1,097	1,084	2,181
1962	1,152	1,150	2,302
1963	1,052	1,032	2,084
1964	1,245	1,247	2,492
1965	1,376	1,375	2,751
1966	1,370	1,369	2,739
1967	1,275	1,271	2,546
1968	1,194	1,184	2,378
1969	1,201	1,216	2,417
1970	1,074	1,096	2,170
1971	1,304	1,309	2,613
1972	1,294	1,312	2,606
1973	1,145	1,151	2,296
1974	689	684	1,373
1975	836	854	1,690
1976	913	922	1,835

Source: Traffic Report of the St. Lawrence Seaway (Selected Years), prepared by the St. Lawrence Seaway Authority and the St. Lawrence Seaway Development Corporation.

TABLE 1.2

GROSS PAYMENT FROM FINANCIAL COMPANIES:
SHELL OIL TO THE DEPARTMENT

(U.S. Dollars)

Year	Gross Revenue- United States	Gross Revenue- Canadian	Gross Revenue- Total
1970	\$2,016,279.00	1,664,553.00	3,680,832.00
1971	\$3,143,484.00	2,994,833.00	6,138,317.00
1972	\$3,362,162.00	2,771,838.00	6,134,000.00
1973	\$2,631,362.00	2,430,841.00	5,062,203.00
1974	\$2,296,526.00	1,821,011.00	4,117,537.00
1975	\$2,900,847.00	2,494,838.00	5,395,685.00
1976	\$4,141,234.00	3,369,522.00	7,510,756.00

Source: Director, Great Lakes Pilotage Staff, United States Coast Guard,
Ninth Coast Guard District.
United States Department of Transportation, United States Coast
Guard, Ninth Coast Guard District, Statistical Report:
Great Lakes Pilotage 1970.

pilotage services, such as pilot boat charges, dispatching, transportation and lodging. These expenses may account for almost 30 percent of gross revenue.¹⁶ Adjustment of the gross revenue figure for the rapid inflation of the 1970's, as is done in Table I.3, demonstrates the drop in "real" pilotage revenue. Gross revenue of U.S. pilots, in 1967 constant dollars, dropped 42 percent between 1972 and 1974. The impact upon the individual pilot's income is even more dramatic when one considers the fact that the number of applicant and registered pilots decreased by only three from 1972 to 1974 (See Table I.4). The drop in Canadian revenues was of a similar magnitude. Pilotage rates were increased during the 1974 navigation season; they were increased by another 25 percent between the 1975 and 1976 seasons; and they were increased by another 15 percent in Districts 1 and 3 and by 19 percent in the Welland Canal during the 1977 shipping season. One reason given for the recent increases was that they were required for the "pilot compensation comparability with the pilots' licensed counterparts on U.S. Great Lakes vessels."¹⁷ The pilotage rate schedule for the years 1970 to 1977 is given in Table I.5.¹⁸

The necessity of maintaining a pool of registered pilots large enough so that all registered vessels of the United States, Canada, and foreign countries can meet the requirement that they be navigated by a registered pilot creates a difficult staffing problem, especially from the United States vantage point. The pool of registered pilots must be large enough to provide pilotage service to all vessels requiring it, without permitting undue delays. On the other hand, the staff of pilots must be small enough that the income earned per pilot is sufficient to keep those pilots presently on the staff and to attract trained pilots to the staff to meet future needs. However, the System has peaks and valleys in the number of transits and consequently, in the demand for pilots. For many vessels that serve the Seaway, especially the capital intensive container/general cargo vessels, speed of transit is a very important consideration. These vessels need to have a pilot available immediately at every boarding and discharging location. Vessel operators have complained that it is the delay involved in obtaining a pilot rather than the pilotage rates that are most costly.¹⁹

A relatively large pool of pilots would insure that vessel delays during peak periods would be reduced. However, maintenance of that large a pool would lead to relatively low average earnings for the pilot, and average net earnings must be large enough to maintain current staff and to attract trained pilots (licensed deck officers) from the domestic fleet. The Director of the Great Lakes Pilotage Staff has expressed the concern that recruitment of qualified pilots will be quite difficult because the earnings of those registered pilots who compose the pools have fallen behind the earnings of the licensed deck officers of the domestic fleet.²⁰ If this trend continues, the one group of pilots who will be attracted to entrepreneurial pilotage will be those who do not have any advancement prospects either because of the decline in the size of the Lakes fleet or because of their own mediocrity. One other potential source of pilots is those vessel Masters who are currently sailing non-Seaway trade routes, but who have accumulated the required number of trips through the System (when more U.S. flag lines were serving the System) to qualify as Great Lakes pilots.

TABLE I.3

GROSS REVENUE FROM PILOTAGE CHARGES IN CONNECTION
 U.S. DOLLARS (1967=100): SNELL LOCK TO THE LANTANA

Year	Gross Revenue- United States	Gross Revenue- Canadian	Gross Revenue- Total
1970	\$1,733,688	1,689,217	3,422,905
1971	\$2,591,495	2,221,668	4,813,163
1972	\$2,683,289	2,212,161	4,895,451
1973	\$2,127,244	1,863,892	3,991,137
1974	\$1,548,088	1,232,912	2,781,000
1975	\$1,836,754	1,547,666	3,384,420
1976	\$2,428,876	1,976,259	4,405,135

Consumer Price Index:	1967 = 100.0
(All items, United States	1968 = 104.2
City Average, 1967 = 100.0)	1969 = 109.8
	1970 = 116.3
	1971 = 121.3
	1972 = 125.3
	1973 = 133.1
	1974 = 147.7
	1975 = 161.2
	1976 = 170.5

Source: Monthly Labor Review, January 1977 and previous table.

TABLE I.4

NUMBER OF PILOTS ON ROLLS
(Including Applicant Pilots)

Year	Total Number of Pilots	Total System		District 1		District 2		District 3	
		U.S.	Canada	U.S.	Canada	U.S.	Canada	U.S.	Canada
1961	105	41	64	12	20	15	44	14	0
1962	117	54	63	14	22	24	38	16	3
1963	118	58	60	15	23	29	34	14	3
1964	128	65	63	17	23	36	37	12	3
1965	143	70	73	17	25	40	45	13	3
1966	161	70	85	19	29	43	50	14	6
1967	161	80	81	21	29	45	49	14	4
1968	153	74	79	20	26	40	49	14	4
1969	147	71	76	20	26	32	42	19	8
1970	143	69	74	20	25	31	41	18	8
1971	156	78	78	20	24	33	46	25	8
1972	167	82	85	21	27	36	50	25	8
1973	171	88	83	21	27	36	48	31	8
1974	160	79	81	17	24	34	48	28	8
1975	146	68	78	17	24	28	46	23	8
1976	146	68	78	16	25	27*	45	25*	8

Source: Unpublished data available from Director, Great Lakes Pilotage Staff.

* Includes 3 temporary pilots.

TABLE I.5
PILOTAGE RATES FOR 100 PILOTAGE UNITS

	1977**	1976	1975	1974***	1973	1972	1971	1970****
Snell Lock--								
Cape Vincent	\$664.00	\$577.50	\$442.00	\$462.00	\$332.00	\$332.00	\$332.00	\$332.00
Cape Vincent-								
Port Weller	242.00	210.00	166.00	168.00	120.00	120.00	120.00	120.00
Cape Vincent-								
Toronto*	357.00	310.70	247.00	247.00	180.00	180.00	180.00	180.00
Port Weller-Port Colborne	866.00	728.75	583.00	583.00	430.00	430.00	430.00	430.00
(Welland Canal)								
Port Colborne-	431.00	415.00	331.00	331.00	190.00	190.00	190.00	190.00
Cleveland*								
Port Colborne-	316.00	315.00	252.00	252.00	130.00	130.00	130.00	130.00
Southeast Shoal								
Southeast Shoal-	335.00	335.00	268.00	268.00	190.00	190.00	190.00	190.00
Toledo								
Southeast Shoal-	335.00	335.00	268.00	268.00	190.00	190.00	190.00	190.00
Detroit Lock								
Southeast Shoal-	584.00	563.75	467.00	467.00	300.00	300.00	300.00	300.00
Lake Huron Lightvessel								
Lake Huron Lightvessel-	841.00	730.00	583.00	583.00	420.00	420.00	420.00	420.00
Chicago*								
Lake Huron Lightvessel-	242.00	210.00	168.00	168.00	120.00	120.00	120.00	120.00
Detour								
Detour-	604.00	525.00	420.00	420.00	370.00	370.00	370.00	370.00
Gros Cap								
Gros Cap-	599.00	495.00	395.00	395.00	320.00	320.00	320.00	320.00
Thunder Bay*								
Gros Cap-	721.00	593.75	474.00	474.00	385.00	385.00	385.00	385.00
Duluth*								

*Includes charge for docking of vessel.

**Rates changed June 22, 1977.

***Rates changed September 1, 1974.

****Rates changed August 12, 1970.

On the other hand, if the pool of pilots decreases to that size which can handle normal traffic and generate reasonable incomes, the delays incurred by vessels could reduce the competitiveness of the System. As stated earlier, the capital intensity of many of the new general cargo vessels requires that delays be minimized because high value cargo is extremely time-cost sensitive. If significant delays are encountered as the vessel transits the System, its profitability will be threatened. Under these conditions, some vessels may be withdrawn from service to the System. If withdrawn, the same problem will again arise as it will be necessary to reduce the pool of pilots to insure adequate incomes for the remaining pilots. Again, vessels will encounter significant delays during the peak periods.

At the present time, this is not a serious predicament because there exists a pool of retired registered pilots who can be activated during the peak periods under the classification of "temporarily registered pilots."²¹ The pools can be 'permanently' staffed with a sufficient number of registered pilots to meet normal vessel demand and expanded with temporarily registered pilots to meet peak demands.

As stated earlier, United States pilots are joined into three associations: the St. Lawrence Seaway Pilots Association in District 1, the Lake Pilots Association, Inc. in District 2, and the Upper Great Lakes Pilots, Inc. in District 3. Legally, the St. Lawrence Seaway Pilots Association is a voluntary association whereas the Lakes Pilots Association, Inc., and the Upper Great Lakes Pilots, Inc., are corporations.

Pilots are broken into three classifications. There are "fully registered pilots," "applicant pilots temporarily registered" and "temporarily registered pilots." Fully registered pilots possess all qualifications required by the Coast Guard, have completed the training program and are full members of the association in that district. Applicant pilots temporarily registered possess the same qualifications as registered pilots but they are awaiting admission to membership in the association. Temporarily registered pilots are retired registered pilots (retirement is required at age 65) who are still physically fit and who are activated during peak periods.²²

The formula for compensating registered pilots varies by district. In District 1, the compensation formula conforms very closely to payment according to the number of trips worked. Districts 2 and 3 appear to allocate their compensation through a base salary paid to everyone with additional compensation calculated upon the pilot's availability.²³ All revenues, in all three districts, are paid to the respective association's revenue pool. The pilot's compensation is then drawn from this pool.

The status of applicant pilots temporarily registered also varies by district. In District 1 their classification is synonymous with Lake pilots. They operate in the undesignated waters and harbors of Lake Ontario. They also have the privilege of becoming associate members of the association. In Districts 2 and 3, applicant pilots operate mainly in

undesigned waters. Their status is analogous to that of employees as they generate revenue, but they are not allowed to become members of the corporation.²⁴

Temporarily registered pilots receive a flat fee which is negotiated with the association. The association charges the vessel the regular pilotage fee, and the difference between the negotiated fee and the pilotage fee accrues to the association's treasury for disbursement to registered pilots.²⁵

U.S. pilots are considered entrepreneurial pilots. They form and manage their own associations, and their level of income is dependent upon their level of effort. U.S. pilots have also organized union locals or have become associated with a union. Many District 1 pilots have retained their membership in the International Organization of Masters, Mates and Pilots (MMP), and pilots in Districts 2 and 3 have formed separate locals and have affiliated with the International Longshoremen's Association (ILA). The question should be asked: Why have pilots in Districts 2 and 3 affiliated with the ILA? Given that many pilots were drawn from the Lakes bulk fleet, it would have been expected that they would have maintained their membership with either the Great Lakes and Rivers District of the Masters, Mates and Pilots or the Marine Engineers Beneficial Association-Associated Maritime Officers, District 2 (MEBA-AMO, #2).

Forming locals of the ILA appears to have increased the pilots' bargaining power. The ILA has organized almost all U.S. labor groups that are involved in the movement of general cargo through the System. Economic theory has held that as the proportion of an industry's labor force that is unionized increases, the bargaining power of the union increases.²⁶ The increase in bargaining power has not necessarily been used over wage negotiations, but appears to have been used to increase the demand for pilotage services. For example, it was reported in the U.S. Department of Transportation study of Great Lakes pilotage that ILA dock workers refused to unload general cargo vessels brought into Duluth unless a pilot was on board.²⁷ This demand was made even though the port of Duluth is undesignated water and the compulsory pilotage requirement can be met through the Great Lakes Navigational Certificate.

ILA Local 1921, Great Lakes Pilots, District 2, represents the pilots that are members of the Great Lakes Pilots Association, Inc., and ILA Local 444, Upper Lakes Pilots Association, represents the pilots that are members of the Upper Great Lakes Pilots, Inc.²⁸ Both locals operate union shops as all registered pilots must become members of the local.

The pilots that have organized union locals possess a rather unique status. They are considered entrepreneurs by the U.S. government, but they consider themselves employees of the corporation. The U.S. Department of Labor exempts them from union reporting requirements of the Labor-Management Reporting and Disclosure Act of 1959 because they are not "employees," as defined in that Act.²⁹ Yet they are an effective labor group that can either promote stability or disrupt the System.

Four groups of Canadian pilots operate between the St. Lambert Lock and the Lakehead. They are the Corporation of St. Lawrence River and Seaway Pilots (Cornwall District); Corporation of Upper St. Lawrence Pilots (District 1), the pilots licensed only for the waters of Lake Ontario and Kingston Harbor; and the Corporation of Professional Great Lakes Pilots (Districts 2 and 3).

The Corporation of Upper St. Lawrence Pilots, who operate between the Snell Lock and Cape Vincent are entrepreneurs. The other groups are employees of the Great Lakes Pilotage Authority, Ltd. As entrepreneurs, the Corporation of Upper St. Lawrence Pilots has negotiated for the exclusive right to work that segment in return for the pilotage fees. [The pilotage fees are those that were listed in Table I.5. These fees are agreed to by the Ministry of Transport.] Their income is directly dependent upon the number of vessels transiting the System. However, the members of the Corporation of Upper St. Lawrence Pilots do have the option of becoming employees of the GLPA.

Through collective bargaining, the three other groups of pilots in the GLPA collectively bargain wages and working conditions. Their earnings are not a function of System activity, although the number of pilots covered by the agreements can be adjusted if the System experiences a permanent change in the volume of traffic.

Contracts negotiated by the Corporation of St. Lawrence River and Seaway Pilots and the Corporation of Professional Great Lakes Pilots are quite similar in wage, fringe benefits and working conditions provisions. Salary schedules for the two groups for a minimum of eight months of employment are given in Table I.6. The wages of Lake Ontario Pilots, also contained in Table I.6, are not quite as high, but they are only licensed to navigate the vessel in undesignated waters.

The contracts of the employees of the GLPA also contain many fringe benefits such as payment of all travel expenses, health and life insurance, vacation and sick leave pay and rest days. Canadian entrepreneur pilots in District 1 receive compensation only for some travel expenses, and the GLPA operates the pilot boat.³⁰ U.S. entrepreneurial pilots pay for their own travel expenses, the cost of operating their own pilot boats and all other normal fringe benefits.

Each pilotage group runs essentially a union shop, although the Lake Ontario Pilots have very weak wording to that effect. Contract lengths and expiration dates vary. Lake Ontario Pilots negotiate their agreement every year and the contract expires December 31. The Corporation of St. Lawrence River and Seaway Pilots, who became employees of the GLPA in 1974, negotiate a two-year contract that expires March 31. The Corporation of Professional Great Lakes Pilots negotiate a three-year contract with an expiration date of March 31. The Corporation of Upper St. Lawrence Pilots contract for their services every year. The contract expires every March 31.³¹

TABLE I.C

MONTHLY SALARIES OF CANADIAN 'EMPLOYED' PILOTS

	1974	1975
Corporation of the St. Lawrence River and Seaway Pilots	\$3,020.00	\$3,200.00
Lake Ontario Pilots	2,590.56	2,737.20
Corporation of Professional Great Lakes Pilots*	3,020.00	3,200.00

Source: Contract file of the Great Lakes Pilotage Authority, Ltd.,
Cornwall, Ontario.

*This is the salary figure for District pilots, pilots who mainly
operate in designated waters. Monthly salaries of Lake pilots,
pilots that operate in undesignated waters, were \$2,633.00 in 1974
and \$2,900.00 in 1975.

Contract negotiations in 1976 were rather shaky and involved a work stoppage in the St. Lambert Lock to Snell Lock section. Although the contract expired March 31, a new two-year agreement was not signed until late October between the GLPA and the Corporation of St. Lawrence River and Seaway Pilots and the Corporation of Professional Great Lakes Pilots.³²

The employee pilots do have the right to strike. In the case of two of the pilot groups, the March 31 expiration date could be the source of considerable bargaining power as the System generally opens on or about April 1.

