

Duluth Seaway Port Authority: Impact of Business Development & Shipping Industry in 2005

Prepared for the



by

Applied Insights^{north} &

UMD Bureau of Business & Economic Research

December 2006

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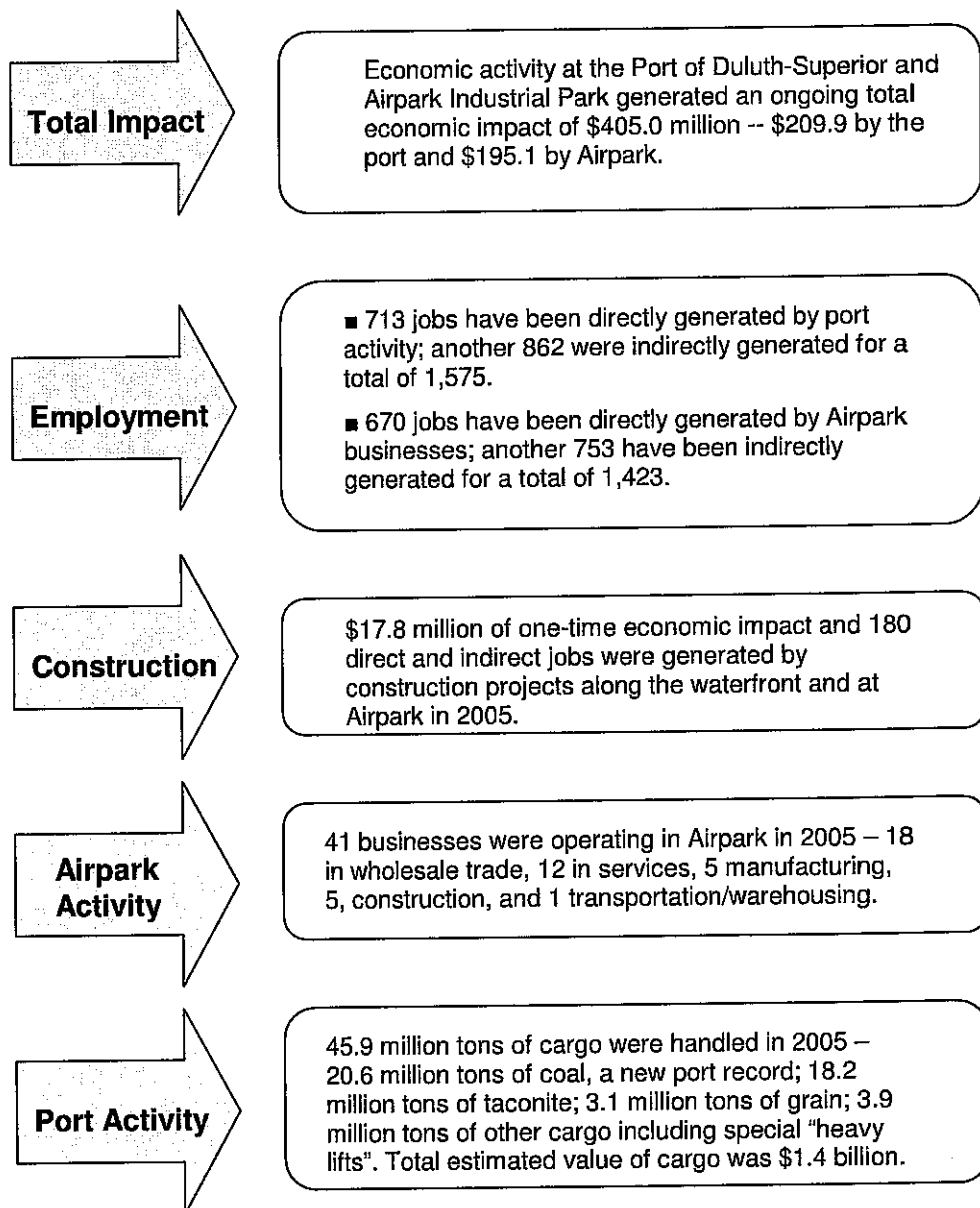
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Summary

The Duluth Seaway Port Authority encourages, enhances, and supports new and existing economic activity generated by the transshipment of goods through the multi-modal Duluth-Superior port, and, general industrial activity at the Airpark Industrial Park and along the waterfront. The Port Authority uses a variety of tools to achieve its mission. This report presents the impact of this activity on the regional (Carlton and St. Louis Counties, Minnesota, and Douglas County, Wisconsin) economy in the year 2005.



