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Brian Mulnix

Grand Valley State University

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PORT DEVELOPMENT IN MUSKEGON, MI

BRIAN MULNIX
Grand Valley State University

Muskegon Lake provides one of the deepest ports on the Great Lakes. While the port is used on a regular basis for recreational and commercial activity, there may be potential for expanding these activities and providing for a self-sustaining facility that will provide the needed infrastructure to enhance port use in Muskegon. Regionally, West Michigan provides an extensive transportation network that would support such development. With the manufacturing and agricultural base in West Michigan, there is much potential for an expanded import-export market that would provide port related activity. My research provides a basic framework for looking at the port development issue, and gives rationale for further study on the topic. Benefits and feasibility are identified and discussed in the paper. Research involved data collection on a regional basis and more specifically in and around the County of Muskegon. The Michigan Port Collaborative and The Muskegon Sustainable Harbors and Marinas Initiative, and their associated partners were instrumental in providing data and research materials for this project. While the research was able to point to many positive aspects of port development for Muskegon, it is crucial to look at the issue from a comprehensive standpoint. As with any large-scale planning issue or topic, studies that are more detailed may be necessary before a final analysis and recommendation can be made. This research is a good starting point for the overall framework regarding port development in Muskegon, and can be a guide to further research if resources and partnerships can be formed among the local leaders and private parties with interest in the port.

RESEARCH OBJECTIVE

The purpose of this research is to determine whether port development is feasible and what the benefits of such a development would be on the Muskegon area and the surrounding region. We know that Muskegon Lake is ideal for large vessel shipping due to the depth and access to surrounding states and water bodies. We also know that historically, the port (Muskegon Lake) has been successful for commercial, recreational, and industrial activities for the region and state. There are, however, questions that must be considered when analyzing the issue: (1) Why has there not been an established port or port authority with the amount of current shipping as well as past operations? (2) What are the economic and environmental implications of establishing a port? (3) Who would be the responsible agency charged with operating the port or port authority? In answering these questions, we begin to develop a framework that will help to establish an argument that supports the notion that development of a port in Muskegon will be feasible and will have a positive effect on the West Michigan region.

To answer the first question, we look deep into the history of the port and past practices. At one time, the lake had dock facilities in several locations, some of which still exist, but many have been abandoned and redeveloped for other uses. The City of Muskegon as a governmental entity has talked about the issue and even incorporated ideas and concepts into comprehensive planning documents. There has not been any movement to move these ideas from concept to reality. Several planning documents have been created that point out the importance and
indicate ideal locations, but there seem to be reservations on the local governing bodies to initiate a process and move forward on the concepts. The most recent documents created have been initiated by private interests with minimal involvement from city officials. Interviews with stakeholders indicated a lack of cooperation among public officials and private parties. This is slowly changing, but that is one of the main reasons for the slow progress. A significant financial investment is required not only for infrastructure, but marketing as well. There is opportunity for public and private investment, but getting cooperation among the interested parties has made it difficult to plan. This cooperation is key for development of the governing body as well as determining a prudent location for the facility. Several privately owned facilities along the lake have been selected as potential port development sites, with each property owner having a stake in the development. Furthermore, many residents have voiced concerns with port development and the potential effects that increased commercial traffic and activity might have on the area. Noise and congestion are mentioned in surveys that the City of Muskegon conducted (MEGA, 1999). The public has also identified this type of lakefront development as a concern, possibly due to past practices along the lake from the lumber and industrial eras when there was not much regulation and the shoreline was littered with a multitude of materials and byproducts that “hardened” the shore and filled valuable wetlands. The public and some city leaders have scrutinized the idea of commercial development of the waterfront for this type of activity.