Still another group that could potentially close the System is the Canadian dispatchers who are also employees of the GLPA. They are members of the Public Service Alliance of Canada. Contracts expire June 30 and are negotiated yearly.

C. Special Issues in the System of Pilotage

The United States and Canada have devised a parallel system of pilotage. Each nation has an organization of pilots that work the international waters of the Great Lakes and St. Lawrence Seaway. But the status of the pilots in each system of pilotage is not parallel. Recent difficulties have occurred because of the difference in 'employment' status, and future problems will undoubtedly occur if the trend in the number of vessel transits continues. The difference in 'employment' status leads to further disagreements over any policy that affects the volume of work available. Two such policies are the Great Lakes Navigational Certificate and the waiver.

As stated earlier, the revenue of U.S. pilots and Canadian pilots in District 1 depends upon the number of vessel transits. If the number of vessel transits declines, all entrepreneur pilots suffer; if the number of transits increases, they gain. The income of employee pilots does not vary according to the number of vessel transits. The friction arises because the pilots whose earnings depend on the number of vessel transits must share the work with those whose income does not depend on the number of vessel transits. Differences in fringe benefits can exacerbate the friction. Entrepreneur pilots must pay for the costs incurred in the pursuit of their profession; employee pilots do not bear these travel and transportation costs.

Maintenance of parity in income with both employee pilots and licensed deck officers of enrolled vessels could be achieved through adjustments in the pilotage fees. The System is already a high time-cost route. Upward adjustment of pilotage fees, sufficient to achieve parity, would make the System a more dollar costly route as well. For example, the increase in pilotage charges from 1975 to 1977, for a vessel of 100 pilotage units, for a round trip between Snell Lock and Chicago was \$1,996. The total cost for the round trip in 1977 was \$7,026.³³

The Great Lakes Navigational Certificate takes on special significance as the number of vessel transits declines. The Great Lakes Navigational Certificate allows a registered vessel to be navigated without a registered pilot in undesignated waters if the Master of the vessel possesses certain qualifications. The requirements for a Great Lakes Navigational Certificate are:

1. Two round trips within the past two years over the waters to be travelled.
2. Knowledge of the Great Lakes Rules of the Road.
3. Knowledge of separate navigation courses for vessels.
4. Proficiency in the English language.
5. Possession of a radio/telephone license.³⁴

From the entrepreneur pilot's viewpoint, the Great Lakes Navigational Certificate is a device to reduce the demand for their services, and hence, to reduce their potential income. However, as a lost source of revenue, the Great Lakes Navigational Certificate appears to have generated more controversy than is warranted. In 1975, 527 of a total of 6,324 trips throughout the System were made under the Great Lakes Navigational Certificate; and only in the undesignated waters of Lake Michigan did they account for a significant dollar amount. In that area approximately 14 percent of the potential revenue was lost to the Great Lakes Navigational Certificate.³⁵

Other proponents of System-wide compulsory pilotage argue safety considerations.³⁶ Proponents and users of the Great Lakes Navigational Certificate argue that it prevents costly delays due to pilot unavailability. If the Master of the vessel is not "Certificated," the vessel must receive a waiver from either the GLPA or the Director, GLPS.³⁷ A waiver is granted only for undesignated waters and only if a pilot will not be available within six hours. In addition, issuing a waiver depends upon such conditions as weather, the condition of the vessel and any special circumstances of traffic.³⁸

The Seaway System is a very time expensive route, and profitability of the vessel is dependent upon the number of round trips the vessel can make during the navigation season. Delay of a vessel, even for six hours, especially when it can occur at eight or more locations during a round trip, can make the difference between a profitable transit and an unprofitable one. A day's delay for a vessel of 136.4 pilotage units would mean an increase of \$4,500 just in general operating expenses, not including fuel.³⁹

If a vessel cannot operate profitably in the System, it will no longer serve it. Therefore, the System is presented with the following alternatives with respect to pilotage:

1. To avoid costly delays, staff levels can be set to meet peak demands and some form of minimum income level can be guaranteed to pilots.
2. Normal staffing levels of pilots can be reduced to insure adequate income levels.
3. Increase or intensify the use of Great Lakes Navigational Certificates.
4. The pilotage system can be maintained as it is.

FOOTNOTES

¹United States Department of Transportation, Great Lakes Pilotage Review (Draft Staff Report), 1972, p. II-18. However, even before the Seaway opened the "sailing masters" had joined the International Organization of Masters, Mates and Pilots, and had taken part in a strike. See Appendix B for a fuller description of the incident.

²The distance from Duluth to Montreal is 1,337 statute miles and from Chicago to Montreal it is 1,244 statute miles.

³Report of the Royal Commission on Pilotage: Part V, Study of Canadian Pilotage, Great Lakes System (Ottawa: Information Canada, 1971), p. 4.

⁴Ibid.

⁵Department of Transportation, *ibid.*, p. I.7.

⁶Great Lakes Pilotage Regulations, Canada Gazette, Part II, Vol. 108, No. 8, and United States Department of Commerce, National Ocean Survey of the National Oceanic and Atmospheric Administration. Great Lakes Pilot 1975 (Washington, D.C.: U.S. Government Printing Office, 1975), p. 51
The Canada Shipping Act, Part VIa has been replaced by the Pilotage Act of 1972.

⁷Report of the Royal Commission, *ibid.*, pp. 6-7.

⁸The authorization for the United States Coast Guard to issue a Great Lakes Navigation Certificate is contained in 46 CFR 401.110(a)(6) and 46 CFR 401.510(b)(3)(iv).

⁹Conversation with Mr. John Hennessey, Senior Advisor-Personnel, Canadian Marine Transportation Administration, May 20, 1976, Ottawa, Ontario.

¹⁰Conversation with Mr. C. D. Milne, Administrative Officer, Great Lakes Pilotage Authority, May 21, 1976, Cornwall, Ontario.

¹¹46 CFR 401.300.

¹²Milne, *ibid.*

¹³The Secretary of Transportation of the United States of America and the Minister of Transport of Canada, Memorandum of Arrangements - Great Lakes Pilotage, January 19, 1977.

¹⁴This particular topic will be discussed in more detail in Appendix C.

¹⁵The Canadian gross revenue total does not include the earnings of those pilots who operate from St. Lambert Lock to the Snell Lock, but who also are employees of the Great Lakes Pilotage Authority.

¹⁶Report of the Royal Commission, *ibid.*, pp. 318-328, 372-373. Between 1961 and 1968, pilotage expenses ranged from a low of 12.03 percent of gross revenue in 1965 in District 2 to a high of 35.04 percent of gross revenue for 1962 in District 3.

¹⁷Federal Register, Vol. 42, No. 116.

¹⁸Pilotage rates listed in Table I-5 are for 100 pilotage units. To compensate for the increase in the size of vessels, resulting in a reduced number of vessels transiting the System, a formula was developed that related the size of the vessel to the number of pilotage units. A pilotage unit was defined as

$$\text{Pilotage Unit} = \frac{\text{Length} \times \text{Breadth} \times \text{Depth}}{10,000}$$

where the dimensions are measured in feet. The pilotage charge, route and distance is multiplied by a weighting factor, either .85, 1.00, 1.15 or 1.30, depending upon the number of pilotage units at which the vessel is rated.

¹⁹Department of Transportation, *ibid.*, p. II-9.

²⁰Conversation with Captain George Skuggen, Director, Great Lakes Pilotage Staff, Ninth Coast Guard District, United States Coast Guard, May 17, 1976, Cleveland, Ohio. Some pilots, especially in District 1, hold New York Harbor pilot's licenses and are able to supplement their income by working three months of the year in a different location. However, using a straight compensation test, it will still be difficult to recruit qualified pilots from the Great Lakes bulk fleet because their earnings are based on a nine month work year.

²¹46 CFR 401.220(e).

²²46 CFR 401.210(a)(5).

²³Department of Transportation, *ibid.*, p. II-80.

²⁴*Ibid.*, pp. II.63-64.

²⁵Telephone conversation with Captain George Skuggen, Director, Great Lakes Pilotage Staff, Ninth Coast Guard District, United States Coast Guard, July 30, 1976.

- ²⁶Albert Rees, The Economics of Work and Pay (New York: Harper & Row, Publishers, 1973), pp. 150-153.
- ²⁷Department of Transportation, *ibid.*, p. II.62.
- ²⁸International Longshoremen's Association, Directory-1975.
- ²⁹351 F.2d 771 (1965).
- ³⁰Contract file of the Great Lakes Pilotage Authority, Ltd., Cornwall, Ontario.
- ³¹*Ibid.*
- ³²Journal of Commerce, October 15, 1976.
- ³³Calculated from Table I.5.
- ³⁴Department of Transportation, *ibid.*, p. II.7.
- ³⁵Unpublished table available from Captain George Skuggen, Director, Great Lakes Pilotage Staff, Ninth Coast Guard District, United States Coast Guard.
- ³⁶Accident data are maintained for vessels navigated by a registered pilot, but not for vessels navigated under a Great Lakes Navigation Certificate.
- ³⁷Canada Gazette, *ibid.*, and 46 CFR 401.510.
- ³⁸Department of Transportation, *ibid.*, p. II.5-II.6.
- ³⁹Unpublished table available from Captain George Skuggen, Director, Great Lakes Pilotage Staff, Ninth Coast Guard District, United States Coast Guard.

II. LOCK OPERATORS AND AUXILIARY PERSONNEL

Lock operators perhaps have the greatest potential to disrupt the movement of traffic through the Great Lakes-St. Lawrence Seaway System. No other labor group has the capability of physically barricading the movement of vessels through the System.

The St. Lawrence River between Montreal and Lake Ontario contains seven locks. Five of the locks are operated by Canadian lock tenders and two are manned by U.S. lock operators. Eight locks, all of them operated by Canadian personnel, compose the Welland Canal and another five locks are situated at Sault Ste. Marie. Four of the locks in the Sault Ste. Marie are manned by U.S. lock operators and one is operated by the Canadians. The St. Lawrence River locks and five of the Welland Canal locks are single, and therefore, part of a chain, all of which must be transited to complete the journey. On the other hand, three of the Welland Canal locks are parallel, and in the Sault Ste. Marie, passage through one of the locks is all that is needed to pass the rapids.

A. Canadian

The St. Lawrence Seaway Authority (SLSA) is the employer of the Canadian lock operators. Slightly under 1,200 employees, represented by two unions and covered in four collective bargaining agreements, are involved in the operation of the locks. Covered personnel range from the lock operators to the clerical support staff.¹

The major agreement is the Operational and Maintenance Agreement which covers the lock crews and traffic controllers. These employees are represented by the Canadian Brotherhood of Railway, Transport and General Workers (CBRT). Approximately 1,000 employees are included in this agreement.

Five locals of the CBRT are parties to the Operational and Maintenance Agreement. Separate locals cover the following five geographical areas: 1) Ste. Lambert Lock and Cote Ste. Catherine Lock, 2) Upper Beauharnois Lock and Lower Beauharnois Lock, 3) Iroquois Lock, 4) the Welland Canal, and 5) the Sault Ste. Marie. The local plays an important role in day to day grievances, but its autonomy and authority are limited.

This is the major agreement because it covers the greatest number of workers and because it covers those workers most directly involved in the operation of the locks. It serves as the pattern for the three other agreements which are the Supervisory Group Agreement, the Headquarters Agreement and the Engineering Support Staff Agreement. These three contracts as well as the Operational and Maintenance Agreement have the same expiration date and are of the same duration.

Representing the employees in the Supervisory Group Agreement is the CBRT. These employees are second line supervisors such as maintenance engineers and some of the technical staff. The 100 workers included in this agreement are separated into two locals, the Eastern Region supervisory employees and the Western Region supervisory employees. The other two labor groups are not as crucial to the stability of the System, but could potentially affect its smooth operation. The Headquarters Agreement includes the clerical staff of the St. Lawrence Seaway Authority. These employees are also represented by the CBRT. Finally, the Engineering Support Staff Agreement covers an internal engineering/drafting staff. These employees are represented by the Public Service Alliance of Canada.

All employees of the St. Lawrence Seaway Authority have the right to strike. The SLSA is a crown corporation, a quasi-public body. Canadian public employees were granted the right to strike in 1967, but employees of the SLSA have had that prerogative since 1959. Lock operators are in a position to increase the bargaining power of several other Canadian labor groups. In 1974, the System was brought to a standstill because the Welland Canal lock operators threatened to walk off the job if U.S. pilots attempted to bring vessels through the Canal in violation of the Memorandum of Arrangements.²

The normal size of a lock crew is six persons. Each crew consists of a lockmaster, a lockmotorman, and four linesmen. In addition, a traffic controller is assigned to each lock.

B. United States

Two locks in the St. Lawrence River, the Snell Lock and the Eisenhower Lock, are operated by the St. Lawrence Seaway Development Corporation (SLSDC) of the United States Department of Transportation. Approximately 100 employees of SLSDC comprise a bargaining unit and are represented by the American Federation of Government Employees (AFGE), AFL-CIO.³ AFGE represents lock operators, maintenance, and other support personnel.

AFGE became the bargaining representative for the employees of the SLSDC in 1962 as a result of Executive Order 10988. This order encouraged federal employees to organize and to bargain collectively.⁴ However, federal employees do not have the right to strike. From 1958 to 1962 SLSDC employees were represented by an electrical union and a metal trades union.

The normal length of contract negotiated between AFGE and SLSDC is three years. Contract expiration date is during the normal overseas navigation season. This fact does not cause much concern because federal employees do not have the right to strike. Therefore, the probability of the System being closed down by closure of Snell Lock and Eisenhower Lock is quite small. However, public employee unions have used work slow-downs or other job actions short of a strike to attempt to improve their bargaining leverage in contract negotiations. Such job actions could delay vessels transiting the System, increase transit times, and make the system less time-competitive.

United States locks at the St. Mary's Falls Canal are operated by the U.S. Army Corps of Engineers.⁵ During the normal shipping season, three locks are operated 24 hours a day, seven days per week. Employees operate on a 40 hour per week basis, requiring 107 employees to man the three locks.

The lock crewmen are civil service employees, but they also comprise AFGE, Local 830. A two-year contract is negotiated and the normal contract expiration date is March 28, just prior to the opening of the shipping season.

Employment is not seasonal as employees are either rotated for lock duty (if one of the locks remains open for the extended season) or for normal overhaul and maintenance duties.

FOOTNOTES

¹Mr. Richard Laniel, Manager of Personnel, St. Lawrence Seaway Authority was the primary information source about the Canadian lock operators and auxiliary personnel. Mr. Laniel discussed several aspects of this labor group May 21, 1976, in Cornwall, Ontario, and in a letter dated June 16, 1976.

²Patrick J. Sullivan, "Labor-Management Relations on the Great Lakes: A New Beginning," Seaway Review, 5 (Spring, 1975): 7.

³Mr. William S. Spriggs, Director of Operations, St. Lawrence Seaway Development Corporation is the primary source of information concerning the employees of the SLSDC. Mr. Spriggs provided the information in a letter dated September 23, 1976.

⁴F. Ray Marshall, A. M. Cartter, and A. G. King, Labor Economics: Wages, Employment and Trade Unionism, 3rd ed. (Homewood, Illinois: Richard D. Irwin, Inc., 1976), pp. 98, 440-442.

⁵Mr. James Bray, Area Engineer, Department of the Army, Detroit District, Corps of Engineers, Sault Ste. Marie Area, was the primary information source concerning the employees of the Corps of Engineers. Mr. Bray provided the information in a letter dated February 9, 1977.

III. DOCK AND HARBOR LABOR

The International Longshoremen's Association (ILA) is the primary organizer of dock and harbor labor involved in the movement of general cargo through United States Great Lakes ports. Local unions affiliated with the ILA in the Great Lakes District not only include the longshore locals, but also include licensed tug personnel, grain handlers, warehousemen, pilots, cement workers and some nonmarine related workers.¹ Three general cargo docks that are organized by the International Brotherhood of Teamsters are the main exceptions to the near labor monopoly that the ILA possesses over the movement of general cargo through U.S. Great Lakes ports.

The ILA originated on the Great Lakes. The National Longshoremen's Association of the United States, formed in 1892, was the forerunner of the ILA.² Its name was changed to the International Longshoremen's Association in 1895.³ In 1900, tugboat captains and engineers organized the Licensed Tugmen's Protective Association (LTPA), and they affiliated with the ILA in 1902.⁴ By 1905, membership of the ILA also included grain handlers and almost all other labor crafts involved in the marine movement of cargo. Total membership in the ILA on the Great Lakes at the turn of the century numbered almost 50,000.⁵ Presently, the ILA does not represent as extensive an array of labor groups on the Great Lakes.

A. Dock Labor

Loading and unloading of general cargo is a relatively labor-intensive activity.⁶ The five major U.S. general cargo ports on the Great Lakes are Chicago, Detroit, Cleveland, Toledo and Milwaukee. Other Great Lakes ports that handle significant quantities of general cargo are Ashtabula, Buffalo, Duluth-Superior, Green Bay, Burns Harbor and Kenosha. Of the above mentioned ports, the ports of Ashtabula and Detroit are not organized by the ILA. Longshoremen in these ports are organized by the Teamsters.