Port Authority Business Development Activities

The Duluth Seaway Port Authority has undertaken economic development activities along the waterfront and at other sites within Duluth for over 40 years. The Port Authority's current development program consists of the following basic tools:

- Developing land for sale to businesses. The Airpark Industrial Park is the prime example of this activity.
- Buying and improving or custom building new structures for lease to specific businesses. This may also include leasing of developed land on which businesses build their own structures.
- Financing of specific projects through the issuance of revenue bonds. Currently the Port Authority has \$44 million of such bonds outstanding.
- General business promotion, attraction, and support.

The Port Authority acquired approximately 300 acres of land for the Airpark Industrial Park in the 1970s in conjunction with the redevelopment of the Duluth International Airport. Land acquisition and the construction of streets and public utilities was financed by general obligation bonds of the City of Duluth and repaid through the use of tax increment financing. The initial phase contained 50 lots on 110 acres. In 2005 the second phase added 18 lots on 62 acres; the \$2 million cost to construct streets and utilities was paid by a \$1.2 million grant from the Federal Economic Development Agency and \$800,000 cash match from the Port Authority. Port Authority staff is responsible for marketing Airpark sites directly to businesses interested in locating or expanding in Duluth.

Recent Port Authority economic development initiatives that are supporting new or expanded business activity or offering opportunities for new enterprises along the waterfront include:

- Demolition and site preparation of the 28-acre former Garfield C and D grain elevator site; this land is ready for immediate development.
- The Port Authority invested \$750,000 to convert a storage facility at the Clure Public Marine Terminal to a steel fabrication facility.
- Conversion of an unheated warehouse facility to a multi-tenant distribution facility whose current tenants include Russell Steel, Seelye Plastics, and CJ Duffey Paper Co.
- A long-term sale/leaseback arrangement with Como Lube & Supply for a 28,000 square foot distribution facility. Soon thereafter Como invested in a 1.5 million gallon tank farm and distillation plant.
- Improvements to the storage yard for Lake State Lumber/Innovative Pine Technology operation. The company entered into a long-term land lease and constructed one of the first non-arsenic treated lumber facilities in the Midwest.
- Acquisition and conversion of the 157,000 square foot former Amhoist Building into a multi-tenant manufacturing/distribution center. Tenants include: Altech Hilline LLC, a manufacturer of high lift trucks primarily for the electric utility industry; A. W. Kuettel &

Sons, a roofing, sheet metal and plumbing contractor; and Chicago Tube & Iron Co., a distributor of steel pipes and valves.

Currently the Port Authority is involved in a major project to promote economic development along the waterfront. Arthur Avenue, now renamed Helberg Drive, is being reconstructed to connect the Port Terminal with Garfield Avenue. The project realigns and reconstructs almost 2,000 feet of rail track and constructs 4,000 feet of new roadway. Upon completion the road will provide a direct connection to all adjoining dock properties and offer all weather road and rail access to facilitate redevelopment of the Garfield C and D dock facility. Expected to open in 2007 the \$6 million cost is being funded by a combination of federal, state, and local funds including a cash contribution by the Port Authority.

Development Status 2005

In 2005 the Airpark Industrial Park contained 41 businesses employing 670 workers. As noted in Table 4, the largest group of Airpark enterprises were involved in wholesale trade while a dozen were in the service sector.

Sector	Number of Firms	Employees
Wholesale Trade	18	210
Services	12	207
Transportation & Warehousing	1	
Manufacturing	5	136
Construction	5	117
Total	41	670

2005 Economic Impact

The economic impact of the Airpark businesses in 2005 was substantial. As shown in Table 5, the businesses generated a total impact of \$195 million and regional employment of 1,423 people. This impact was calculated for the area encompassing Carlton and St. Louis Counties, Minnesota and Douglas County, Wisconsin.

	Direct ¹	Indirect + Induced ²	Total
Output	\$108,770,005	\$86,342,985	\$195,113,980
Employment	670	753	1,423

Source: IMPLAN.

¹Direct Impact includes impact of the aggregated operational activities and value added of the Airpark businesses.