On the second question, the economic and environmental effects of port development, there are many case examples from other ports among the Great Lakes and around the world that have shown positive results on the areas where the ports are located. In Milwaukee, Wisconsin for example, The Port of Milwaukee is owned and governed by the City of Milwaukee and has a Port Authority established to manage the facility. According to Betty Nowak, Marketing Manager for the Port of Milwaukee, the port oversees the city’s lakefront, which has many recreational properties, as well as its foreign and domestic shipping facilities that bring in steel, pipe, machinery, ocean containers, as well as bulk and liquid cargoes for local consumption (City of Milwaukee, 2009). Operating revenues for the port in 2007 were approximately $4.9 million, which equated to about $1.85 million in gross income after operating expenses. The port was also able to capture $366,283 in property taxes paid by port tenants in 2007. Mrs. Nowak indicated that the main benefits from the port and port authority are job creation and revenue to pay for port improvements. Seaports have long been recognized for their ability to create jobs and generate tax revenues while facilitating a safe and secure movement of cargo (Knatz, 2009). Research on this project has shown that there is an abundance of goods that are currently shipped to many Great Lakes states in the Midwest by truck and rail that could utilize a facility with access to waterborne shipping. The region is rich with agricultural products from fruits and vegetables to dairy products that are shipped on a regular basis. There are also opportunities for industrial based shipping as well as scrap steel.

On the environmental side, there are two main issues that come up: physical environmental preservation, and conservation of natural resources. By developing the shoreline with proper planning, many of the issues that plague the city now can be alleviated. These include the hardened shoreline and loss of natural marine habitat. Investment in port development can provide shoreline rehabilitation that parallels the commercial needs of the port. The Lake Michigan Forum is a group that has been working on these types of projects in Muskegon Lake and has been on board with port discussions to provide input for future planning and funding opportunities. Another hot topic is that of invasive species in the Great Lakes; these are carried
in the ballasts of ships as they enter the Great Lakes from sea-born ports. Once cargo is loaded or unloaded, the ballasts are emptied and the invasive species are released into the fresh water of the Great Lakes where they have no natural enemies to keep their population in check, and they compete with native species for food and habitat. Establishing ports can eliminate this problem by providing procedures and facilities that provide sterilization methods as the ships prepare to leave the port. From a natural resource standpoint, shipping by water reduces the amount of petroleum needed to carry large volumes of cargo. In the appendix of this document, there is a comparison model to show the same amount of cargo carried by truck, train, and ship, and how much fuel is used for that amount of cargo. It is evident that shipping by water is the most efficient and economically feasible way to move cargo. This is most important with the threat of oil shortages and higher fuel costs.

The final question in the research objective involves organizational structure and authority of the port and facilities. While it is easy to break the issue into a public v. private argument, it is important to be cognizant of the need for cooperation among all parties to have a successful venture. The private sector plays a crucial role in the development of a marketable economy and by providing the need for the port in the first place. From the public side, it is important to have cooperation because they can offer things like crucial infrastructure and access to grants and other publicly funded sources to improve and expand the port facility. The main point is that for port development to work, there must be cooperation among the private and public sectors, and they all need to be represented as stakeholders in the process and in the future. Another aspect of this question, which will not be dealt with to a great extent in this document, is the idea of establishing a port authority to govern the port facility. While not a necessity, a port authority can be beneficial but requires a great amount of cooperation among private and public interests. It would definitely be something to consider in the future if port development became a reality in Muskegon.

**MUSKEGON PORT ASSESSMENT**

Muskegon Lake is situated on the western shore of Michigan, approximately 114 miles north of Chicago (by water), and 190 miles west of Detroit. The lake was authorized as a harbor through the Rivers and Harbor Act of 1902, and subsequent amendments. Muskegon Lake is officially considered a deep draft commercial harbor, with adequate depths in port areas of 29 feet or more. The Muskegon Port is the 118th leading U.S. Port out of 360 (Transportation, January 2009) with 2.1 million tons of material shipped or received in 2007. This number also makes Muskegon Harbor the 28th ranked harbor on the Great Lakes out of 111 designated harbors. The harbor has approximately 6,500 feet of maintained federal channel, and over 6,200 feet of structures including breakwaters, piers, and revetments (Engineers, 2008). Maintenance of this structure is charged to the U.S. Army Corps of Engineers and the U.S. Coast Guard. The U.S. Coast Guard has a station in Muskegon Lake.