The ILA locals involved primarily in the loading and unloading of general cargo in Great Lakes ports are listed in Table III.1.

TABLE III.1

GREAT LAKES AREA ILA LOCALS INVOLVED IN THE HANDLING OF GENERAL CARGO

Port	Local
Buffalo	Local 928
Burns - Indiana	Local 1969
Chicago	Local 19
	Local 1803
Cleveland	Local 1317
Duluth	Local 1366
Green Bay	Local 1014
Kenosha	Local 1315
Milwaukee	Local 815
Ogdensburg	Local 217-A
Oswego	Local 1570-A
Superior	Local 1037
Toledo	Local 1982

Source: International Longshoremen's Association, Directory - 1975.

Although these are the locals that are primarily involved in the handling of general cargo, not all members are so employed. For example, Local 1014 in Green Bay has approximately 200 members. Of these 200 members, almost one-half are covered by the longshore agreement and the other one-half are split between a coal dock agreement and an inland warehouse agreement.⁷ Local 815's agreements cover over 200 employees, some of which are employed in inland warehouses and cement plants, in addition to the longshore agreement. Local 19's agreement covers 500 employees, all of which are employed on the docks.⁸

The port of Detroit is the largest port on the Great Lakes that is organized by the Teamsters. Teamsters in the port of Detroit are covered by a three year contract, but they negotiate independently of the Teamsters locals in the ports of Ashtabula and Bay City. Approximately 450 to 550 longshoremen are employed in the port of Detroit on a somewhat regular basis.⁹

Since the opening of the St. Lawrence Seaway, the Great Lakes District of the International Longshoremen's Association has attempted to coordinate collective bargaining and to reduce interport competition based on difference in labor costs. In the 1960 negotiations, the Great Lakes locals of the ILA were able to equalize wages and fringe benefit costs for several of the ports. Prior to this contract there had been considerable variation in the

wages paid to longshoremen included in the general cargo agreements. Longshoremen in Chicago had received wages of \$2.33 per hour, whereas the wage rate was \$1.97 per hour in Toledo.¹⁰ However, a strike took place at several of the ports before the employers agreed to similar compensation packages.¹¹ During the contract negotiations of 1963, 1966, 1969 and 1972, several ILA locals negotiated similar wage and fringe benefit packages. Although the Great Lakes District coordinated efforts, each local still negotiated a separate three year agreement with the individual employer or the employers' association of that port.

1. Great Lakes Association of Stevedores Agreement.

In December 1974, the Great Lakes Association of Stevedores (GLAS) and the GLD-ILA signed a collective agreement. This agreement covered 17 stevedoring and terminal operators and 13 locals of the GLD-ILA operating in 12 ports. This master agreement, however, covered only six issues: 1) Wages, 2) Check-off (only for the GLD), 3) Contributions to Pension and Welfare Plans, 4) Length of Agreement, 5) Containerization, and 6) LASH (lighter aboard ship).¹²

The master agreement was significant in several respects.

1. It was the first time the employers joined together in a Lakes-wide bargaining agreement.
2. The contract expiration date was moved from March 31 to December 31.
3. The provision that containers consolidated within a given radius be stripped and stuffed on the dock was eliminated.
4. In the event no agreement is reached in local negotiations not covered by the Master Agreement, such issues would have to be first submitted to a joint GLAS-ILA committee for recommendations before a strike or lockout could be called.
5. The contract contained an explicit statement of the mutual intent and purpose of the agreement. The statement in the contract was as follows: "The GLAS-GLD-ILA Committee . . . shall have the authority . . . to take such action as they deem proper in the mutual interests of employers and employees to stimulate and encourage greater use of all of the Port facilities on the Great Lakes covered by this agreement and to make recommendations as to improving efficiency and to removal of impediments to such use."

The provisions of the contracts were designed to make Great Lakes ports more competitive with ports on the Atlantic and Gulf coasts. The primary method was to demonstrate that labor-management relations were stable and that there would be no interruption in work by the GLD-ILA. Moving the contract expiration date to December 31 removed some of the

uncertainty vessel operators might have had about committing their vessels to operation on the Lakes. Now the labor agreement would be signed prior to the opening of the navigation season, and breakdowns in local port negotiations would not trap their vessels.

The agreement also encouraged the movement of general cargo through the ports, especially containerized cargo, by eliminating the "stripping and stuffing" requirement on consolidated cargo. Elimination of this requirement would reduce the cost of shipping container cargo through the System and would speed up the movement of the containerized cargo. If containerized cargo could be attracted to the Great Lakes ports, it would generate more work for longshoremen and could also alleviate the imbalance in cargo movements.¹³

The GLAS agreement was partially due to the 1974 shipping season, during which vessel transits declined by one-third and general cargo tonnage declined by 20 percent. But it was also due to the GLD-ILA's acknowledgement of the changing nature of cargo movements. At their 1971 convention, their economic consultant stated:¹⁴

Some of the things we have been able to hold onto in the past are going to have go go in the face of new technologies, and we have left the day when it was 20 men with cargo hooks pushing boxes around in the hold of a ship, and if we don't recognize that fact, there will be no ships in the Great Lakes.

The impact of technological developments was reiterated by another speaker. He stated:¹⁵

When you take the ships of the tremendous size that they are now building, and these old ships are being replaced, and they are not going to have that many large ships, and they are going to be tremendous ships, . . . and it doesn't pay to run them all the way down and run them in the Lakes and run them out.

As stated earlier, for the new, large, capital-intensive vessels, speed is of prime importance. The physical configuration of the St. Lawrence Seaway and Great Lakes is one impediment. Excessive time in port is another.¹⁶ The GLAS agreement is designed to minimize time in port and to eliminate undue or unanticipated delays. That is the only factor that it can address.

From a theoretical viewpoint, the Great Lakes District locals sacrificed a considerable degree of bargaining power by agreeing to switch the contract expiration date from April 1, traditional date for the opening of the Seaway shipping season, to January 1. It is crucial for the terminal operators and stevedore contractors to operate during the available season. They do not have the flexibility of manufacturing establishments which can increase production and stockpile their product in anticipation of a strike and then reduce inventories if the strike occurs. The ILA locals possessed considerable leverage in negotiations. Because the terminal operators and stevedore contractors need to service the vessels when they arrive in port,

they would desire a quick settlement. Switching the contract expiration date to January 1 eliminated that special leverage. A strike at that time would be useless as the Seaway is closed to overseas shipping. Therefore, the employers would not be interested in a quick settlement, which often favors the union. E. R. Livernash argued that bargaining power of the union is greatest when it can reduce "the cost and consequences of concession by employers relative to the cost and consequences of a strike."¹⁷ When the contract expired April 1, the cost and consequence of a strike were large relative to the cost of a quick agreement.¹⁸

The GLD-ILA also regained some of the lost bargaining power by convincing the employers to form the Lakes-wide bargaining group, the Great Lakes Association of Stevedores (GLAS). Although prior to the formation of GLAS, the ILA locals under the guidance of the District had the conscious policy of negotiating equal wage and fringe benefit costs at all Great Lakes ports they represented, their ability to obtain large increases may have been hindered by the fact that each port's employer's association negotiated separate agreements with the local.¹⁹ The union locals could agree on what they considered to be an acceptable offer, but there was no guarantee that they could achieve that type of settlement in each port.²⁰ Writers in economics and industrial relations have traditionally held that it is advantageous for a union to negotiate with an employer's association because any cost increase resulting from the negotiated gain will be equal for all members. Therefore, the size of the negotiated agreement should not harm any one member's relative competitive position.²¹

The gain in bargaining power by the GLD-ILA is greatly limited by the declining volume of overseas general cargo traffic and the fact that they have not organized all Great Lakes ports. As stated earlier, the Teamsters have organized the ports of Detroit, Ashtabula, and Bay City. The importance of this factor was evidenced during the 1960 Lakes-wide strike called by the ILA. Many of the shipments normally handled through the struck ports were funneled through the port of Detroit.²² General cargo tonnage handled by the port of Detroit doubled between 1959 and 1960, and then declined in 1961 from the 1960 figure.²³

2. General Cargo Traffic and Longshore Employment.

General cargo traffic reached its peak in 1971 when 8.3 million tons passed through the Montreal to Lake Ontario section of the Seaway. General cargo traffic has declined since then to 4.5 million tons in 1976.²⁴ The decline in traffic volume is generally attributed to technological developments in marine cargo transportation and handling, which have made the Great Lakes-St. Lawrence Seaway a high-cost route.²⁵ Modern container vessels and combination vessels have very high fixed operating costs. In order to cover these costs, these vessels must complete as many payloads as possible. If the vessel is not physically excluded from entering the System, it faces a 29-day round-trip within the Seaway System, with at least one port of call in each of the five lakes, traveling from the mouth of the St. Lawrence River to Duluth and back.²⁶ More payloads can be generated on alternate trade routes, especially on those serving the Atlantic Coast.

The largest decline occurred between 1972 and 1973 when general cargo handled by U.S. Great Lakes ports decreased from 6.3 million tons to 4.8 million tons. However, 1974, when general cargo tonnage dropped to 3.7 million tons, is generally considered to be the most disastrous season.²⁷ Table III.2 lists the general cargo tonnage handled at selected U.S. Great Lakes ports since 1960.

Naturally, as general cargo traffic declines, employment opportunities for longshoremen also decline. In some instances, the number of longshoremen employed decreases; but in many instances, the number of hours worked by each longshoreman declines. As a result, many longshoremen become underemployed.²⁸

Ports undergo peak demands. One day several vessels may be in port--two days later the port may be empty. When in port, the vessel needs its cargo discharged or loaded as quickly as possible. Any delay reduces its potential profitability because it decreases the number of payloads it can complete. This requires that the available longshore labor force be large enough to handle the peak demands.

Peak demands also result in a sizeable number of workers being casually employed. Casual employment varies in degree but is most often found in industries where (a) the demand for labor is irregular, and (b) there is a continuous attachment of the employee and employer to the market.²⁹ Longshore labor is the usual example of casual employment. The employer's attachment results from having invested in facilities and equipment; the employee's attachment results from his membership in the union, seniority rights and certain pension and welfare benefits. Two outgrowths of casual employment are: (a) many workers are underemployed, and (b) total wage payments are distributed among too many employees to allow all to receive adequate earnings.³⁰

The hardship of casual employment is exacerbated by declining cargo traffic. The attachment to the market reduces occupational and geographical mobility. As general cargo traffic through a port declines, a greater proportion of the port's labor force becomes casually employed. When an entire seacoast suffers from the same decline, and when each port has its own casual labor force, the extent of underemployment becomes critical. On the other hand, the economics of marine cargo handling and transportation and the requirements of port service effectiveness necessitates a labor force that is attached to the market and of sufficient size to meet peak demands.

To calculate the size of the longshore labor force needed to handle a certain volume of cargo, one rule of thumb is that 15 longshoremen (one gang with one forklift) can handle 25 tons of breakbulk cargo in one hour.³¹ This implies that 1.67 tons of breakbulk cargo generate one man-hour of employment. Figures in Table III.3 have been calculated using this rule, and they represent one set of feasible employment hours for longshoremen

from general cargo traffic in selected U.S. Great Lakes ports. These figures do not purport to be the actual hours worked.³² Gang size and productivity vary by port and by the method of packaging. In one port a gang of 15 longshoremens may be able to unload 30 tons of breakbulk cargo in one hour, but if the cargo is palletized, only 12 longshoremens employing four forklifts may be able to unload 60 tons per hour.

Feasible employment hours declined by more than one-half between 1971 and 1974 in the port of Chicago and all other ports, except Green Bay, Indiana-Burns and Kenosha, suffered similar proportionate declines. The effect on employment can be studied further by calculating the number of full-time equivalent jobs that can be supported by the volume of general cargo traffic. A full-time job was assumed to be one that offered 40 hours of work per week for 35 weeks, totaling 1,440 hours. Table III.4 contains the results of the calculations. In the port of Chicago, feasible full-time equivalent employment in 1974 was at its lowest since 1963; and in the port of Duluth-Superior, there was insufficient traffic to maintain one full-time equivalent gang. However, it must be remembered that this calculation is made under the assumption that vessels enter a port on an assembly line basis for only eight hours per day and for only five days per week.

It was stated earlier that the irregular demand for longshore services is one of the primary characteristics of casual employment. For instance, in the port of Green Bay in 1975, the volume of general cargo traffic was sufficient to provide 15.3 feasible full-time jobs. In 1975, 92 longshoremens were listed on the seniority roster in the port of Green Bay. Not one of the longshoremens worked at least 1,440 hours. Four longshoremens worked over 1,000 hours and 85 worked some hours.³³ All individuals on the list that had longshoring as their primary occupation were technically underemployed. The experience of longshoremens in Green Bay is not the exception, but the rule. During the 1974 shipping season, many longshoremens earned less than the poverty-level of income.³⁴

One reason for the extent of casual employment and underemployment in U.S. Great Lakes ports is that for the cargo volume available, there are too many general cargo ports on the Great Lakes. In 1975, 16 U.S. Great Lakes ports handled some general cargo. Almost every port has its own longshore labor force which is generally of sufficient size to meet normal peak demands, but this also means that in every port a proportion of the longshore labor is casually employed. The development of two load centers or regional ports (one on Lake Michigan and the other on Lake Erie or Lake Ontario) could reduce underemployment of longshoremens and improve the competitiveness of the System. The fact that individual ports seldom generate sufficient cargo to meet a vessel's load factor forces vessels to make several ports of call, increases the time spent in the Great Lakes and reduces the number of payloads the vessel can realize.

Load centers would eliminate several ports of call because sufficient cargo to meet the vessel's load factor could be assembled at the two ports. Time in the System could be reduced for the vessel and could make the

TABLE III.2
 GENERAL CARGO TRAFFIC THROUGH SELECTED U.S. GREAT LAKES PORTS (IN TONS)

	1960	1961	1962	1963	1964	1965	1966	1967
Buffalo	24,960	19,906	28,703	27,065	26,640	46,688	33,902	34,965
Chicago	673,535	706,365	787,029	824,224	1,102,990	1,474,079	1,065,976	1,850,460
Cleveland	221,524	251,415	273,365	279,520	293,675	578,616	600,733	619,724
Detroit	435,682	344,580	478,327	541,868	676,337	1,551,729	1,434,183	1,533,782
Duluth-Superior	12,034	29,535	43,976	102,368	144,171	155,504	92,383	136,282
Green Bay								
Indiana-Burns								
Kenosha								
Milwaukee	113,610	131,860	137,798	146,863	243,147	259,648	223,413	260,520
Toledo	73,835	75,383	86,441	128,618	145,792	285,491	335,650	330,095

TABLE III.2
(continued)

	1968	1969	1970	1971	1972	1973	1974	1975	1976
Buffalo	27,666	24,349	43,596	47,579	13,851	14,506		16,674	18,601
Chicago	2,549,169	2,191,290	2,022,322	2,695,426	2,344,060	1,733,294	1,293,797	902,113	1,258,801
Cleveland	1,010,008	943,806	710,157	973,117	864,043	712,855	559,144	381,303	499,683
Detroit	2,277,815	1,591,523	1,908,496	2,510,527	2,057,316	1,664,135	1,475,441	1,072,760	1,219,687
Duluth-Superior	148,413	115,640	103,788	146,304	203,389	71,575	33,819	8,941	25,594
Green Bay	30,833	45,499	12,154	15,969	13,880	9,364	37,543	41,760	3,702
Indiana-Burns							2,041	19,572	40,381
Kenosha						35,620	36,771	42,409	64,747
Milwaukee	414,817	426,630	361,085	415,863	318,831	269,028	158,875	208,775	150,527
Toledo	397,894	291,040	330,687	500,780	379,849	270,291	217,497	275,217	361,845

Source: Traffic Report of the St. Lawrence Seaway (Selected Years)
Prepared by the St. Lawrence Seaway Authority and the St. Lawrence Seaway Development Corporation

TABLE III.3

FEASIBLE EMPLOYMENT HOURS FOR GENERAL CARGO LONGSHOREMEN FOR SELECTED
U.S. GREAT LAKES PORTS

	1960	1961	1962	1963	1964	1965	1966	1967
Buffalo	14,946	11,920	17,187	16,207	15,592	27,957	20,301	20,937
Chicago	403,314	422,973	471,275	493,547	660,473	882,682	997,590	1,114,048
Cleveland	132,649	150,548	163,692	167,377	175,853	346,477	359,720	371,092
Detroit	260,887	206,335	286,423	324,472	404,992	929,179	858,795	918,432
Duluth-Superior	7,206	17,868	26,333	61,298	86,330	93,116	55,319	81,606
Green Bay								
Indiana-Burns								
Kenosha								
Milwaukee	68,030	78,958	82,514	87,942	145,597	155,478	133,780	156,000
Toledo	44,213	45,140	51,761	77,017	87,301	170,953	199,790	197,662

TABLE III.3
(continued)