²Indirect impact includes the purchases of supplies and/or services required to produce the direct effects. Induced impact includes the purchases that arise from the increase in aggregate labor income of households.

Shipping & Waterfront Industry

Port Description

The Port of Duluth-Superior is a multi-modal transportation hub that utilizes its unique mid-continent location at the westernmost end of the Great Lakes/St. Lawrence Seaway to serve a half-million square miles of North American resources and purchasing power. The focal point is the harbor with 49 miles of waterfront, 19 square miles of land and water, and 17 miles of dredged channels. On the landward side the port is served by four major rail carriers and has direct access to the Interstate Highway System.

While primarily a bulk commodity transshipment port handling western coal, Minnesota taconite, and Midwest grain, the waterfront has several key portside facilities that transform basic commodities into valuable products and it has a shipyard. The port is also known for its "heavy lift" capabilities, handling specialized shipments including components for wind-powered electrical generation facilities and Canadian tar sands development.

Cargo Dock Operations	Coal	Midwest Energy Resources Company
	Taconite / Iron Ore	Burlington Northern Santa Fe RR Canadian National/DMIR RR
	Grain	AGP Grain Ltd. Cargill, Inc. Cenex Harvest States General Mills Peavey Company – Connors Point
	Bulk Terminals	Cutler-Magner Co. / CLM Hallett Dock Company Lafarge North America Northland Bituminous C. Reiss Terminals St. Lawrence Cement
	General Cargo / Other	Lake Superior Warehousing

2005 Port Activity

The 2005 shipping season was exceptionally busy and, as has been the case in recent years, led by shipments of western coal that set a new port record. Taconite shipments remained strong. Grain increased substantially over 2004 and other cargos including special heavy lifts, pulp/paper, and lumber increased over the previous year.

Commodity	Amount (US tons)¹	Percent of Total
Coal	20,631,931	45%
Taconite	18,244,984	40%
Grain	3,137,130	7%
Other	3,862,206	8%
Total	45,876,251	100%

¹2,000 pounds.

2005 Economic Impact

As noted in Table 7, the port is a significant source of economic activity within the region generating nearly \$210 million in total impact and directly and indirectly creating nearly 1,600 jobs. This impact was calculated for the area encompassing Carlton and St. Louis Counties, Minnesota and Douglas County, Wisconsin.

Table 7. Duluth-Superior Port: Output and Employment Impact, 2005

	Direct¹	Indirect + Induced²	Total
Output	\$113,440,663	\$96,438,834	\$209,879,576
Employment	713	862	1,575

Source: IMPLAN.

¹Direct Impact is aggregated impact of operational activities and value added of the waterfront transshipment businesses and those located on Port Authority property.

²Indirect impact includes the purchases of supplies and/or services required to produce the direct effects. Induced impact includes the purchases that arise from the increase in aggregate labor income of households.

The estimated value of the cargos handled by the port in 2005 was \$1.4 billion.

In addition to the ongoing economic impacts of port and Airpark business activity, these enterprises generate substantial one-time impacts from construction and improvement projects. In 2005 these activities generated \$17.8 million in total impact and supported 180 jobs; roughly 72% of the construction activity occurred at waterfront facilities

Table 8. Duluth-Superior Waterfront and Airpark Construction Impact, 2005

	Direct¹	Indirect + Induced²	Total
Output	\$10,738,535	\$7,097,236	\$17,835,771
Employment	108	72	180

Source: IMPLAN.

¹Direct Impact includes impact of the aggregated construction and improvements undertaken by port and Airpark businesses.

²Indirect impact includes the purchases of supplies and/or services required to produce the direct effects. Induced impact includes the purchases that arise from the increase in aggregate labor income of households.

Appendix A. Detailed Results

This chapter presents the detailed output tables for the impact analysis. Table A-1 presents the combined economic output (impact) generated by waterfront and Airpark businesses. Table A-2 presents the impact for waterfront activity and Table A-3 for Airpark. These impacts were calculated for the area encompassing Carlton and St. Louis Counties, Minnesota and Douglas County, Wisconsin.