Muskegon Lake is directly connected to Lake Michigan through the government navigational channel. Lake Michigan is part of the Great Lakes - St. Lawrence Waterway System (GL/SLW). The GL/SLW stretches some 2,300 miles from the Gulf of St. Lawrence near the Atlantic Ocean. All of the five Great Lakes are connected, making that particular system the largest fresh water system in the world. The St. Lawrence River completes the final connection of the Great Lakes to the Atlantic Ocean and essentially the rest of the world. The connection is made through the St. Lawrence Seaway, which is a series of locks that allow the vessels to travel over various
elevations between the lakes. The St. Lawrence Seaway allows for ocean vessels of up to 740 feet in length, but ships that have origins within the Great Lakes system can reach over 1,000 feet in length. Ships of this size commonly visit Muskegon Lake. (Great Lakes and Seaway Shipping)

Muskegon’s long held slogan, “Port-City” stems from its storied history as a Great Lakes port-of-call for the shipping of locally abundant raw materials, primarily lumber (Muskegon, 1997). With the abundance of natural resources and the strong industrial base, the Muskegon Port has always played an integral role from an economic and transportation standpoint. Usage of the “Port of Muskegon” and Muskegon Lakes surrounding tributaries dates back to the 1700s when early fur traders positioned themselves around the lake, which provided access for native residents and other traders to the trading posts and established villages. The early lumbermen in the mid-1800s used the lake as a means to gather logs from the Muskegon River, which flows into the lake at the north end. Once the lumber was processed at the numerous mills that dotted the shoreline, it was shipped out through the channel on barges and ships into Lake Michigan to destinations such as Chicago and Milwaukee. By the early 1900’s, most of the region’s lumber had been harvested and the mills began to close. After the logging boom had dried up, the industrial era came to Muskegon and again the port was utilized for shipments of bulk materials and machinery, primarily in the 1940’s and 1950’s when the military based factories were thriving in the area. The latest commercial uses of the lake include the Lake Express Cross Lake Car Ferry and several private docks along the eastern shore that call on large ships for bulk goods such as coal and aggregate products.

Muskegon Lake has always been considered an important Great Lakes port because of the deep water and safe harbor from Lake Michigan. However, there is no dedicated port facility that can handle multiple options for commercial shipping, and there is no designated body to manage and sustain such a facility. The idea has been explored numerous times over the years, in fact my research turned up reports dating back to the 1920’s looking at this very topic. What I hope to do is revisit the idea and identify strategies and rationale for this type of development on the shores of Muskegon Lake. The positive effect of developing a strategic port and port facilities will enhance not only the economic aspect of the area, but the environmental and human qualities as well. By developing the lakefront that has been historically dominated by industrial uses, the city has an opportunity to provide a multitude of uses along the shoreline from recreational uses to commercial and light industrial. This idea follows the sustainability ideals that are talked about with urban core development and the “Triple Bottom Line” concept (Sands).

By strategically locating a port on Muskegon Lake, there opens a possibility of fulfilling several local goals that have been presented over the years: Developing the dilapidated waterfront, cleaning up environmental contamination along the shoreline, and providing economic benefits to the city, county and region. All of this can be accomplished by developing a sustainable port facility that can open up the area to new markets and expand existing operations in the region to provide an efficient means of transporting goods throughout the world.

Most of the studies that have been done in Muskegon point to the northeast end of the lake where current port activity takes place. The main reason for this is the depth of the water in this area, which is crucial for bringing lake freighters in. This area is also currently being served by industrial uses such as the BC Cobb power plant, the Verplank Aggregate shipyard, and the Padnos scrap yard that is located adjacent to the area. The ideal development would be a port
with amenities that would allow for a multitude of shipping options such as container freight, roll-on roll-off truck freight, and expanded bulk freight.