	1968	1969	1970	1971	1972	1973	1974	1975	1976
Buffalo	16,566	14,580	26,105	28,490	8,294	8,686		9,984	11,138
Chicago	1,526,449	1,312,150	1,210,971	1,614,028	1,403,629	1,037,886	774,429	540,187	753,773
Cleveland	604,795	565,153	425,244	582,705	517,391	426,859	334,817	228,325	299,211
Detroit	1,363,961	953,007	1,142,811	1,503,309	1,231,925	996,488	883,497	642,371	730,351
Duluth-Superior	88,870	69,246	62,149	87,610	121,191	42,857	20,251	5,354	15,325
Green Bay	18,463	27,245	7,278	9,562	8,311	5,607	22,481	25,006	2,216
Indiana-Burns							1,222	11,720	24,180
Kenosha						21,329	22,019	25,395	38,770
Milwaukee	248,393	255,467	216,219	249,020	190,917	161,095	95,135	125,015	90,135
Toledo	238,260	147,275	189,016	303,461	227,454	161,851	130,238	166,597	216,673

Source: Table III.2

Method of Calculation: Employment Hours (E.H.) = General Cargo Tonnage (G.C.T.)/1.67

TABLE III.4

POTENTIAL FULL-TIME JOBS (35 WEEKS) FOR GENERAL CARGO LONGSHOREMEN
FOR SELECTED U.S. GREAT LAKES PORTS

	1960	1961	1962	1963	1964	1965	1966	1967
Buffalo	10.4	8.3	11.9	11.3	10.8	19.4	14.1	14.5
Chicago	280.1	293.7	327.3	342.7	458.7	612.9	692.8	773.6
Cleveland	92.1	104.5	113.7	116.2	122.1	240.6	249.8	257.7
Detroit	181.1	143.2	198.9	225.3	281.3	645.2	596.3	637.8
Duluth-Superior	5	12.4	18.3	42.6	59.9	64.7	38.4	56.7
Green Bay								
Indiana-Burns								
Kenosha								
Milwaukee	47.2	54.8	57.3	61.1	101.1	107.9	92.9	108.3
Toledo	30.7	31.4	35.9	53.5	60.6	118.7	138.7	137.3

TABLE III.4
(continued)

	1968	1969	1970	1971	1972	1973	1974	1975	1976
Buffalo	11.5	10.1	18.1	19.8	5.8	6.0		6.9	7.3
Chicago	1060.3	911.2	840.9	1120.9	974.7	720.8	538.0	375.1	523.4
Cleveland	420.0	392.5	295.3	404.7	359.3	294.4	232.5	158.6	207.8
Detroit	947.1	661.8	793.6	1043.9	855.4	692.0	613.5	446.0	507.2
Duluth-Superior	61.7	48.1	43.1	60.9	84.2	29.8	14.1	3.7	10.6
Green Bay	12.8	18.9	5.1	6.6	5.8	3.9	15.6	17.4	1.5
Indiana-Burns							.8	8.1	16.8
Kenosha						14.8	15.3	17.6	26.9
Milwaukee	172.5	177.4	150.1	172.9	132.6	111.9	66.1	86.8	62.6
Toledo	165.5	102.3	137.5	210.7	157.9	112.4	90.4	115.7	150.5

Source: Table III.3

Method of Calculation: Full Time Jobs (F.T.J.) = E.H./1440

Seaway a more attractive trade route. The extremes between peaks and valleys would most likely be reduced when vessels are making only two ports of call because; (a) scheduling of vessel transits could be done more efficiently as the number of possible complications is reduced and port productivity per cargo type would be fairly constant; and (b) reduced time in the System could generate greater volumes of cargo and induce more frequent service. Only two longshore labor forces of sufficient size to meet normal demands would be required, and most longshoremen at the load centers would have full-time employment. Cargo previously handled by the local port would be transported to a load center by an overland feeder system, or, where feasible, a vessel feeder system. Total employment of longshoremen would most likely decrease, relative to the initial level, but long run employment levels may be greater than under the present system, and those longshoremen who are employed, would not be underemployed.

B. Tugmen

Tugs are necessary for the maneuvering and berthing of large vessels in the tight confines of entrance channels and harbors. Since 1900, tug captains and engineers have been organized by the Licensed Tugmen and Pilots' Protective Association (LTPPA).³⁵ At that time the LTPPA on the Great Lakes was composed of 28 locals, but has since declined to 14.³⁶ Although some tug captains are organized by the Teamsters and others are not, the LTPPA has been the principal representative.

LTPPA is affiliated with the ILA comprising its Local 374 and has been so since 1902.³⁷ The fact that tug captains and engineers are affiliated with the ILA completes the chain of ILA organization of almost all U.S. labor groups involved in the handling and movement of overseas general cargo on the Great Lakes-St. Lawrence Seaway System.

The collective bargaining agreement to be considered is LTPPA's agreement with Great Lakes Towing Company. Great Lakes Towing is the principal operator of tugs that provide towing service to overseas vessels and domestic bulk vessels. LTPPA also negotiates an agreement with the Great Lakes Dock and Dredge Association, an association of construction tug operators, as well as with three steamship companies.³⁸

The Grand Lodge of the LTPPA negotiates a master agreement with the Great Lakes Towing Company and several topics are negotiated in supplemental local agreements.³⁹ A delegate from each local takes part in the master negotiations. It is a three-year agreement that expires April 1. Table III.5 lists the location and number of the LTPPA locals on the Great Lakes. However, not all locals are included in the negotiation with Great Lakes Towing Company as this company does not operate tugs in all of the ports where locals are located.

Four persons comprise the crew on most commercial (nonconstruction) tugs. The captain and licensed engineer are represented by the LTPPA,

TABLE III.5

GREAT LAKES LOCALS OF THE LTPPA

Local *	Location
374-1	Duluth
374-2	Chicago
374-3	Ashtabula
374-4	Buffalo
374-5	Cleveland
374-8	Milwaukee
374-9	Toledo
374-11	Sault Ste. Marie
374-12	Erie
374-14	Sandusky
374-16	Detroit
374-24	Sturgeon Bay
374-26	Muskegon
374-34	Detroit

*In addition, the Grand Lodge (374) is located in Duluth and Local 374-A (Licensed and Unlicensed Offices, both Deck and Engine Departments) is located in Chicago.

Source: International Longshoremen's Association, Directory - 1975.

but the two unlicensed crewmen on tugs are organized by the Inland Boatmen's Union (IBU) of the Seafarer's International Union-Atlantic, Gulf, Lakes and Inland Waters District (SIU).⁴⁰ The SIU has recently absorbed the IBU, although each maintain their own contracts and seniority rosters.⁴¹

Tug crews have been victimized by the same forces that have reduced longshore employment and pilots' work loads--the decline in transits by vessels engaged in overseas general cargo traffic. In addition, they have also suffered from reduced demand for their services resulting from the declining number of vessels composing the Great Lakes bulk and tanker fleet, and from the increasing number of bulk and tanker vessels that have had bow thrusters installed. For instance, it has been estimated that 90 percent of the overseas general cargo vessels that use Lake Calumet Harbor in South Chicago employ tugs.⁴² In the last five years, due to the decline in the number of overseas vessel transits, as well as the "Lake fleet effects," Great Lakes Towing Company has reduced IBU employment by 25 percent, to 150,⁴³ and the number of crews employed by Great Lakes Towing in Chicago has been reduced from 25 to 9.⁴⁴ Total Great

Lakes membership of LTPPA has also declined from approximately 475 in 1960 to a current membership of less than 300.⁴⁵

Vessels are not legally required to use tugs to enter most Great Lakes ports, but their use is at the discretion of the Master of the vessel. Because some tugs have been inactivated and some fleets have been split between sister ports, as a result of the decrease in the demand for towing services, overseas vessels that use tugs face another potential delay. If no tug is available when the vessel wishes to enter the harbor, and if the vessel waits till one becomes available, the overall transit time of the vessel may be increased by a considerable amount. The Master of the vessel has two choices: (a) he may decide to enter an unfamiliar harbor with a vessel that is difficult to maneuver at low speeds and be a safety hazard, or (b) he may wait for tug assistance. If he selects option (b) and has to do so at several ports, with the result that the time-cost increases preclude profitable operations, the vessel may be withdrawn from service to the System.

C. Grain Handlers

Grain handlers have formed separate locals on the basis of craft distinctions within the International Longshoremen's Association. The craft structure of these ILA locals is indicated in Table III.6. Of the Great Lakes region locals listed, only Local 153, Local 1037, and Local 1366 are not devoted exclusively to the handling of grain. The other locals are quite autonomous, both from the Great Lakes District of the ILA and from other locals that represent grain handlers. The autonomous organizational structure results in a fragmented structure of collective bargaining. Agreements are signed on a port-by-port basis. In individual ports, if there are several grain craft locals, these locals bargain independently with the employer or employers' association. For example, in the port of Chicago, the elevator operators bargain jointly, but they negotiate a separate contract with each local. In effect, two of the major elevator operators establish the pattern which is followed by the other operators.⁴⁶ To further add to the fragmented structure is the fact that not all grain elevators on the Great Lakes are organized by ILA locals.⁴⁷

In contrast to the port of Chicago situation, Locals 1366 and 1037 in the ports of Duluth and Superior have bargained jointly with major elevator operators in the two ports prior to 1963. A three year contract is written with the contract expiration date set for April 1.⁴⁸

One of the results of the individual port-by-port agreements is that handling charges differ significantly from port-to-port. For example, as listed in Table III.7, grain shovelers in the port of Buffalo during 1975 received \$25.68 per 1,000 bushels; whereas in the port of Chicago, they received \$11.50 per 1,000 bushels. Rates for shovelers and the number of elevators are also given for other selected Great Lakes ports.

Several different efforts have been made to equalize and improve collective bargaining conditions for grain handlers. To increase the bargaining power of the grain locals, the GLD-ILA has endorsed the merger of the American Federation of Grain Millers with the ILA.⁴⁹ Coupled with this, the GLD-ILA is also seeking Lakes-wide bargaining for grain locals with a Lakes-wide employers' group.⁵⁰ One result of a Lakes-wide agreement would undoubtedly be the equalization of rates for all Great Lakes ports.

TABLE III.6

GREAT LAKES AREA ILA GRAIN CRAFT LOCALS

Local	Name	Location
101	Grain Trimmers	Chicago
109	Loading and Unloading Grain	Buffalo
153	Grain and General Freight Handlers and Ship Fitting	Toledo
418	Grain Elevator, Flour, Feed and Mill Workers	Chicago
421	Weighmasters	Chicago
1037	General Cargo, Grain and Allied Workers	Superior
1286	Grain Elevator Employees	Buffalo
1286-1	Grain Car Cooper	Buffalo
1295	Grain Trimming, Fitting, Sacking, Cleaning and Related Work	Milwaukee
1326	Grain Workers	Oswego
1366	General Cargo and Allied Workers	Duluth
1570-A	Grain Scooping and General Longshore Work	Oswego
1622	Grain Inspection, Sampling and Weighing of Grain	Buffalo
1955	Grain Elevator Employees	Toledo

Source: International Longshoremen's Association, Directory - 1975.

TABLE III.7

ELEVATORS AND SHOVELER'S RATES PER 1,000 BUSHELS OF GRAIN IN SELECTED U.S. PORTS

	1960	1961	1962	1963	1964	1965	1966	1967
<u>Buffalo</u>								
Elevators	12	12	12	12	12	12	12	9
Shoveler's Rates	11.50	11.80	12.00	12.25	12.43	12.43	13.08	13.38
<u>Duluth</u>								
Elevators	6	6	6	6	6	6	6	6
Shoveler's Rates	7.00	7.00	7.00	8.00	8.00	8.00	8.00	8.00
<u>Milwaukee</u>								
Elevators	3	2	2	2	2	2	2	2
Shoveler's Rates	8.67	7.00	7.00	7.00	7.00	7.00	7.50	7.50
<u>South Chicago</u>								
Elevators	9	9	9	9	9	9	9	9
Shoveler's Rates	6.40	6.50	6.50	6.50	6.50	7.40	7.55	7.55
<u>Superior</u>								
Elevators	7	7	7	7	7	8	8	8
Shoveler's Rates	7.00	7.00	7.00	8.00	8.00	8.00	8.00	8.00

TABLE III.7
(continued)

	1968	1969	1970	1971	1972	1973	1974	1975
<u>Buffalo</u>								
Elevators	9	9	10	9	9	8	5	5
Shoveler's Rates	13.38	14.23	15.00	16.10	17.46	19.07	23.20	26.58
<u>Duluth</u>								
Elevators	7	6	6	6	6	6	6	6
Shoveler's Rates	8.00	16.50	16.50	16.50	16.50	19.00	19.00	19.00
<u>Millwaukee</u>								
Elevators	2	2	2	2	2	2	2	2
Shoveler's Rates	7.50	8.50	9.00	9.25	10.00	10.00	11.50	11.50
<u>South Chicago</u>								
Elevators	7	7	8	7	7	7	7	7
Shoveler's Rates	7.55	7.55	9.00	9.25	10.00	10.00	11.50	11.50
<u>Superior</u>								
Elevators	7	7	7	7	7	7	6	6
Shoveler's Rates	8.00	16.50	16.50	16.50	16.50	19.00	19.00	19.00

Source: John O. Greenwood, Greenwood's Guide to Great Lakes Shipping (Cleveland: Freshwater Press, Inc., Selected Years).

FOOTNOTES

¹The many different crafts and skills included in the GLD-ILA are probably best exemplified by several of the locals' titles. For instance, the full name of Local 815 is "General Cargo, Automobile, Grain and Warehouse Workers, Checkers, Loaders and Unloaders of Railway Cars, and Cement Plant Employees; General Longshoremen, All General Dock and Warehouse Workers, Including, but not limited to, Crane Operators, Engineers, Maintenance Men, Mechanical Workers, Fork Truck Operators, and the apprentices of all degrees." Local 1279 has the following title, "Divers, Salvage, Scrap Iron, Steel Handling, Wiping Cloth Workers and Miscellaneous Employees." International Longshoremen's Association, Directory - 1975.

²Charles P. Larrowe, Maritime Labor Relations on the Great Lakes (East Lansing, Michigan: Michigan State University Press, 1959), p. 15.

³Ibid.

⁴Ibid., p. 19.

⁵Ibid., p. 20.

⁶This statement is somewhat of a tautology. Although general cargo has usually been defined as high value per unit cargo, a more appropriate definition may be, cargo that is packaged such that it requires labor intensive handling techniques. For example, the economic impact of a port is usually calculated through a multiplier. One of the chief components of the original impact is wages paid to dock employees. If one is simply concerned with increasing the economic impact of a port, one could ship iron ore in bags. Comments made at the MARAD Round Table Discussion on Port Data Requirements, September 21-22, 1976, Chicago, Illinois.

⁷Conversation with John Brzek, Secretary-Treasurer, Local 1014, GLD-ILA, Green Bay, Wisconsin, July 13, 1976.

⁸Union Contract Files, U.S. Department of Labor, Bureau of Labor Statistics, Division of Industrial Relations, Washington, D.C.

- ⁹ Letter from Mr. Don McCarty, Vice-President, Detroit Marine Terminals, Detroit, Michigan, January 19, 1977.
- ¹⁰ "Dockers Picket Five Lake Ports," The [Montreal] Gazette, May 18, 1960.
- ¹¹ Ibid., and conversation with Patrick J. Sullivan, Secretary-Treasurer, Great Lakes District-International Longshoremen's Association, Buffalo, New York, May 19, 1976.
- ¹² Master Agreement Between Great Lakes Association of Stevedores and the Great Lakes District of the International Longshoremen's Association.
- ¹³ The imbalance in cargo movements is discussed more thoroughly by Eric Schenker, Harold M. Mayer and Harry C. Brockel, The Great Lakes Transportation System (Madison: University of Wisconsin Sea Grant College Program, 1976), Chapter 3.
- ¹⁴ Speech by Monsignor James A. Healy, 1971 Convention of the Great Lakes District - International Longshoremen's Association, AFL-CIO, Proceedings (Buffalo: n.p., 1971), pp. 43-44.
- ¹⁵ Speech by Thomas Gleason, Jr., ibid., pp. 75-76.
- ¹⁶ Even in 1960, excessive time in port and the time required to transit the System were major complaints of vessel operators. James R. MacDonald, "Struggling Seaway: It's Faced With Strike Threat, Traffic Lag, Increased Competition," The Wall Street Journal, May 6, 1960.
- ¹⁷ E. R. Livernash, "The Relation of Power to the Structure and Process of Collective Bargaining," The Journal of Law and Economics 6 (October, 1963): 18-19.
- ¹⁸ It has been argued that unions tend to win short strikes, managements tend to win long strikes. (See Livernash, pp. 15-18) Therefore, a strike at the opening of the shipping season should force management to a quick settlement. However, this only holds if the union's desired solution falls within the bargaining range. The 77 day strike by Local 815 in the port of Milwaukee in 1972 apparently desired a solution that did not fall within management's view of the bargaining range.
- ¹⁹ Some of the remaining disparity between wages and fringe benefit costs per employee in U.S. Great Lake ports was eliminated in 1963 when some of the employers adopted a modified version of the Atlantic Coast longshoremen's wage and fringe benefit package.
- ²⁰ In 1963, the ILA locals of the major ports of the Great Lakes held a wage policy meeting in Milwaukee. It was agreed at that meeting that the contract offer received by Local 815 would be acceptable to the other locals, if offered. However, the Duluth local doubted that they would be able to obtain a similar offer as they were also attempting to change the contract length. Minutes of the Wage Policy Committee, Great Lakes District of the International Longshoremen's Association, March 23, 1963.