Industry	Direct	Indirect + Induced	Total
Manufacturing	\$85,793,808	\$49,585,520	\$135,379,328
Transportation & warehousing	71,692,424	16,565,280	88,257,704
Wholesale trade	29,351,038	10,435,114	39,786,152
Other services	18,439,282	7,711,620	26,150,902
Construction	16,935,106	1,293,602	18,228,708
Finance & insurance	0	14,138,930	14,138,930
Retail trade	0	13,390,898	13,390,898
Health & social services	0	12,836,624	12,836,624
Government & other	0	11,631,595	11,631,595
Professional, scientific & tech services	0	7,817,408	7,817,408
Accommodation & food services	0	6,989,529	6,989,529
Agricultural & forestry	0	5,582,620	5,582,620
Administrative & waste services	0	5,458,409	5,458,409
Information	0	4,965,927	4,965,927
Real estate & rental	0	4,429,279	4,429,279
Utilities	0	4,178,905	4,178,905
Management of companies	0	2,874,883	2,874,883
Mining	0	1,042,834	1,042,834
Educational services	0	958,790	958,790
Arts, entertainment & recreation	0	894,053	894,053
Total	\$222,211,658	\$99,455,174	\$404,993,476

Source: IMPLAN.

Table A-2. Economic Output Generated by Waterfront Activity, 2005			
Industry	Direct	Indirect + Induced	Total
Transportation & warehousing	\$67,283,095	\$10,956,919	\$78,240,014
Manufacturing	32,515,460	24,591,276	57,106,736
Other services	9,193,960	4,088,447	13,282,407
Finance & insurance	0	7,736,097	7,736,097
Health & social services	0	6,859,345	6,859,345
Retail trade	0	6,829,757	6,829,757
Government & other	0	6,265,725	6,265,725
Wholesale trade	548,616	5,074,936	5,623,552
Construction	3,899,532	708,547	4,608,079
Professional, scientific & tech services	0	3,935,331	3,935,331
Accommodation & food services	0	3,895,881	3,895,881
Administrative & waste services	0	3,236,786	3,236,786
Information	0	2,564,864	2,564,864
Real estate & rental	0	2,437,583	2,437,583
Agricultural & forestry	0	2,411,349	2,411,349
Utilities	0	2,080,566	2,080,566
Management of companies	0	1,281,241	1,281,241
Mining	0	516,596	516,596
Educational services	0	503,833	503,833
Arts, entertainment & recreation	0	463,754	463,754
Total	\$113,440,663	\$96,438,833	\$209,879,496

Source: IMPLAN.

Table A-3. Economic Output Generated by Airpark Business Activity, 2005			
Industry	Direct	Indirect + Induced	Total
Manufacturing	\$53,278,348	\$24,994,244	\$78,272,592
Wholesale trade	28,802,422	5,360,178	34,162,600
Construction	13,035,574	585,055	13,620,629
Other services	9,245,322	3,623,173	12,868,495
Transportation & warehousing	4,409,329	5,608,361	10,017,690
Retail trade	0	6,561,141	6,561,141
Finance & insurance	0	6,402,833	6,402,833
Health & social services	0	5,977,279	5,977,279
Government & other	0	5,365,870	5,365,870
Professional, scientific & tech services	0	3,882,077	3,882,077
Agriculture & forestry	0	3,145,037	3,145,037
Accommodation & food services	0	3,093,648	3,093,648
Information	0	2,401,063	2,401,063
Administrative & waste services	0	2,221,623	2,221,623
Utilities	0	2,098,339	2,098,339
Real estate & rental	0	2,017,930	2,017,930
Management of companies	0	1,593,642	1,593,642
Mining	0	526,238	526,238
Educational services	0	454,957	454,957
Arts, entertainment & recreation	0	430,299	430,299
Total	\$108,770,995	\$86,342,985	\$195,113,980

Source: IMPLAN.

Appendix B. Economic Impacts on Minnesota

The impacts reported in this document were calculated for the three-county metropolitan region of Duluth-Superior; this area includes Carlton and St. Louis Counties, Minnesota and Douglas County, Wisconsin. Because the businesses involved in this study, especially the port and transshipment operations, have impacts that reach beyond the immediate region, a second analysis was conducted to define the impacts on an area that includes the entire state of Minnesota plus Douglas County, Wisconsin. The following tables present these impacts.

Table B-1. Economic Output and Employment Impacts on Minnesota Generated by Combined Waterfront and Airpark Business Activity, 2005

	Direct ¹	Indirect + Induced ²	Total
Output	\$203,528,840	\$243,269,814	\$446,798,654
Employment	1,383	1,937	3,320

Source: IMPLAN.