**EXISTING CONDITIONS**

There have been several initiatives in recent years with a strong focus on port development in the Muskegon area. A 1999 study prepared by the City of Muskegon and the Muskegon Area Economic Development Agency (MEGA at that time, now Muskegon Area First) was completed. The study was called the City of Muskegon Waterfront Redevelopment Plan-1999, and was completed as an addendum to an earlier 1997 study that focused on redevelopment of the downtown lakefront. In the 1999 study, community leaders and private partners assessed and analyzed the downtown waterfront, with the focus of port development being a key element. Based on city master and land use plans, the study stressed the importance of the “city’s most valuable asset” and that all developments within its vicinity are likely to have wide ranging repercussions throughout the city and region (MEGA, 1999). The study discussed the importance of land uses and linkages between different potential uses such as commercial, industrial, and residential. Several of the recommendations from the 1999 study deal with potential relocations of existing facilities to allow this linkage to be successful. The focus was to put all commercial port activities in one general location at the northeast end of the lake where a majority of the existing port activities already resided. There are a few scattered non-contiguous
facilities along the lakeshore that city leaders felt could be moved to the desired area. Fitzgerald talked about the sector planning and cluster or targeted industry. This is the type of concept that was being developed in the study. A sector often refers to a group of firms that produce a similar product, but also can refer to shared markets, technology, resources, or workforce needs (Fitzgerald, 2002). Cluster strategies also refer to connectivity of markets in a geographic region that are connected through similar needs and services. There were four main goals that were discussed in the 1999 study, and three of the four have been implemented to date. The three that have been implemented are the extension of US-31 Business Route (Shoreline Drive), the Grand Valley State University Annis Water Resource Institute, and the Lake Express high-speed passenger ferry service. The last concept that has not been implemented is the development and expansion of an established port that could handle bulk and container freight as well as roll-on/roll-off cargo, and potentially service the ferry service or Great Lakes passenger cruise ships. The plan developers cited the diversity that the cities of Baltimore, Cleveland, and San Francisco experienced when their waterfronts were carefully redeveloped, and hoped to emulate their strategies for success. Community leaders identified the key area of success in those cities as being able to incorporate the “working city” into their plans. Keeping historical reference to an industrial past should be the goal, and keeping some of the industrial activities alive on the waterfront would be vital because it exemplifies the value of having the deep-water access and port activities, which was the original premise for the location of the city. “Were it not for the ample natural harbor, it is doubtful that the city would have ever attained its present stature as an important Midwestern industrial center or acquired the moniker, ‘Port City.’”

Another study, also completed in 1999; Muskegon Port Authority Study 1999 (MPAS) was derived from the same group and was completed by a hired consultant. This study took a more focused look at the establishment of an organized body to facilitate and regulate potential port activities. The MPAS study took a more detailed look at the Muskegon port and other ports around the Great Lakes and used more comparative analysis for justifying the development of the port. The ports that were analyzed include the Port of Milwaukee, the Port of Toledo, The Port of Detroit, and The Indian Port Commission that handles Burns Harbor. In this study, the consultant did analysis and provided more economic data to support the development of a port and port authority. It was determined through this study that the best means of establishing a port facility would be to initiate the development of a commission or authority to facilitate the process.