²¹Livernash, *ibid.*, pp. 24-28.

²²Monsignor Healy, *ibid.*, p. 45. In addition, the port of Toledo was handling general cargo as the United Mine Workers had organized some of the longshoremen in this port.

²³St. Lawrence Seaway Authority and St. Lawrence Seaway Development Corporation, Traffic Report of the St. Lawrence Seaway (Annual Reports).

²⁴*Ibid.*

²⁵Schenker, Mayer and Brockel, *ibid.*

²⁶Unpublished table available from Captain George Skuggen, Director, Great Lakes Pilotage Staff, Ninth Coast Guard District, United States Coast Guard.

²⁷St. Lawrence Seaway Authority, *ibid.*

²⁸To be underemployed has several meanings: (a) those who would prefer to work more than labor market opportunities permit them, (b) those who work full-time but who are unable to earn an income greater than the poverty-level income, and (c) those who are employed in occupations that require skills, training and education levels that are below that which they possess. Richard Perlman, The Economics of Poverty (New York: McGraw-Hill Book Company, 1976), pp. 139-140.

²⁹Hosseine Morewedge, The Economics of Casual Labor: A Study of the Longshore Industry (Berne: Herbert Lang & Company, Ltd., 1970), pp. 19-20.

³⁰*Ibid.*, pp. 18-19.

³¹These formulas were provided by John Brzek, Secretary-Treasurer, Local 1014, ILA, Green Bay, Wisconsin. A slightly different formula that provides the same results is that ninety longshoremen are needed to handle 1,200 tons of breakbulk cargo in an eight hour shift. K. M. Johnson and H. C. Garnett, The Economics of Containerization (London: George Allen & Unwin, Ltd., 1971), p. 71.

³²The actual number of employment hours in a port is a function of the negotiated gang size, their productivity and the distribution of types of cargo handled in the port. As the proportion of palletized cargo increases, the number of employment hours decreases. Again, these figures are not the actual hours of employment, but are calculated simply for analytical purposes. However, these figures should be overestimates of the actual number of hours worked.

³³Figures were provided by John Brzek, Secretary-Treasurer, Local 1014, ILA, Green Bay, Wisconsin, April 14, 1976.

³⁴"We understand up in the Great Lakes that there is some of your membership that are only making from 34 to 36 hundred. That is not near a living wage." Speech by Harry Hasselgren, Secretary-Treasurer, ILA. 1975 Convention of the Great Lakes District-International Longshoremen's Association, AFL-CIO, Proceedings (Buffalo, n.p., 1975), p. 2.

³⁵Charles P. Larowe, Maritime Labor Relations on the Great Lakes (East Lansing: Michigan State University, 1959), p. 19. At that time the union's official name was Licensed Tugmen's Protective Association. It was changed to include Pilots between 1958-1960.

³⁶Ibid., and International Longshoremen's Association, Directory - 1975.

³⁷Larowe, ibid., p. 19.

³⁸Conversation with Robert F. MacLaren, President, Local 374-8, LTPPA, April 26, 1976.

³⁹Conversation with Captain Jack Bohl, LTPPA, Milwaukee, Wisconsin, August 6, 1976.

⁴⁰Letter from Jack Bluit, Detroit Port Agent, Seafarers International Union, Atlantic, Gulf, Lake and Inland Waters District, September 20, 1976.

⁴¹Ibid.

⁴²Letter from Maxim M. Cohen, General Manager, Chicago Regional Port District, June 22, 1976.

⁴³Bluit, ibid.

⁴⁴Ibid.

⁴⁵1960 Convention of the Great Lakes District - International Longshoremen's Association, AFL-CIO, Proceedings (Buffalo: n.p., 1971), and Captain Bohl, ibid.

⁴⁶Cohen, ibid.

⁴⁷Ibid.

⁴⁸Agreement (1972-75) Between International Longshoremen's Association, AFL-CIO, Locals 1366 and 1037 and the Duluth-Superior Marine Association. In this agreement, the contract expiration date was moved from March 1 to April 1.

⁴⁹Proceedings, 1971, ibid., and Proceedings, 1975, ibid.

⁵⁰Ibid.

IV. SEAMEN

Separate from the movement of overseas general cargo is an equally important sector of the marine cargo industry, the internal Great Lakes movement of bulk cargo. Principal commodities moved in this industry are iron ore, coal, sand, stone, cement, grain, paper bulk and petroleum. Except for using the same navigation lanes and being subject to the same physical constraints, the two marine cargo industries seldom interact. Whereas the overseas movement of general cargo is primarily handled by "common carrier" vessels that will provide service to almost all shippers, the movement of bulk cargo is primarily "private." Bulk cargo is generally moved from raw material sites to production facilities in vessels operated by the same firm that also operates the two other facilities, or by chartered bulk carriers.¹

A. Description of Labor Management Relations

Five national unions and two independent unions represent seamen on the internal Great Lakes fleet.² Licensed deck personnel, when organized, are represented by either the Masters, Mates and Pilots, Great Lakes and Rivers District (MMP-GLD); or the Associated Maritime Officers (AMO), which is affiliated with the Marine Engineer's Beneficial Association, District 2; or the Licensed Tugmen's and Pilots' Protective Association (LTPPA), which is Local 374 of the International Longshoremen's Association (ILA); or the Great Lakes Licensed Officers' Organization (GLLO). Almost all licensed engineers are represented by the Marine Engineers' Beneficial Association, District 2 (MEBA); but the LTPPA is recognized as the bargaining representative for some engineers, while engineers on several fleets are not unionized. Cooks and stewards, when unionized, have been organized by either MEBA-AMO; or the Seafarers' International Union-Atlantic, Gulf, Lakes and Inland Waters District (SIU); or the National Maritime Union of North America (NMU); or the Great Lakes Seamen, Local 5000 of the United Steelworkers of America (GLS). Unlicensed personnel are represented by either the GLS, the SIU, or the NMU. Of the unions listed, MEBA-AMO, LTPPA, GLS, NMU, and SIU are all affiliates of the American Federation of Labor-Congress of Industrial Organizations (AFL-CIO).

(There are a number of small independent vessel operators on the Great Lakes. It would be impossible to include all such fleets in the analysis. Of necessity, the analyses and data presentations will be limited to major vessel operators on the Great Lakes.)³

Labor-management relations on the internal Great Lakes fleet are as dissimilar to labor-management relations on the other East, West and Gulf Coasts as is the nature of the cargo movements. There are three primary differences.

1. GLS is the dominant union for unlicensed personnel, and their contract settlement serves as the pattern for all settlements. On the other coasts, the SIU and NMU are the usual representatives of unlicensed personnel.
2. On the other coasts, the International Organization of Masters, Mates and Pilots (MMP), which is affiliated with the ILA, is the main representative of licensed deck officers. On the Great Lakes, the Great Lakes and Rivers District of Masters, Mates and Pilots is an independent union and has organized only several fleets.⁴
3. Employers on the Great Lakes have been slow to formalize employer's associations for the purpose of conducting collective bargaining negotiations with the seamen's unions. There is, however, a considerable amount of joint bargaining. On the coasts, much of the collective bargaining is handled by employer's associations.

Table IV.1 lists the major U.S. fleets on the Great Lakes, number of vessels in the fleet, the unions that represent their licensed deck officers, licensed engineers, cooks and stewards, unlicensed personnel and whether the fleet belongs to any formal bargaining group.⁵ This table reveals several interesting relationships. Although the SIU represents the unlicensed personnel on 11 fleets and the GLS represents them on 8 fleets, these 8 fleets total 105 vessels, whereas the 11 fleets organized by the SIU account for 45 vessels. Also of interest is the fact that licensed deck officers of four fleets and licensed engineers of three fleets have not organized, but have remained unrepresented.

For the iron ore trade, GLS representation of unlicensed personnel is simply an extension of the concept of industrial unionism. Generally, the same company that owns and operates the vessels is also an affiliate or subordinate of the same company that owns and operates the raw material processing facilities and the production facilities where the finished product is made. Work sites at both the origin and destination of the vessel journey are organized by the United Steel Workers of America, and GLS representation of fleet personnel just extends the degree of union organization within the industry.⁶ The bargaining power of the union increases as its organization of industry's work force increases. Organization along craft lines, even though the entire Great Lakes fleet is so organized, does not produce the same leverage as industrial unionism does in this instance. Two reasons for this situation are:

TABLE IV.1

U.S. FLEETS ON THE GREAT LAKES AND UNION REPRESENTATION

	Fleet Size	Licensed Deck*	Licensed Engine	Cooks and Steward	Unlicensed Personnel	Employers Association
Amoco Oil Company	3	None	None	NMU	NMU	
Bethlehem Steel Corporation - Great Lakes Steamship Div.	6	AMC	MEBA	MEBA/AMC	GLS	
Boland-Cornelius, Inc. - American Steamship Company	13	AMC	MEBA	SIU	SIU	GLAMO
Amersand Steamship Company	1	AMC	MEBA	SIU	SIU	GLAMO
Gartland Steamship Company	1	AMC	MEBA	NA	SIU	GLAMO
Reiss Steamship Company	3	AMC	MEBA	NA	SIU	GLAMO
Cleveland-Cliffs Steamship Co.	14	AMC	MEBA	MEBA/AMC GLS	GLS	
Cleveland Tankers Inc.	2	MUP-GLD	MEBA	NMU	NMU	
Erie Navigation Company	3	LTPPA	LTPPA	SIU	SIU	GLAMC
Erie Sand Steamship Company**	3	LTPPA	LTPPA	SIU	SIU	GLAMC
Ford Motor Company - Marine Division	5	None	None	NMU	NMU	
Inland Steel Company	7	None	MEBA	MEBA/AMC	GLS	
International Harvester Co.	1	AMC	MEBA	MEBA/AMC	GLS	
Litton Great Lakes Corp.	1	AMC	MEBA	MEBA/AMC	SIU	GLAMO
Medusa Corporation - Medusa Cement Company	2	AMC	MEBA	SIU	SIU	GLAMC
National Gypsum Company - Furon Cement Division	6	LTPPA	LTPPA	None	SIU	GLAMO
National Steel Corporation - Hanna Mining Company	7	None	None	None	GLS	
Oglebay Norton Company - Columbia Transportation Div.	17	AMC	MEBA	NA	GLS	
Fringle Transit Company	2	AMC	MEBA	MEBA/AMC	SIU	GLAMO
Pickands, Mather & Company Interlake Steamship Company	9	AMC	MEBA	MEBA/AMC	GLS	
S & E Shipping Corporation Kinsman Lines	10	AMC	MEBA	MEBA/AMC	SIU	
United States Steel Corp. - Great Lakes Fleet	46					
Straight Dock Fleet	22	MUP-GLD	MEBA	NA	GLS	
Self-unloader Fleet	6	AMC	MEBA	NA	GLS	
Not Operating	18					

*In some instances, Masters are not included

**Self-unloader Fleet

NA - Not Available

1. Two negotiations are necessary when workers are unionized along craft lines; the bargain between the different crafts to insure that they will negotiate as one body, and the negotiations with the vessel operator. Much energy can be expended during the first stage.
2. For the ore carriers, Great Lakes bulk shipping is not really a separate industry. It can be viewed as another input (joint factor of production), and therefore, one segment of the steel industry.

Because of this special leverage, the GLS negotiated increases serve as the pattern for all other settlements.

For non-ore carriers, or those vessels not owned or chartered by the same company that owns facilities at both ends of the voyage, the traditional craft organizational structure is probably as good as any.⁷ No additional leverage would be attained by having the GLS serve as the representatives of the unlicensed personnel.

B. Great Lakes Marine Labor Organizations

1. United Steelworkers of America, Great Lakes Seamen - Local 5000.

The GLS represents the unlicensed personnel on eight fleets, as indicated in Table IV.1. As stated earlier, the eight fleets account for 105 vessels and support an active membership of 1520 seamen.⁸ The 105 vessel total is the actual number of vessels owned by the eight fleets, but the number of vessels operating during the season may be considerably less.⁹

The eight fleets with which GLS negotiates have formed two multi-employer bargaining groups, although neither group is formally organized as an association. United States Steel Corporation - Great Lakes Fleet Division, Bethlehem Steel Corporation - Steamship Division, Inland Steel Company and Wisconsin Steel Company (International Harvester) form the "Basic Group" which bargains jointly. The "Independent Group," composed of Cleveland-Cliffs Iron Company, Columbia Transportation Division of Oglebay Norton Company, Hanna Mining Company and Interlake Steamship Division of Pickands Mather & Company, also bargains jointly.¹⁰ Both sets of contracts are essentially the same for all eight fleets. Wage scales and structures are identical, but some variations in other provisions occur because of specialized machinery or conditions in the three year contracts that expire August 1.¹¹

The 1974 contract negotiations in the steel industry were the first conducted under the Experimental Negotiating Agreement (ENA). This agreement specified that no strike or lockout would occur during the 1974 negotiations. One reason for the ENA was that both the companies and the union, in the long run, were negatively affected by a strike or the threat of a strike. In the

several previous contract negotiating years since the Seaway opened (1962, 1965, 1968 and 1971), iron and steel movements through the System increased relative to the previous year's tonnage by 42 percent in 1962, 143 percent in 1965, 61 percent in 1968 and 40 percent in 1971.¹² Furthermore, these increases became somewhat permanent as tonnages handled in the following noncontract years nearly equalled that handled in the contract year. In 1974, although there were certain extenuating circumstances, iron and steel movements through the System declined by 17 percent. Thus, U.S. iron and steel producers were losing a share of the domestic consumption and employment was declining or not increasing as rapidly as it should have been.

The ENA could have several favorable consequences. If the ENA results in U.S. steel and iron producers acquiring a greater share of the domestic iron and steel customers, and perhaps, even increasing their exports, employment opportunities for seamen could increase as some vessels are put back into operation to meet the increased raw material requirements. Furthermore, prior to ENA, with the threat of a strike, the steel companies increased the production of iron and steel products and stockpiled them before the work stoppage. This also meant that iron ore movements were increased prior to the work stoppage. With the ENA, these peaks of production and iron ore movements may be eliminated. Consequently, the size and carrying capacity of the fleet may be decreased, although the remaining vessels of the fleets would be activated more days of the navigation season. If vessels are simply eliminated from the fleet, job loss will be proportionate to the skill level composition of the fleet's labor force. On the other hand, if the age and size composition of the fleet is altered, it could result in a different distribution of job loss.

Unlicensed personnel will bear the severest burden of changing the age and size composition of the fleets and of automating the vessels. Whereas an old "maximum laker" tended to carry 27 unlicensed crewmen, newer conventional vessels tend to carry between 18 and 20 unlicensed crewmen.¹³ One particular vessel, the PRESQUE ISLE, a 1,000 foot pusher barge, carries only 12 unlicensed crewmen.¹⁴ Even if the manning requirements do not change, many positions normally filled by unlicensed personnel will be lost. A generally accepted rule is that one 1,000-foot vessel can retire from service three to five old, smaller vessels. Thus, between 54 and 100 jobs could be eliminated by construction of one new "maximum laker." However, this has not occurred as yet because many of the loading and unloading facilities can handle only the smaller vessels.¹⁵

2. Seafarers' International Union - Atlantic, Gulf, Lakes and Inland Waters District.

The SIU represents unlicensed personnel on 11 major Great Lakes fleets which total 45 vessels. Current membership in the SIU is approximately 2,000 members on the Great Lakes, although this figure includes members from the recently absorbed Inland Boatmen's Union.¹⁶

Between 800 and 1,200 unlicensed seamen are needed to staff 45 vessels, depending upon the age composition of the fleet. In 1975, the average number of days worked was 139 days for skilled (but unlicensed) deck personnel and 96 days for unskilled deck personnel.¹⁷ Through job rotation, the 800 to 1,200 jobs could support a membership of 2,000 persons. However, there is a slight bias in using 1975 figures. The available opportunities for unlicensed SIU members are probably overstated because in 1975 and 1976, some licensed personnel were employed in positions not requiring a license because no opportunities were available for their skill level.¹⁸ The SIU also represents the cooks and stewards on several fleets.

Ten of the 11 fleets with which the SIU negotiates are joined into a formal employers association, Great Lakes Association of Marine Operators (GLAMO), for the purpose of collective bargaining with the SIU.¹⁹ GLAMO members include American Steamship Company, Amersand Steamship Company, Gartland Steamship Company, Reiss Steamship Company, Erie Navigation Company, Erie Sand Steamship Company, Litton Great Lakes Corporation, Cement Transit Company (Medusa Cement Company), Huron Cement Division and Pringle Transit Company. Kinsman Lines also negotiates with the SIU, but does not belong to GLAMO, although the agreement it signs is almost identical to that negotiated by GLAMO.²⁰ The normal length of the contract is three years, and it expires July 31.²¹

SIU membership has decreased significantly in the last ten years. Before 1965, SIU represented between 4,000 and 5,000 seamen on the Great Lakes.²² Currently, they represent 2,000. In 1965, there were 214 bulk carriers (not including tankers) in the Great Lakes fleet; in 1975, that same category of vessels numbered only 142.²³ The decrease in the number of vessels and the reduction of crew sizes have had a devastating effect on employment; but part of the employment decline has been caused by the withdrawal of American flag vessels from the overseas transport of grain.