¹Direct Impact includes impact of the aggregated operational activities and value added of the Airpark businesses.

²Indirect impact includes the purchases of supplies and/or services required to produce the direct effects. Induced impact includes the purchases that arise from the increase in aggregate labor income of households.

Table B-2. Economic Output and Employment Impacts on Minnesota Generated by Airpark Business Activity, 2005

	Direct	Indirect + Induced	Total
Output	\$111,330,290	\$130,173,819	\$241,504,109
Employment	670	1,026	1,696

Source: IMPLAN.

Table B-2. Economic Output and Employment Impacts on Minnesota Generated by Waterfront Activity, 2005

	Direct ¹	Indirect + Induced ²	Total
Output	\$92,198,550	\$113,095,995	\$205,294,545
Employment	713	911	1,624

Source: IMPLAN.

Table B-4. Economic Output Generated by Combined Waterfront and Airpark Business Activity, 2005			
Industry	Direct	Indirect + Induced	Total
Manufacturing	\$70,115,192	\$77,554,152	\$147,669,344
Transportation & warehousing	53,149,992	12,252,284	65,402,276
Wholesale trade	40,420,944	17,764,472	58,185,416
Other services	22,083,630	8,618,264	30,701,894
Construction	17,759,082	1,470,974	19,230,056
Professional, scientific & tech services	0	15,557,848	15,557,848
Retail trade	0	14,918,676	14,918,676
Health & social services	0	14,687,965	14,687,965
Finance & insurance	0	14,361,005	14,361,005
Government & other	0	13,866,188	13,866,188
Real estate & rental	0	12,054,658	12,054,658
Administrative & waste services	0	8,378,065	8,378,065
Accommodation & food services	0	7,885,452	7,885,452
Management of companies	0	6,428,843	6,428,843
Agricultural & forestry	0	5,134,758	5,134,758
Utilities	0	4,420,165	4,420,165
Information	0	4,147,652	4,147,652
Arts, entertainment & recreation	0	2,003,529	2,003,529
Educational services	0	1,691,733	1,691,733
Mining	0	73,132	73,132
Total	\$203,528,840	\$243,269,814	\$446,798,654

Source: IMPLAN.

Industry	Direct	Indirect + Induced	Total
Manufacturing	\$44,559,184	\$42,272,008	\$86,831,192
Wholesale trade	38,759,808	9,932,560	48,692,368
Other services	11,072,573	4,577,639	15,650,212
Construction	13,669,819	765,002	14,434,821
Professional, scientific & tech services	0	8,695,467	8,695,467
Transportation & warehousing	3,268,906	5,166,377	8,435,283
Retail trade	0	8,153,370	8,153,370
Health & social services	0	7,733,646	7,733,646
Finance & insurance	0	7,494,535	7,494,535
Government & other	0	7,274,928	7,274,928
Real estate & rental	0	6,328,019	6,328,019
Administrative & waste services	0	4,191,953	4,191,953
Accommodation & food services	0	4,045,714	4,045,714
Management of companies	0	3,838,669	3,838,669
Agriculture & forestry	0	2,974,155	2,974,155
Utilities	0	2,436,371	2,436,371
Information	0	2,271,376	2,271,376
Arts, entertainment & recreation	0	1,077,930	1,077,930
Educational services	0	904,124	904,124
Mining	0	39,980	39,980
Total	\$111,330,290	\$130,173,819	\$241,504,109

Source: IMPLAN.

Table B-6. Output Impact on Minnesota Generated by Waterfront Activity, 2005			
Industry	Direct	Indirect + Induced	Total
Manufacturing	\$25,556,008	\$35,282,144	\$60,838,152
Transportation & warehousing	49,881,086	7,085,907	56,966,993
Other services	11,011,057	4,040,625	15,051,682
Wholesale trade	1,661,136	7,831,912	9,493,048
Health & social services	0	6,954,319	6,954,319
Finance & insurance	0	6,866,470	6,866,470
Professional, scientific & tech services	0	6,862,381	6,862,381
Retail trade	0	6,765,306	6,765,306
Government & other	0	6,591,260	6,591,260
Real estate & rental	0	5,726,639	5,726,639
Construction	4,089,263	705,972	4,795,235
Administrative & waste services	0	4,186,112	4,186,112
Accommodation & food services	0	3,839,738	3,839,738
Management of companies	0	2,590,174	2,590,174
Agricultural & forestry	0	2,160,603	2,160,603
Utilities	0	1,983,794	1,983,794
Information	0	1,876,276	1,876,276
Arts, entertainment & recreation	0	925,599	925,599
Educational services	0	787,609	787,609
Mining	0	33,152	33,152
Total	\$92,198,550	\$113,095,995	\$205,294,545

Source: IMPLAN.