Some of the negative issues that have come up through research and interviews include noise issues and an increase in truck and train traffic. With proper planning, these can be addressed before the project starts. The concentration of port operations and heavy industry on the lake (perhaps under the aegis of a Port Authority or other quasi-public agency) can be seen as benefiting both industry and the public in a variety of ways. In the case of the former, economies-of-scale and other efficiencies can be achieved through the common use of port-related infrastructure such as booms, stevedore cranes, deep-water slips, warehousing and transportation facilities, thus relieving each operator of the need to maintain separate facilities. Perhaps more importantly, effective management of port activities could eventually lead to full containerization capabilities and more expansive use of Foreign Trade Zone (FTZ) designations. From the public’s standpoint, large tracts of formerly inaccessible waterfront lands would be opened up for more optimal uses such as housing and recreation. Truck traffic, and the wear and tear it causes to local roads, would be more effectively contained to more compatible areas away from high concentrations of housing. In short, the clustering of the heaviest port activities can be
seen as an integral part of attracting a greater variety of desired land uses to the lake while at the same time enhancing Muskegon’s viability as a general cargo port. At a minimum, the logistical requirements for a port include ample land for storage and warehousing, deep-water berths, and convenient access to a regional transportation network. Of all the sections of shoreline historically used for industrial purposes, the section of shoreline between Fishermen’s Landing and the CMS, Cobb Plant perhaps best meets all of these criteria. Along this stretch of shoreline there are several deep-water slips, ample acreage for storage and access to inland rail transport. Most importantly, it is only a short distance to U.S. 31 and its confluence with I-96. A key benefit to a central port at this location is the reduction in truck traffic in downtown and along other sections of the lake. Trucks could quickly and easily access the port and circumvent downtown altogether. Heavy truck traffic along Muskegon and Webster Avenues would be greatly reduced. Consideration however, would have to be given to the amount of dredging required to accommodate large ships at this location. The existing slips are not currently wide enough to fit two ships side by side and at some point, the slips may have to be widened and/or deepened. Given the present restrictions on dredging activities in Muskegon Lake (due to sediment contamination), a mitigation plan may have to be coordinated with the DEQ and/or EPA to effectuate the necessary improvements, including disposal of the hazardous sediment. At the very least, special measures would have to be implemented to move the materials to a Class II disposal site (Works, 2008).
MULTI-MODAL TRANSPORTATION NETWORK

The study area serves as an ideal location for port facilities, and has been identified as the desired location for future port development in city master plans and other studies on the subject. Directly east of the site, the CSX rail yard provides rail access to the shore. Access to US-31 and M-120 is also immediately adjacent to the area, which can ultimately link up with I-96 and US-131. I-96 actually terminates in Muskegon and provides a direct route to the Detroit area and numerous metropolitan areas along the way. Part of the rationale in the past for locating a port in Muskegon has been to extend I-96 across Lake Michigan and continue the route west at Milwaukee. Currently, the Lake Express high-speed car ferry runs between Milwaukee and Muskegon and is beginning their sixth year of service. The Muskegon County Airport provides both commercial passenger and air cargo services and is located approximately eight miles from the study area.

REGIONAL DEMOGRAPHICS

The current population of Muskegon County was estimated at 174,386 in 2007, which was a 2.5% increase from the 2000 U.S. Census estimates. The Consolidated Statistical Area population of the region was estimated at 1,324,516 in 2008. For the purpose of this report, I am limiting the economic data to just Muskegon County. It should be considered that regional data outside of the area I have defined will also have an effect on the benefits of the idea that is being proposed and should be looked at in more detail in future studies. The following table shows the current economic information for Muskegon County.

<table>
<thead>
<tr>
<th>Muskegon County Employment By Sector 2001 &amp; 2006</th>
<th>2001</th>
<th>2006</th>
<th>% of Total 2001</th>
<th>% of Total 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>14,793</td>
<td>13,559</td>
<td>18.1%</td>
<td>15.7%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>11,669</td>
<td>13,809</td>
<td>14.3%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>9,525</td>
<td>12,132</td>
<td>11.7%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Government</td>
<td>9,883</td>
<td>9,647</td>
<td>12.1%</td>
<td>11.2%</td>
</tr>
<tr>
<td>Accommodation/Food Services</td>
<td>6,240</td>
<td>6,693</td>
<td>7.6%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Other Services, except Public Administration</td>
<td>4,203</td>
<td>4,742</td>
<td>5.1%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Construction</td>
<td>4,640</td>
<td>4,766</td>
<td>5.7%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Administrative/Waste Services</td>
<td>2,425</td>
<td>3,848</td>
<td>3.0%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Real Estate/Rental and Leasing</td>
<td>2,806</td>
<td>3,424</td>
<td>3.4%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Professional and Technical Services</td>
<td>2,913</td>
<td>2,557</td>
<td>3.6%</td>
<td>3.0%</td>
</tr>
<tr>
<td><strong>Total Employment</strong></td>
<td><strong>81,627</strong></td>
<td><strong>86,284</strong></td>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Source: Regional Economic Information System

Muskegon County has an economically diverse economy. Industry remains a crucial component of the Muskegon coastal economy, providing the highest percentage of jobs for area workers. While manufacturing as a whole has declined as far as numbers of jobs, it remains an
important part of the regional economy. Industrial machinery, aerospace components, and biochemistry account for most of these jobs, but the industrial sector has diversified to include rubber, plastics, automotive parts, energy-related devices, electronic equipment, food, and printed materials.