3. National Maritime Union of North America (NMU).

The NMU is a relatively minor labor organization on the Great Lakes bulk fleet. It has organized the unlicensed personnel on three fleets, totalling ten vessels, as is indicated on Table IV.1. In addition, it has organized the cooks and stewards on these same three fleets and also represents the unlicensed personnel on some of the car ferry fleets.

Initially the NMU had organizing jurisdiction over the unlicensed seamen on the U.S. Great Lakes bulk fleet; but after several unsuccessful attempts, it ceded jurisdiction to the United Steel Workers of America. Since that time, the role played by the NMU on the Great Lakes has not approached that which it occupies on the Coasts, where it is the primary organizer of unlicensed personnel on U.S. subsidized carriers.²⁴

As indicated in Table IV.1, the two principal U.S. Great Lakes tanker fleets' unlicensed personnel are organized by the NMU. Amoco Oil Company

and Cleveland Tankers Inc., bargain simultaneously with the NMU. One interesting difference between the two companies is that the Amoco Oil Company vessels, being somewhat older, carry 15 unlicensed seamen and four cooks - stewards per vessel, whereas Cleveland Tankers vessels carry eight unlicensed seamen and one cook-steward per vessel.²⁵

4. Marine Engineers' Beneficial Association, District 2 - Associated Maritime Officers (MEBA-AMO).

Probably the most pervasive labor organization on the U.S. Great Lakes bulk fleet is the Marine Engineers' Beneficial Association, District 2, and its affiliate, the Associated Maritime Officers. MEBA represents the licensed engineers on 17 fleets and AMO represents the licensed deck officers on 14 fleets. Cooks and stewards on several fleets have also been organized by MEBA-AMO. The total membership of MEBA-AMO on the Great Lakes is approximately 1,000. When the rivers and offshore membership is included, the total numbers 1,700.²⁶

MEBA-AMO negotiates separately with each employer, although the employers do join together in informal bargaining groups along similar lines as their arrangement when negotiating with GLS. MEBA-AMO also negotiates with all fleets, except the Huron Cement Division, which negotiates with the SIU. This is an informal relationship and does not constitute joint bargaining.²⁷ The bargaining relationships are listed in Table IV.1.

In 1974, MEBA-AMO negotiated the Family Leave Plan (FLP) into its three year contracts. This plan could have important ramifications for Great Lakes maritime manpower. Under this plan a licensed officer (including stewards) may "earn leave days at the rate of twenty days of leave for each sixty days of work aboard the vessel."²⁸ Currently, taking the leave time is voluntary, but if it were negotiated to be mandatory, it could increase the required manpower pool to operate the present fleet by one-third. However, with the trend toward altering the age and size composition of the fleet, and the consequent decline in available positions, FLP may simply keep the current manpower pool employed.

It does appear that the "jumboizing" and modernizing of the fleet has reduced the number of available positions for licensed engineers. In 1970, 973 licensed engineers were employed in vessels greater than 1,000 gross registered tons (grt) and worked an average of 197.3 days on the Great Lakes. In 1974, the respective numbers had dropped to 934 engineers working an average of 175.6 days; in 1975, the number of engineers had declined still further to 891, while the average number of days worked had decreased to 156.4.²⁹ In addition to the "jumboizing" and modernizing, part of the downward movement may also have been due to the recession of 1975.

5. Masters, Mates and Pilots, Great Lakes and Rivers District (MMP-GLD).

The Masters, Mates and Pilots, Great Lakes and Rivers District is independent of the International Organization of Masters, Mates and Pilots

having broken away from the MMP in 1973. The MMP-GLD represents licensed deck officers on the Cleveland Tankers fleet and the straight deck fleet of United States Steel, Great Lakes Fleet. These two fleets account for 24 vessels and generate approximately 72 jobs, excluding that of the Master of the vessel.

The MMP-GLD plays a relatively minor role on the U.S. Great Lakes fleet, although it was very active in the 1950's in the organizing efforts of licensed deck personnel. The minor role played by the MMP-GLD is unlike that of the International Organization of Masters, Mates and Pilots on the Atlantic, Gulf and Pacific Coasts, where they represent the licensed deck officers on the fleets composing the five major employers' groups.³⁰

As indicated in Table IV.1, the licensed deck personnel of the self-unloader division of the United States Steel, Great Lakes Fleet, which numbers six vessels, are organized by the Associated Maritime Officers. However, according to the collective bargaining agreement, it appears that the AMO will not increase its influence on this fleet. Included in the current contract between the MMP-GLD and the Great Lakes Fleet of United States Steel is the following clause:³¹

The Company recognizes the Union as the exclusive bargaining agency with respect to rates of pay, wages, hours of work and conditions of employment for all Licensed Mates employed on straight-decker bulk freight vessels, vessels used to transport steel products, and newly constructed vessels engaged primarily in the transport of iron ore, operated by or under bareboat charter to the Company's Great Lakes Fleet.

The current agreement is a three-year agreement and the contract expiration date is August 1.

One recent development is that the judicial maneuvers attempting to thwart the affiliation of MMP-GLD with the International Longshoremen's Association have been cleared away by the United States Supreme Court. The MMP-GLD has been attempting to affiliate with the ILA since 1974.³² This affiliation would be a natural development as the International Organization of Masters, Mates and Pilots affiliated with the ILA in 1971, forming the ILA-Marine Division.

6. Great Lakes Licensed Officers (GLLO).

The Great Lakes Licensed Officers is an independent union that primarily represents the licensed deck and engine room officers on several of the U.S. Great Lakes car ferry fleets. The GLLO first appeared on the Great Lakes in 1951.³³ Its current membership is approximately 50 and its membership will probably continue to decline.³⁴

C. Great Lakes Maritime Manpower

As the Great Lakes fleet is modernized and employment opportunities for unskilled seamen are declining, retraining and employing the excess labor should be a central concern. On the other hand, for skilled manpower, shortages may be imminent. The important aspect for policy consideration is that these potential shortages are in those skill levels requiring the most training.

Table IV.2 is a listing of the average age of each skill level employed on the U.S. Great Lakes domestic fleet composed of vessels of greater than 1,000 gross registered tons. A quick inspection reveals that the average age of each skill level has not changed significantly since 1970. The average age of licensed deck officers in 1970 was 46.3 years; by 1975 it had only increased to 47.6 years. Similar changes were experienced in the other skill levels. An important consideration, though, is that in 1970, the age group 45-49 years inclusive, constituted 20 percent of the licensed deck officers and also accounted for 20 percent of the days worked. By 1975, this same age group accounted for 23 percent of the licensed deck officers but 26 percent of the days worked.³⁵

From Table IV.3 it can be seen that the modal age group for the two licensed skill groups, licensed deck and licensed engine, has been growing older. In 1970 the modal age group for licensed deck officers was 40-44 years, inclusive, and for licensed engineers it was also 40-44 years. By 1975, the modal age group for both occupations was 45-49 years, inclusive. This situation becomes even more critical because fully 46 percent of the licensed deck officers and 47 percent of the licensed engineers are older than the modal age group. The only other skill group which faces a similar problem is that of the skilled engine workers. In 1975, 34 percent of their skill class was between the ages of 45 to 54 years.

Part of the concern caused by this development is because (a) the training lag for the licensed occupations is quite long and (b) there are very few candidates in the pipeline. From the individual's viewpoint, it is a very rational response not to enter a career on the Lakes. It requires a long training period and employment opportunities have declined steadily since the mid-sixties. In 1965 there were 214 bulk cargo vessels, but by 1975 that number had decreased to 142 vessels. This trend is expected to continue, with the fleet eventually being composed of about 100 large vessels.³⁶ Given that the average vessel will normally carry four licensed deck officers and between three and five licensed engineers, the number of available positions for licensed deck officers has declined by slightly less than 300 in the last ten years. For licensed engineers the reduction has ranged from approximately 215 positions to 360 positions.

Not only must the licensed deck manpower pool supply the domestic bulk fleet, it must also serve as the source for registered entrepreneur pilots. As stated in Chapter I, these pilots are required on all overseas (registered)

TABLE IV.2

AVERAGE AGE OF GREAT LAKES SEAMEN
BY OCCUPATION FOR SELECTED YEARS

Occupation	1970	1974	1975
Licensed Deck	46.3	45.3	47.6
Licensed Engine	45.5	46.6	47.1
Skilled Deck	39.3	38.9	39.9
Skilled Engine	43.9	47.1	45.3
Skilled Cook & Steward	45.6	46.1	46.4
Unskilled Deck	29.9	27.4	30.4
Unskilled Engine	36.5	32.1	35.0
Unskilled Cook & Steward	43.7	40.3	41.6

Source: Calculations based upon the Seamen's Employment Analysis System.

TABLE IV.3

PROPORTION OF SKILL GROUP IN EACH AGE GROUP

	Licensed Deck		Licensed Engine		Skilled Deck		Skilled Engine		Unskilled Deck		Unskilled Engine	
	1970	1974	1970	1974	1970	1974	1970	1974	1970	1974	1970	1974
19 and under	.000	.001	.000	.000	.010	.034	.015	.006	.004	.000	.065	.144
20-24	.002	.019	.021	.050	.074	.049	.117	.147	.156	.063	.052	.075
25-29	.014	.047	.050	.025	.052	.058	.107	.103	.116	.083	.069	.059
30-34	.066	.054	.044	.047	.046	.039	.108	.089	.084	.099	.056	.081
35-39	.117	.083	.066	.112	.073	.061	.008	.084	.091	.095	.090	.084
40-44	.283	.118	.122	.187	.117	.124	.163	.122	.106	.144	.138	.118
45-49	.188	.265	.231	.157	.206	.188	.151	.162	.152	.159	.188	.170
50-54	.130	.146	.203	.175	.166	.169	.076	.114	.136	.118	.145	.170
55-59	.086	.141	.130	.123	.142	.173	.066	.073	.075	.119	.124	.130
60-64	.055	.090	.097	.098	.091	.101	.050	.052	.054	.087	.100	.098
65-69	.035	.021	.023	.010	.021	.026	.012	.011	.007	.026	.012	.005
70 and over	.010	.010	.007	.009	.007	.007	.008	.002	.002	.005	.002	.000

Source: Calculations based upon Seamen's Employment Analysis System.

vessels that transit the St. Lawrence Seaway and Great Lakes. The current average age of the entrepreneur pilots is 55 years.³⁷ Consequently, the Great Lakes Pilotage Staff, to meet their staffing requirements, will be recruiting from the pool of Great Lakes licensed deck personnel.

Another important aspect is the contract provision, the Family Leave Plan, negotiated by MEBA-AMO. Although all licensed deck and engine personnel are not presently covered under this or a similar plan, soon it will probably be available to all licensed personnel. Such a plan will become uniform either to forestall unionization of presently nonunion personnel or because of the strong pattern in agreements between unions on the Great Lakes. Under the present plan, covered personnel have the option of taking 20 days of leave for every 60 days of shipboard service. This leave may be taken during the shipping season or it may be waived.³⁸ One manifestation of the plan is that average days worked by licensed deck officers and engine officers decreased by 16 and 19 days, respectively, between the 1974 and 1975 seasons. This plan was newly negotiated in 1974 and first became operative during the 1975 shipping season.

If taking the leave becomes mandatory, it would increase the needed number of licensed personnel by one-third. At present there does not appear to be a sufficient number of licensed personnel in the pipeline to accommodate it.³⁹

Unskilled deck and engine classes appear to constitute a sufficient manpower pool to handle future needs. As indicated in Table IV.3, the modal age of both classes is 20-24 years. For a significant segment of unskilled personnel, their attachment to the U.S. Great Lakes bulk fleet labor force is only marginal. They have not made a substantial investment in the occupation and can easily switch to occupations and industries that offer relatively better opportunities. Therefore, although the changing composition of the fleet has probably taken its greatest employment toll on the unskilled occupations, it has affected that group which has the least attachment to the industry and occupation and which has the greatest relative mobility and flexibility.

D. Changing Composition of the Great Lakes Bulk Fleet

As alluded to several times in this chapter, the changing composition of the Great Lakes bulk fleet has been the underlying factor in altering the status of seamen on the Great Lakes. The first factor is that the number of vessels has declined. In 1960, there were 286 bulk freighters, including self-unloaders, in the Great Lakes fleet. By 1976 the number had decreased to 139. Table IV.4 contains the record of fleet size and capacity from 1960-1976. As indicated, the single-trip carrying capacity of the bulk freighter fleet has declined by almost one million tons, although the actual tonnage carried is greater. What has happened is that the average carrying capacity per vessel has increased by almost six thousand tons and these new larger vessels are faster, have quicker turnaround times and consequently, can handle more payloads per shipping season.

The decline in fleet size of bulk freighters and self-unloaders has been most apparent since 1970, as has the increase in the average carrying capacity per vessel. One reason for the increase in vessel size was the opening of the Poe Lock at Sault Ste. Marie in 1969. The new lock permitted the increase of the size of the "maximum laker" on the four upper Great Lakes to 1,000 feet. Another reason was the passage of the Merchant Marine Act of 1970 that extended the program of construction subsidies to vessels built and operated in the Great Lakes. The Merchant Marine Act is discussed in more detail in Appendix D.

Even more of a decline was witnessed in the tanker fleet. Between 1960 and 1976 the number of tankers decreased from 55 to 10. Its overall one-time carrying capacity declined by a factor of three, but its average carrying capacity per vessel increased by nearly three thousand tons. The tanker fleet also experienced a significant decline from 1971 to 1976, but this was partially due to the completion of the interstate pipeline through several of the Great Lakes states.

Another aspect of the new vessels is that they are more automated. Tasks which had been performed manually are now done by machines. This may result in the elimination of some positions from the necessary minimum crew.

Minimum crew sizes for domestic bulk vessels are determined by the United States Coast Guard. Total crew size is at the discretion of the vessel operator but subject to negotiation with the union, if any. The basic starting requirement in determining the minimum crew is the statutory mandate of three watches (shifts) on vessels documented under the laws of the United States. Each watch has the following complement of personnel on duty:⁴⁰

- (1) one licensed navigation officer.
- (2) one competent wheelsman at the wheel (able seaman minimum rank).
- (3) one competent lookout (able seaman).
- (4) one general duty seaman (ordinary seaman).
- (5) one licensed engine officer.
- (6) one skilled QMED (qualified man, engine department).
- (7) one non-rated engine room employee (wiper).

In addition each vessel is managed by the Captain of the vessel and Chief Engineer. The Coast Guard does not set minimums as to cooks, stewards and porters; but their number is also subject to negotiation with the union, if any.

The above listed personnel represent the manning requirements on relatively old vessels. On newer vessels, which have a call bell system

TABLE IV.4

UNITED STATES GREAT LAKES BULK FLEET

Type, Number, and Capacity	Year							
	1960	1961	1962	1963	1964	1965	1966	1967
Bulk Freighters and Self-Unloaders (number)	286	266	254	234	223	214	205	202
Capacity (1,000 tons)	3,436	3,314	3,204	3,033	2,915	2,821	2,736	2,696
Average Capacity (1,000 tons) Per Vessel	12.01	12.45	12.61	12.96	13.07	13.18	13.34	13.34
Oil Tankers (number)	55	48	48	46	49	48	42	41
Capacity (1,000 tons)	173	159	159	159	152	149	136	131
Average Capacity (1,000 tons) Per Vessel	3.14	3.31	3.31	3.45	3.10	3.10	3.23	3.19
Total (number)	383	343	325	301	292	278	263	259
Capacity (1,000 tons)	3,813	3,614	3,490	3,302	3,181	3,050	2,959	2,915

TABLE IV.4
(continued)

Type, Number, and Capacity	1968	1969	1970	1971	1972	1973	1974	1975	1976
Bulk Freighters and Self-Unloaders (number)	196	192	190	189	185	162	154	142	139
Capacity (1,000 tons)	2,647	2,609	2,629	2,622	2,670	2,584	2,550	2,412	2,499
Average Capacity (1,000 tons) Per Vessel	13.50	13.58	13.83	13.87	14.43	15.95	16.58	16.98	17.98
Oil Tankers (number)	40	39	40	39	16	14	13	11	10
Capacity (1,000 tons)	128	129	136	133	74	73	68	59	61
Average Capacity (1,000 tons) Per Vessel	3.20	3.30	3.40	3.41	4.62	5.21	5.23	5.36	6.10
Total (number)	250	245	240	230	208	207	193	178	174
Capacity (1,000 tons)	2,850	2,812	2,811	2,801	2,777	2,746	2,698	2,551	2,639

Source: Lake Carriers' Association, Annual Report (Selected Years)

and several other compensating features, the fourth person (ordinary seaman) has been eliminated from the deck watch. Similarly, on automated vessels, the engine room watch, in some instances, has been reduced to two persons. The eliminated position is that of the wiper. Thus the full minimum crew complement on an older vessel would include:⁴¹

Captain	1
Chief Engineer	1
Deck (4 men X 3 watches)	12
Engine (3 men X 3 watches)	<u>9</u>
	23

(plus cooks, stewards, porters and other unlicensed personnel as negotiated).
Newer, more automated vessels would have the following manning requirement:

Captain	1
Chief Engineer	1
Deck (3 men X 3 watches)	9
Engine (2 men X 3 watches)	<u>6</u>
	17

Still further reductions may take place in the engine room of fully automated vessels. This reduction would require that only one person per watch be in the engine room. The usual number of cooks and stewards that are carried is two per vessel, although in newer vessels, there is a tendency to reduce that number to one. As stated earlier, the normal number of unlicensed personnel carried per vessel ranges from 18 to 20. That would indicate that between four and six additional unlicensed personnel positions are added to the Coast Guard minimum crew complement pursuant to the labor agreement.