This chapter describes the methods used to gather and analyze the data for this impact report.

IMPLAN Economic Impact Analysis Program

The Consultant Team used the IMPLAN¹ economic impact analysis program for this effort.

IMPLAN is an input-output accounting of commodity flows from producers to intermediate and final consumers. As noted by MIG, the developers of IMPLAN, "Purchases for final use (final demand) drive the model. Industries produce goods and services for final demand and purchase goods and services from other producers. These other producers, in turn, purchase goods and services. This buying of goods and services (indirect purchases) continues until leakages from the region (imports and value added) stop the cycle."

The IMPLAN model for input-output analysis was specifically designed for economic impact assessments. With its "comprehensive and detailed data coverage of the entire U.S. by county" and "ability to incorporate user-supplied data at each stage of the model building process" IMPLAN "provides a high degree of flexibility both in terms of geographic coverage and model formulation."

There are two components to the IMPLAN system, the software and databases. The databases provide all information to create regional IMPLAN models. The software performs the calculations and provides an interface for the user to make final demand changes.

Comprehensive and detailed data coverage of the IMPLAN study areas by state, county or zip code, and the ability to incorporate user-supplied data at each stage of the model building process, enables the definition of specific models for baseline, construction, operations, and tax impact, with adjusted production functions to reflect the proposed development projects. Using the IMPLAN software and data, BBER can identify various projects' expenditures in terms of the sectoring scheme for the model, in producer prices, in historical dollars based on the year of the model, and apply those dollars spent within the study area definition given for the impact analysis.

The data used in the model include:

- US Bureau of Economic Analysis Benchmark I/O Accounts of the US
- US Bureau of Economic Analysis Output Estimates
- US Bureau of Economic Analysis REIS Program
- US Bureau of Labor Statistics County Employment and Wages (CEW) Program

¹ IMPLAN is the registered product of the Minnesota IMPLAN Group (MIG), Inc., IMPLAN System (data and software), 1725 Tower Drive West, Suite 140, Stillwater, MN 55082 www.implan.com; see also written guides by Doug Olson and Scott Lindall, "IMPLAN Professional Software, Analysis, and Data Guide."

- US Bureau of Labor Statistics Consumer Expenditure Survey
- US Census Bureau County Business Patterns
- US Census Bureau Decennial Census and Population Surveys
- US Census Bureau Economic Censuses and Surveys
- US Department of Agriculture Crop and Livestock Statistics

IMPLAN data files consist of the following components: employment, industry output, value added, institutional demands, national structural matrices and inter-institutional transfers.

Impacts for models in IMPLAN analyses use the most recent IMPLAN data available, which is for the year 2003. Impact can be reported in 2005 dollars (given the data year of inputs supplied to BBER) and calculated with the built-in deflators of the modeling software.

Economic impacts are made up of direct, indirect, and induced impacts. The following cautions are suggested assumptions for accepting the impact model:

- IMPLAN input-output is a production based model
- Local or export based purchases that represent transfers from other potential local purchases are not counted.
- The numbers (from U.S. Department of Commerce secondary data) treat both full and part time individuals as being employed.
- Assumptions need to be made concerning the nature of the local economy before impacts can be interpreted.

Data Sources

The data for this analysis came from two sources. Most of the data used to drive the IMPLAN model came from surveys of waterfront and Airpark businesses. A total of 54 firms out of 65 provided information for this impact analysis. Of the remaining firms, information from the ReferenceUSA^{®2} database was used for 10 businesses. Data for one business was estimated using information from similar firms.

² ReferenceUSA[®] is an Internet-based reference service from the Library Division of infoUSA[®], which was founded in 1972. The site is a reference tool in libraries and is continually enhanced based upon suggestions from librarians and library patrons. The ReferenceUSA[®] database contains, in module format, detailed information on more than 13 million U.S. businesses; 120 million U.S. households; 683,000 U.S. health care providers; 1 million Canadian businesses; and 11 million Canadian residents.