The industrial and commercial hub of the region is the Muskegon metropolitan area. Over 50 percent of the population in the region resides in this metropolitan area. Ludington, the county seat of Mason County, serves as the secondary nucleus of the lakeshore region. Other local commercial and industrial centers for the region include the cities of Fremont and Newaygo in Newaygo County, the White Lake area in northern Muskegon County, and the city of Hart and village of Shelby in Oceana County, as well as the city of Grand Haven in Ottawa County.

Agricultural activities are an important component of the region’s economy. Fruit growing has always been a prosperous activity, especially along the highly productive fruit ridge. The fruit ridge is located along the eastern boundary of the region in Muskegon and Newaygo counties extending through Oceana and Mason counties to Lake Michigan. The most notable crops harvested are blueberries, apples and strawberries.

**BENEFIT OF PORT DEVELOPMENT**

Several factors have been identified as opportunities and constraints regarding the development of a port in Muskegon:

**Opportunities:**
- Zoning is in place (desired location has been identified)
- Current market and needs exist
- Foreign Trade Zone exists and can be expanded
- Existing storage space for bulk cargo
- Capability of handling maximum size vessels (in identified location)
- Environmental Remediation will be a positive by-product of development
- Current transportation network and infrastructure exists in desired location
- Private interests ready to move forward
- Potential markets exist that have not been tapped
- Ferries and recreational opportunities exist
- Decrease in distribution of invasive species
- Potential for job creation

**Constraints:**
- Funding
- No statutory language exists
- Issues with location and ownership
- Large investment needed to support expansion of cargo options
- Access to transportation and infrastructure must be addressed
- Private-Public officials not in agreement on concept or authority
- Future water levels
- Local, state, and federal regulations
- Public buy-in
The environmental efficiency of Great Lakes shipping cannot be matched. A 1993 study by the Great Lakes Commission of eleven trade routes on the Great Lakes showed that by utilizing ships, we save 14 million gallons of fuel and reduce emissions by more than 4,300 tons. Roughly 500,000 tons of cement is delivered to Detroit from Alpena by lake freighters using approximately 800,000 gallons of fuel compared with roughly 2,000,000 gallons of fuel if these same shipments traveled by truck (GLC). According to a study done by the Brown County Port and Solid Waste Department, shipping via waterborne vessels is more efficient than rail or truck, with fewer emissions (better air quality), less fuel consumption, fewer accidents and less highway congestion. Other key factors include the environmental aspect and the economic impact to the city and region with the development of the port facility. There is an evident need for additional shipping based on the numbers and cost benefits, as well as discussions that have occurred with private owners along the lakeshore. Markets such as the container freight, roll-on/roll-off shipping, expanded ferry service, recreational uses such as charter boats and Great Lakes cruise ships all exist. There also may be a market for agricultural products from the region. The ideal scenario would be a market that provided shipping opportunities in and out of the port.

EVALUATING PORT MARKET

The following industries were identified as major players (or potential players) in shipping business in the Ecosystem Based Environmental Management Assessment Report (2008) completed by The Delta Institute (Institute, 2008):

B.C. Cobb (Consumer Energy) Power Plant: This facility is located on a 300-acre site in the recommended area for port development. The plant runs partially from burning coal, which creates an ongoing demand for waterborne shipments of coal. Most of the coal received by the facility originates in the Powder River Basin in Wyoming and Montana, as well as some coal from Kentucky, West Virginia, and Pennsylvania. The facility currently operates a 1,380-foot dock and has a storage capacity of 680,000 tons of material. The location is ideal for the fact that there is an average depth of 30 feet at the facility.