Similar reductions in minimum crew sizes have also occurred for tankers. Minimum requirements for older tankers were 21 persons (4 licensed deck, 4 licensed engine and 13 distributed between skilled and unskilled deck and engine personnel). New tankers may sail with a crew of 15 persons (4 licensed deck, 3 licensed engine and 8 skilled and unskilled deck and engine personnel).

FOOTNOTES

¹Of course, this last statement is a broad generalization as there are bulk vessels owned by third parties that do move raw materials, and also there is a small amount of interlake traffic of general cargo.

²Because two small vessels operated by the Erie Sand Steamship Company will not be included in the analysis, only seven unions will be studied. If these two vessels were included, it would raise the number of unions to eight as the International Union of Operating Engineers represents the unlicensed personnel on these two vessels. Correspondence with representatives of Erie Sand Steamship Company.

³Except for the case of the Erie Navigation Company, this will mean only fleets whose vessels are greater than 1,000 gross registered tons (grt) will be included.

⁴Most of the information contained in Table IV.1 was obtained through communications with the principal actors in the System, the union leaders and the marine superintendents for the fleets. Of special assistance were Ton Conway, MEBA-AMO, Jack Bluit, SIU, C. T. Armstrong, GLS, and Riley O'Brien of Inland Steel Company.

⁵The fact that USWA worked both ends of the vessel journey was an important reason for NMU to cede jurisdiction over the ore carriers to the USWA. Charles P. Larrowe, Maritime Labor Relations on the Great Lakes (East Lansing, Michigan: Michigan State University, 1959), pp. 76-77.

⁶It must be remembered that the GLS does represent a craft group. However, GLS is a union specific to one industry. Traditional maritime craft unions represent different skill levels across industry, or instead, view shipping as the industry.

⁷Letter from C. T. Armstrong, Sub-District Director, District #4, United Steel Workers of America, November 24, 1976.

⁸During the 1976 shipping season, the United States Steel Corporation had eighteen vessels idled. Great Lakes Red Book 1976, 73rd edition (St. Clair Shores, Michigan: Fourth Seacoast Publishing Company, Inc., 1976).

⁹ Armstrong, *ibid.*

¹⁰ *Ibid.*

¹¹ Calculations made on the basis of figures contained in the Traffic Report of the St. Lawrence Seaway (annual series), prepared by the St. Lawrence Seaway Authority and the St. Lawrence Seaway Development Corporation. Although the calculations include both import and export traffic of iron and steel products, import tonnages have usually been much greater than export tonnages.

¹² Letter from Jack Bluit, Detroit Port Agent, Seafarers International Union, September 20, 1976.

¹³ Correspondence with representatives of Litton Great Lakes Corporation.

¹⁴ Armstrong, *ibid.*

¹⁵ Bluit, *ibid.*

¹⁶ Department of Commerce, Maritime Administration, Office of Maritime Manpower, Seamen's Employment Analysis System, 1975. (The SEAS is a computer information retrieval system which provides aggregated information of all seamen that sign Coast Guard Discharge slips, i.e., work on vessels of greater weight than 1,000 gross registered tons.)

¹⁷ Bluit, *ibid.*

¹⁸ *Ibid.*

¹⁹ *Ibid.*

²⁰ *Ibid.*

²¹ *Ibid.*

²² Lake Carriers Association, Annual Report, Selected Years.

²³ C. F. Horr, H. S. Marcus and E. G. Frankel, A Review of Maritime Labor and A Study of the Longshore Industry, Report No. 72-8 (Cambridge: Massachusetts Institute of Technology, Commodity Transportation and Economic Development Laboratory, June 1972), pp. 15-16.

²⁴ Telephone conversation with Eugene Anderson, Assistant to J. W. Windhauser, Manager, Marine Operations, Amoco Oil Company, November 12, 1976.

²⁵ Letter from Tom Conway, Assistant to Melvin Pelfrey, Vice President, Lakes, District 2, MEBA-AMO, July 27, 1976.

²⁶ *Ibid.*

²⁷ Agreement Between Inland Steel Company (Vessel Department) and District 2, Marine Engineers Beneficial Association, AFL-CIO, Covering Licensed Engineers, August 1, 1976.

²⁸ Department of Commerce, Maritime Administration, *ibid.*

²⁹ U.S. Department of Commerce, Maritime Administration, Seafaring Guide & Directory of Labor - Management Affiliations (Washington, D.C.: U.S. Government Printing Office, 1975), pp. 1-2.

³⁰ Agreement Between United States Steel Corporation and Masters, Mates and Pilots, Great Lakes and Rivers District, August 1, 1974, p. 5.

³¹ 45 LW 3238, No. 75-1898 (1976), 532 F.2d 1074 (1976), and 388 Federal Supplement 208 (1975).

³² Larrowe, *ibid.*, pp. 73-74.

³³ U.S. Department of Labor, Bureau of Labor Statistics, Directory of National Unions and Employee Associations, 1973 (Washington, D.C.: U.S. Government Printing Office, Supplement 3, January 1976), p. 41.

³⁴ Calculations based upon Seamen's Employment Analysis System, *ibid.*

³⁵ Conway, *ibid.*

³⁶ Conversation with Captain George Skuggen, Director, Great Lakes Pilotage Staff, Cleveland, Ohio, May 17, 1976.

³⁷ Inland Steel Company, *ibid.*

³⁸ In 1975, there were only 95 licensed deck officers and 136 licensed engineers between the ages of 18 and 39 that were employed on vessels greater than 1,000 gross registered tons.

³⁹ 46CFR 157.01 - 157.30, and Memorandum between Mr. Harry Brockel and Captain J. A. Wilson, Chief, Marine Safety Division, Ninth Coast Guard District, November 16, 1976.

⁴⁰ An important caveat is that the Coast Guard establishes the minimum crew requirement for each individual vessel. The requirements listed are just rules of thumb.

⁴¹ Correspondence with representatives of Cleveland Tankers, Inc.

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V. SUMMARY AND CONCLUSIONS

In 1959, prior to the opening of the St. Lawrence Seaway, Professor Larrowe used the phrase, "organizational chaos" to describe labor relations on the Great Lakes.¹ At that time he was primarily concerned with the introduction of ocean-going seamen and their concepts of unionism and labor relations upon labor-management relations on the Great Lakes. The success of the System was assumed. No longer is the system of labor-management relations characterized by fragmented, unstable relationships, although conflicts do still arise. Instead, the current question is: Can the system of labor relations on the Great Lakes-St. Lawrence Seaway assist to counteract technological advances and physical limitations which have reduced the competitiveness of the System?

Given this question, the first problem revolves around pilotage and particularly on the level and method of compensation. Both United States and Canadian legislation mandate that all registered vessels be navigated by either a registered Canadian or U.S. pilot in designated waters and that a registered pilot be on board the registered vessel as it transits undesignated waters, except under certain circumstances. This legal requirement places the responsibility upon the respective Canadian and U.S. agencies to have a sufficient number of pilots available for service to those vessels that are subject to the compulsory pilotage requirement. The number of pilots must be sufficiently large to insure that vessels transiting the System during peak periods, and peak periods are a result of the seasonal limitations, are not subjected to unreasonable delays awaiting the availability of a pilot.

To meet staffing requirements, the earnings potential of pilots must be sufficient to retain present staff and to attract additional staff members or replacements. Adequate staffing levels have not been difficult to maintain for the Great Lakes Pilotage Staff because alternative employment opportunities for pilots have been diminishing as a result of the reduction in the number of vessels in the U.S. Great Lakes bulk and miscellaneous fleet. However, the age composition of the U.S. Great Lakes registered pilots and the licensed deck personnel of the U.S. Great Lakes bulk fleet indicates that, if the present trend continues, a shortage of either one group or the other is imminent. Therefore, it is imperative that the level of earnings for registered pilots be high enough, not only (a) to attract pilots from the U.S. Great Lakes bulk fleet and from that

pool of licensed deck officers that previously met the requirements for registration, but (b) to attract young persons who have not chosen an occupation and to induce them to pursue a Great Lakes pilots license.

The level of earnings for U.S. registered pilots cannot be guaranteed because they are entrepreneurs. Their level of earnings is directly related to the number of transits by registered vessels. Canadian registered pilots who operate from Lake Ontario to the Lakehead negotiate an annual salary with the Great Lakes Pilotage Authority. As the number of transits by registered vessels declines, the differences in the methods of compensation become a source of conflict, especially when both country's pilots are sharing the work but only U.S. pilotage income is decreasing. If the net earnings of U.S. pilots continues to fall behind those of Canadian registered pilots, the current parallel system of pilotage may become extremely unstable.

There are several possible methods to guarantee and to increase the level of earnings. The first alternative is to reduce the number of registered pilots on the Great Lakes Pilotage Staff, thereby increasing the number of trip assignments for each pilot. However, this method could increase the delays experienced by registered vessels as they wait for a pilot to become available and could result in the vessel being withdrawn from service in the System.

The second alternative is to raise pilotage fees to a level that insures adequate earnings. This method has its drawbacks as freight rates would have to be increased, thereby further reducing the competitiveness of the System.

The third alternative is to change the employment status of U.S. registered pilots from entrepreneurs to federal civil service employees and to pay them a wage equal to their "opportunity wage" out of general tax revenues.²

On the other hand, if it is determined that (a) to guarantee and to increase the level of earnings of U.S. registered pilots; (b) to reduce and to eliminate delays experienced by registered vessels transiting the System; and (c) to maintain the relative money cost advantage of the Seaway are not appropriate policy goals, some other solution will have to be found. One other alternative would be to leave the Seaway system of pilotage as it is.

Any alternative that is selected must be satisfactory to both U.S. and Canadian registered pilots. Any alternative that is detrimental to the interests of the Canadian registered pilots will probably result in the System being closed to overseas traffic. Canadian lock tenders in the St. Lawrence River and in the Welland Canal are likely to close the locks, as they had done in 1974, if so doing is in the interests of the Canadian registered pilots.

The International Longshoremen's Association possesses a near labor monopoly over the movement of general cargo on the four Western Great Lakes. The U.S. registered pilots in Districts 2 and 3 have formed locals of the ILA; all major general cargo ports except Detroit and Ashtabula are organized

by the ILA; licensed officers of the tugs that serve these ports are organized by the LTPPA, which is Local 374 of the ILA. The labor monopoly can be used to extract certain concessions from vessel operators and stevedore contractors, such as de facto compulsory port pilotage in undesignated waters, or use of a tug if a registered pilot is not on board. But the labor monopoly has limits to its power--the vessel operator or the stevedoring contractor must make a sufficient return on the investment so that investors do not withdraw their capital. The other side of the labor monopoly is that it promotes stability in the System by reducing fragmented collective bargaining agreements and eliminates the interunion battles that can lead to total shutdowns of activity.

The GLAS agreement, the result of declining general cargo tonnages in 1973 and 1974, established a new collective bargaining structure. With the new structure, only one contract negotiation is crucial and no longer can the breakdown of any one of thirteen negotiations trap vessels. The Great Lakes Association of Stevedores and the Great Lakes District of the International Longshoremen's Association have demonstrated their intentions to stabilize labor-management relations and to handle vessel cargo quickly and efficiently. However, it is questionable whether the best efforts of these two parties can counteract the other factors which have reduced the relative competitive position of the U.S. Great Lakes ports.

The establishment of two load centers or regional ports for general cargo, including containerized cargo, could improve the competitive position of the System, in addition to reducing the extent of casual employment. With two load centers, the general cargo vessels would need to stop at only two ports to achieve their load factors and therefore, would spend less time in the System and would be able to increase the number of payloads. With two load centers and an efficient feeder system, overseas vessel service may become more frequent, thereby reducing the increased credit costs that the shipper or buyer has generally faced when using the Seaway. With two load centers and regular, frequent service, the demand for longshore services would be fairly constant, and less of the longshore labor force would be casually employed.

The U.S. Great Lakes bulk fleet, the internal Lakes shipping industry and its labor-management relations faces different impediments than the Great Lakes overseas shipping industry. The main difference is that its survival is not at stake. Instead the increasing cost of fuels has probably enhanced the competitive position of the internal Lakes bulk shipping industry.

Labor-management relations on the U.S. Great Lakes bulk fleet are unlike those of the U.S. merchant marine, but the differences have not appeared to convey special advantages or disadvantages to either management or labor.

Recent developments such as the "jumboizing" and modernizing of the U.S. bulk fleet have reduced employment opportunities for seamen and have probably led to the inclusion of such provisions as the Family Leave Plan in some agreements, and will probably induce the unions to bargain very hard for new

job security provisions. Although employment opportunities have been reduced, those hardest hit have been the unskilled, those with the least invested in any specialized training but having the greatest remaining time to pursue other occupations. However, the industry itself may face a difficult staffing problem in the future, even though the U.S. Great Lakes bulk fleet may consist of only 100 large, fast ships, because few young licensed deck officers and few licensed engine officers are in the pipeline.

Although Professor Larrowe's indictment is no longer applicable, both the general cargo shipping industry and bulk cargo shipping industry face a difficult future, and labor is central to it. Will labor-management cooperation be maintained, especially in the longshore industry? Will the financial incentives and job security be there to induce new entrants to the licensed and skilled marine trades? Will difference between U.S. and Canadian pilots be eliminated so that vessel operators and shippers will not have to fear being jeopardized by their disputes?

FOOTNOTES

¹ Charles P. Larrowe, Maritime Labor Relations on the Great Lakes (East Lansing, Michigan: Michigan State University, 1959), p. 3.

² Economists use the term "opportunity wage" to refer to the wage the individual could receive in his next best opportunity. Given equal working conditions, the rational individual must always receive a wage equal to or slightly greater than his opportunity wage before he will accept the employment.

APPENDIX A: GREAT LAKES LABOR AND MANAGEMENT ORGANIZATIONS

Organization	Acronym	Function
I. LABOR ORGANIZATIONS		
American Federation of Government Employees	AFGE	Union that represents lock operators and related personnel at U.S. locks in the St. Lawrence River and the St. Mary's River.
American Federation of Grain Millers	AFGM	Union which was subject of merger proposals by International Longshoremens's Association grain craft locals.
American Federation of Labor-Congress of Industrial Organizations	AFL-CIO	Association of most major labor organizations in the United States.
Associated Maritime Officers	AMO	Union that represents licensed deck officers on some vessels of the Great Lakes bulk vessel fleet, an affiliate of Marine Engineers Beneficial Association, District 2.
Canadian Brotherhood of Railway, Transport and General Workers	CBRT	Union that represents lock crews, traffic controllers, maintenance engineers and clerical staff at Canadian locks in the St. Lawrence River, the Welland Canal and the St. Mary's River.
Corporation of Lower St. Lawrence River Pilots		Canadian pilots who operate from the mouth of the St. Lawrence River to Quebec.
Corporation of Mid-St. Lawrence River Pilots		Canadian pilots who operate from Quebec to Montreal on the St. Lawrence River.

Organization	Acronym	Function
Corporation of Professional Great Lakes Pilots		Canadian pilots who operate from the Welland Canal to the Lakehead.
Corporation of St. Lawrence River and Seaway Pilots		Canadian pilots who operate from St. Lambert Lock to Snell Lock.
Corporation of Upper St. Lawrence Pilots		Canadian entrepreneur pilots who operate between the Snell Lock and Cape Vincent.
Great Lakes District, International Longshoremen's Association	GLD-ILA	ILA locals on the Great Lakes, Ohio River and Mississippi River north of Memphis.
Great Lakes Licensed Officers' Organization	GLLO	Union that represents licensed deck and engine officers on some car ferry fleets.
Great Lakes Pilots, District 2		Name of ILA local representing U.S. Great Lakes registered pilots in District 2.
Great Lakes Pilots Association		First organization of Canadian and U.S. Great Lakes pilots and sailing masters.
Inland Boatmen's Union	IBU	Union, recently merged with SIU, that represents unlicensed personnel on tugs operated by Great Lakes Towing Company.
International Brotherhood of Longshoremen	IBL	AFL sponsored longshore labor union from 1953 to 1959.
International Brotherhood of Teamsters	Teamsters	Union that represents longshoremen in the ports of Detroit, Ashtabula and Bay City.
International Longshoremen's Association	ILA	Union that represents longshoremen, licensed tug personnel, grain handlers, warehousemen, pilots, some cement workers and other non-marine related workers in the Great Lakes region as well as the Atlantic and Gulf Coasts.

Organization	Acronym	Function
International Organization of Masters, Mates, and Pilots	MMP	Affiliated with the ILA and the union representing licensed deck officers for five of the major coastal-deep water agreements.
Lake Pilots Association, Inc.		U.S. registered pilots who operate from the Welland Canal to Lake Huron (District 2).
Lake Ontario Pilots		Canadian registered pilots who operate on Lake Ontario and in Kingston Harbor.
Licensed Tugmen and Pilots' Protective Association	LTPPA	Union that represents licensed deck and engine officers on the Great Lakes Towing Company tug fleet, licensed deck and engine officers of several U.S. Great Lakes bulk fleets, and comprises Local 374 of the ILA.
Licensed Tugmen's Protective Association	LTPA	Union that preceded the Licensed Tugmen and Pilots' Protective Association.
Marine Engineers Beneficial Association, District 2	MEBA	Union that represents licensed engine officers on seventeen of the major Great Lakes bulk fleets.
Masters, Mates and Pilots, Great Lakes and Rivers District	MMP-GLD	Independent union that represents licensed deck officers on two of the major Great Lakes bulk fleets.
Montreal Harbor Pilots		Canadian pilots who operate from the Montreal harbor to the St. Lambert Lock.
National Longshoremen's Association	NLA	Earlier name for the International Longshoremen's Association.
National Maritime Union of North America	NMU	Union that represents unlicensed personnel on three of the major Great Lakes bulk fleets.
Public Service Alliance of Canada		Union that represents the engineering support staff at the Canadian locks and that also represents the dispatchers of the Great Lakes Pilotage Authority.

Organization	Acronym	Function
St. Lawrence Seaway Pilots Association		Association of U.S. registered pilots who operate from the Snell Lock to Port Weller (District 1).
Seafarers International Union - Atlantic, Gulf, Lakes and Inland Waters District	SIU	Union that represents unlicensed personnel on eleven of the major U.S. Great Lakes bulk fleet.
United Steel Workers of America, Local 5000 - Great Lakes Seamen	GLS	Union that represents unlicensed personnel on eight of the major U.S. Great Lakes bulk fleet.
Upper Great Lakes Pilots, Inc.		Corporation of U.S. registered pilots who operate on Lakes Huron, Michigan, Superior and the connecting channels (District 3).
Upper Lakes Pilots Association		Name of ILA local that represents U.S. Great Lakes registered pilots in District 3.

II. MANAGEMENT GROUPS

"Basic Group"		Fleets from four U.S. steel companies which bargain jointly with GLS.
Great Lakes Association of Marine Operators	GLAMO	Name of association formed by ten U.S. Great Lakes fleets for the purpose of formally bargaining jointly with the SIU.
Great Lakes Association of Stevedores	GLAS	Name of association of seventeen terminal operators joined together for the purpose of negotiating jointly with thirteen locals of the ILA in the Great Lakes region.
Independent Group		Also known as "Semi-Steel". Informal name given to four fleets that bargain jointly on wage issues with the GLS.

APPENDIX B: PILOTAGE STRIKE OF 1958

In 1958, the Great Lakes Pilots Association, which consisted of all members of Local 92 and some members of Local 47 of the International Organization of Masters, Mates and Pilots (MMP), in the course of its initial contract negotiations with the Shipping Federation of Canada, called a strike against the "Federation."¹ The Shipping Federation of Canada was an association of various European steamship lines and tramp vessel operators that served the Great Lakes ports, and one of the purposes of the "Federation" was to negotiate labor agreements.

In 1957, the Shipping Federation of Canada had agreed to recognize the Great Lakes Pilots Association and the International Organization of Masters, Mates and Pilots as the bargaining representative for the Canadian and U.S. Great Lakes pilots and sailing masters. A strike was called shortly after the "Federation's" initial contract offer was rejected; and although not explicitly stated, it appears that the underlying reason for the strike call was that the "Federation" had not agreed to compulsory pilotage for its member's vessels as they transited the Great Lakes.

The key to the strike, which lasted from April 24 to approximately May 5, was the cooperation of the International Brotherhood of Longshoremen (IBL) in the ports of Chicago, Cleveland and Milwaukee. The Great Lakes Pilots Association and the MMP set up picket lines against vessels operated by members of the "Federation" in these ports, and members of the IBL refused to cross the picket lines and work the ships.

Charges of unfair labor practices were brought by the Shipping Federation of Canada and by stevedore contractors in the ports of Chicago, Cleveland, and Milwaukee. In the course of the proceedings before the National Labor Relations Board (NLRB), it was initially determined that MMP was a labor organization within the meaning of the National Labor Relations Act.² In a later decision, the NLRB reaffirmed its position by concluding that "MMP's membership included individuals in substantial numbers who were 'employees' and that their participation in MMP was also substantial and meaningful."³ In a supplemental decision, the NLRB concluded "that the pilot-members of Local 47 do not occupy the status of employees within the purview of ... the Act."⁴ This decision--pilot-members of Local 47 are not employees--was upheld by the United States Court of Appeals.⁵

The result of this series of decisions is that although the entrepreneur pilots have formed, in several instances, union locals and considered themselves to be employees of their respective corporations, they fail the test of the law for employees according to the Labor-Management Reporting and Disclosure Act of 1959. Thus, they are exempt from the requirements of this law.

FOOTNOTES

¹ Many of the details concerning the strike are drawn from this case's proceedings before the National Labor Relations Board. 125 NLRB 113 (1959).

² Ibid.

³ 144 NLRB 1172 (1963).

⁴ 146 NLRB 116 (1964).

⁵ 351 F.2d 771 (1965).

APPENDIX C. STRIKES, CARGO DIVERSION AND THE ST. LAWRENCE SEAWAY

One commonly accepted argument is that a strike or the threat of strike during contract negotiations by longshoremen on the Atlantic or Gulf Coasts usually results in a good year for the Great Lakes and St. Lawrence Seaway ports. The reason given for this relationship is that with the threat of strike, cargo destined to or originating from the Great Lakes region will be transported through the Seaway rather than risking the possibility of it being tied up for an indefinite period at a struck Atlantic or Gulf Coast port.

To analyze the relationship between general cargo tonnage on the St. Lawrence Seaway and longshore labor relations on the Atlantic and Gulf Coasts, the contract negotiation years of 1959, 1962, 1964, 1968, 1971 and 1974 are examined.¹

In 1959, the contract expired October 1 and the International Longshoremen's Association locals on the Atlantic and Gulf Coasts went out on strike. The Taft-Hartley injunction was issued October 6, 1959, and the longshoremen returned to work for the 80-day cooling-off period. A new contract was signed in mid-December, 1959, before the cooling-off period had ended. In 1962, the parties did not reach an agreement before the contract expired. The longshoremen walked off the job October 2, but the Taft-Hartley injunction was granted October 3. After the 80-day cooling-off period, the strike recommenced December 23 and lasted until January 27, 1963, when both parties agreed upon a two-year contract. Contract negotiations again stalled in 1964, and this time the Taft-Hartley injunction was issued the same day the longshoremen went out on strike. After the 80-day cooling-off period expired, the strike resumed and lasted from December 20, 1964 to early March, 1965.

In 1968, contract negotiations again failed to reach an agreement before the contract expired. The Taft-Hartley injunction was issued October 2, 1968, one day after the contract had expired and the longshoremen had walked out. Isolated work stoppages took place during the 80-day cooling-off period. The strike recommenced December 20, 1968, and closed all ports on the Atlantic and Gulf Coasts until February 13, 1969. In 1971, although the contract expired October 1, the Taft-Hartley injunction was not used until late November.² A new contract was negotiated and signed during the cooling-off period.

A new spirit of cooperation emerged in 1974 as the IIA abandoned its previous stance of "no contract, no work." A new contract was signed between the IIA and the employers' associations on the Atlantic and Gulf Coasts without a strike by the IIA.

Contract disputes between longshoremen and the employers on the Atlantic and Gulf Coasts appear to have had a very favorable impact upon general cargo movements through the Seaway. The two biggest years of general cargo traffic on the Seaway were 1968 and 1971, years that negotiations failed to arrive at a contract without a strike. The uncertainty of the outcome of the negotiations may have caused some traffic to switch to the Seaway. This reason appears to be valid as in 1968 and 1971, general cargo tonnage in the Montreal to Lake Ontario section was higher in the months of October, November and December than it had been in previous shipping seasons. In addition, the 1962 and 1964 shipping seasons also experienced general cargo tonnage increases over the previous season. Table C.1 indicates the general cargo traffic and the percentage increase over the previous year in the Montreal to Lake Ontario section of the Seaway.

However, an even more interesting figure is contained in Table C.1--the iron and steel tonnage sub-total of general cargo tonnage, and the percentage change relative to the previous season. The major steel agreement is negotiated every three years: 1959, 1962, 1965, 1968, 1971 and 1974.² In 1959, the steel industry and the United Steel Workers of America (USWA) reached an agreement only after a 116-day strike. Strikes did not occur in the following contract negotiation years, but it was obvious that customers of the major steel companies were stockpiling foreign-produced steel and iron in case a strike did occur. For instance, in 1965, although no work stoppage took place, it took the USWA and steel companies three months to reach a settlement. In that same year, iron and steel products (classified as general cargo) moved through the Montreal to Lake Ontario section increased by 143 percent. That same year, iron and steel product imports increased by 115 percent.

Both IIA contracts and USWA contracts expired in 1962, 1968 and 1971. In 1968 and 1971, as indicated in Table C.2, iron and steel tonnage increased significantly in the month of July--the last month of the "steel contract"--as well as increasing in the months of October, November and December. In 1962, the steel contract was settled three months prior to its expiration. Although iron and steel tonnage increased by 42 percent, the increase was due mainly to the overall increase in use of the System. General cargo tonnage also increased during the months of October, November and December; but the increase was also just part of the natural growth.

In 1974, several months prior to the contract expiration date, the steel companies and the USWA announced the Experimental Negotiating Agreement, which held that negotiations would continue beyond the contract expiration date, without a lockout or strike, if no new agreement had been reached by that time. This eliminated the need for steel company customers to stockpile iron and steel products from foreign producers because the supply of domestically produced items would not be interrupted by a work stoppage. General cargo tonnage dropped 22 percent, and iron and steel tonnage dropped 17 percent.

TABLE C.1

GENERAL CARGO AND IRON AND STEEL TRAFFIC THROUGH THE
MONTREAL-LAKE ONTARIO SECTION OF THE SEAWAY SYSTEM

Year	General Cargo Tonnage	Percentage Change*	Iron and Steel Tonnage**	Percentage Change	Percent of General Cargo
1959	1,859,163		448,449		23
1960	2,253,897	16	708,199	76	31
1961	2,074,183	-8	578,433	-27	28
1962	2,517,608	21	820,534	42	33
1963	2,940,795	17	944,520	15	32
1964	3,676,587	25	1,357,126	44	37
1965	5,579,408	52	3,299,931	143	59
1966	5,488,689	-2	3,063,980	-8	56
1967	5,962,747	9	3,400,012	10	57
1968	8,003,027	34	5,474,541	61	68
1969	7,054,652	-13	4,471,301	-18	63
1970	6,547,458	-7	4,437,087	-1	68
1971	8,582,429	31	6,196,212	40	72
1972	7,846,094	-9	5,733,967	-7	73
1973	5,825,330	-26	4,357,644	-24	75
1974	4,522,372	-22	3,603,929	-17	80
1975	3,617,919	-20	2,462,426	-32	68
1976	4,537,636	25	3,332,055	35	73

Source: Traffic Report of the St. Lawrence Seaway (annual)

* Calculated as $(Y_t - Y_{t-1})/Y_{t-1}$

** Includes only that iron and steel that is considered general cargo.

TABLE C.2

GENERAL CARGO TONNAGE THROUGH THE MONTREAL TO LAKE ONTARIO
SECTION OF THE SEAWAY SYSTEM BY MONTH BY YEAR (1000 TONS)

	April	May	June	July	August	Septem- ber	October	Novem- ber	Decem- ber
1959	123.1	187.6	287.5	256.3	210.0	223.4	273.8	267.0	.9
1960	134.2	253.4	230.6	312.5	304.1	255.2	368.6	380.7	3.6
1961	127.0	295.2	339.7	260.7	239.6	266.2	306.5	336.1	2.4
1962	150.1	228.8	306.6	307.7	298.3	281.0	395.9	408.1	40.0
1963	173.8	350.6	347.6	331.5	347.6	373.6	466.6	470.8	77.5
1964	279.0	450.9	457.8	468.3	424.1	410.9	574.1	556.2	54.2
1965	466.7	746.1	754.7	713.5	659.2	660.2	921.3	624.0	32.9
1966	387.3	693.4	639.7	654.6	659.7	653.7	950.0	797.6	51.8
1967	563.3	712.4	670.4	659.9	595.8	689.0	1,013.1	979.6	77.3
1968	788.9	966.3	661.3	1,210.2	887.3	1,042.1	1,155.8	1,164.1	126.1
1969	530.7	974.4	837.6	686.3	1,018.7	834.1	951.5	1,039.5	181.1
1970	438.6	837.3	680.2	650.6	687.8	781.9	1,139.9	1,165.9	142.1
1971	751.8	868.0	1,028.2	1,016.9	1,027.5	1,069.3	1,251.7	1,359.4	242.5
1972	593.9	788.9	1,042.4	881.2	857.6	1,064.2	1,208.2	1,253.3	142.9
1973	362.8	782.6	673.8	738.5	675.9	731.2	723.6	956.1	179.9
1974	185.7	422.2	511.7	481.3	387.0	599.3	787.1	1,083.8	61.8
1975	230.7	466.1	354.3	294.8	379.9	390.9	851.5	770.9	141.2
1976	168.8	649.8	490.4	437.6	610.0	486.8	689.5	890.9	112.9

Source: Traffic Report of the St. Lawrence Seaway (annual)

Thus, the good years and the bad years for general cargo traffic appear to be quite sensitive to labor-management relations in different regions and sectors. Work stoppages by longshoremen on the Atlantic and Gulf Coasts and difficult negotiations for the industry-wide steel agreement, plus the legacy of the 116-day strike of 1959 have all contributed to some of the variations in general cargo movements through the St. Lawrence Seaway System.

FOOTNOTES

¹Vernon Jensen, Strife on the Waterfront: The Port of New York Since 1945 (Ithaca: Cornell University Press, 1974). Professor Jensen describes the contract negotiations for these years, except for 1974.

²United States Department of Labor, Bureau of Labor Statistics, The Monthly Labor Review. Details of the steel industry negotiations are contained in the regular series, "Current Developments in Industrial Relations."

APPENDIX D: THE MERCHANT MARINE ACT OF 1970

The steady decline in the number of bulk vessels in the U.S. Great Lakes bulk fleet and the change in the size composition was discussed in Chapter IV. Whereas in 1960 there were 286 bulk freighters and self-unloaders in the U.S. Great Lakes fleet, that number had decreased to 192 by 1969 and had declined to 142 in 1975. Construction of the Poe Lock, which increased the size of the "maximum laker" on the four upper Great Lakes, and the Merchant Marine Act of 1970, which extended several federal programs to the Great Lakes, were given as the main reasons for continual changes in the number and size composition of the fleet.¹

The Merchant Marine Act of 1970 extended four benefit programs to vessel operators in the Great Lakes-St. Lawrence Seaway System: Construction Differential Subsidies, Title XI Loan Guarantees, Tax-Deferral Privileges and Operating Differential Subsidies.² Of these four areas, Title XI Loan Guarantees and Tax-Deferral Privileges are relevant for the U.S. Great Lakes bulk fleet.

The Title XI Loan Guarantee program provides loan guarantees up to 87-1/2 percent of cost for vessels that meet certain criteria. The effect of the loan guarantee is to reduce money market costs of raising the necessary financing. Between 1973 and 1976, 11 bulk vessels and 10 deck barges were constructed with loans guaranteed by this program for use on the Great Lakes.³

Tax-Deferred Privileges permit Great Lakes vessel operators to establish funds in which tax-deferred revenues may be deposited. The purpose of the program is to enable vessel operators to accumulate the capital necessary for replacement or modernization of their fleets. Between 1970 and 1976, 24 Great Lakes vessel operators have established such funds.⁴

The net result of these two programs is that the relative prices of alternate investments have been altered. In so doing, they have made the new construction, acquisition or modernization of vessels for service on the Great Lakes a relatively more attractive investment possibility.

The net long-run effect of these two programs on the employment of seamen in the Great Lakes bulk fleet is uncertain. If shoreside production facilities had switched to different transportation modes without these programs and without the construction of the Poe Lock, the programs probably

would have increased relative employment levels in the long run. On the other hand, if other transportation modes were not feasible long-run alternatives, either by relative cost or technological criteria, these programs may have reduced the relative long-run employment of seamen in the Great Lakes bulk fleet.

FOOTNOTES

¹Although commonly known as the Merchant Marine Act of 1970, it technically is the 1970 Amendments to the Merchant Marine Act of 1936.

²"The Impact of the Merchant Marine Act of 1970," Seaway Review 6 (Winter 1976) 2: 19-28.

³Ibid.

⁴Ibid.

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