Michigan Steel Inc.: Michigan Steel, Inc. specializes in steel castings produced in a wide range of alloys from five to 3000 pounds. The facility has frontage on the lake, and has considered in the past the idea of relocating their facility to the northeast end of the lake if facilities were created. Currently all products are shipped by truck to destinations. Shipping from the current location would be limited due to shallow water issues.

West Michigan Dock and Mart Facility: The Mart Dock facility is one of the most active shipping facilities on the lake. The primary materials shipped are bulk aggregates that are stored on site and shipped to various locations around the region by truck or rail. The facility has six docks that range from 420 to 930 feet. The depth at this facility is adequate at 27 feet, but with recent water levels in the Great Lakes, there may be limitations on size and weight of loads coming in. The facility has a capacity of 100,000 tons of storage. There are approximately 50 acres available for development for port and storage facilities. This facility is also serviced by the Michigan Shore Railway Company.
Verplank: The Verplank facilities are also some of the busiest on the lake, with weekly shipments of aggregates arriving at their two dock facilities. Verplank’s property is a key component to any future port development. They currently own over 40 acres at the northeast end of the lake, where the deep channel lies. All past studies have pointed to the area of the Verplank facility as the ideal location for port facilities. With the current configuration of their property, there is a capacity of around 200,000 tons of dry bulk storage. Their docks range from 1,000-1,500 feet and the water depth is 30 feet at this location. Currently the CSX rail yard is adjacent to this facility.

Lafarge: The Lafarge facility is a satellite facility of the Alpena-based cement company. With a capacity of 15,000 tons of material storage, the company is not a large player as far as tonnage, but they do receive periodic shipments on a regular basis and have expressed interest in expansion. The dock is 555 feet long and there is an average water depth of 20 feet, which limits the size of vessel that can reach their dock.

Andries: The Andries Company actually leases a dock from the Verplank Company. They provide tugboat service for the lake and are a major player as far as shipping and port development on the lake.

Padnos: The Padnos Company is located near the preferred port area and is serviced by truck and rail. Their primary business is scrapping metal. In an interview with the manager of the scrap yard, I was informed that during normal economic times, it would not be uncommon to ship out 13-15 truckloads of scrap metal per day. Another interesting bit of information was that the trucks are actually shipping down to Holland, Michigan, where the material is loaded onto ships and barges en route for the St. Lawrence Seaway and overseas to countries demanding the product. They indicated that if the facility were available, they would ship right out of Muskegon.

CSX Rail: The CSX rail yard is located adjacent to the most active shipping facilities on the lake, which is the ideal location for future port development. CSX has 838 miles of track statewide and 46 miles locally that run from Newaygo County to Southern Ottawa County.

In addition to the companies listed, many more operations in the county and region could potentially benefit from a port facility. Muskegon County’s largest manufacturer is Alcoa, which produces aerospace parts from alloys. They have over 10 facilities in the county and employ nearly 2,400 people. Another potential benefactor is the agriculture industry. West Michigan is a major exporter of agricultural goods, primarily fruit. Peterson Farms and Gerber Products ship truckloads of product to destinations around the U.S. More importantly, many of their shipments, which originate in Oceana and Newaygo Counties, end up in Wisconsin and Minnesota (Scoutten, 2009). Mr. Scoutten also indicated that as a driver, it would be both cost and time effective to utilize a roll-on/roll-off type service to cross Lake Michigan and avoid traveling through Chicago. Other important manufacturers include L3 Communications Corp, Lift-Tech International, Johnson UNC Technology Inc., and Cannon Muskegon Corp. There is also a large sand mining operation: McCormack Sand Products, which is currently looking to expand operations that will allow them to ship sand to plants in Indiana and Illinois. Currently they use truck and rail to ship their product.

As a comparative analysis, numbers and characteristics from various ports around the Great Lakes Region were reviewed. This data compared Muskegon Lake, the region, and the
various ports to determine similarities and potential for the Muskegon Port if it were to develop. The ports that were analyzed include the Port of Milwaukee, The Detroit/Wayne County Port, and the Port of Green Bay. Other ports such as the Duluth-Superior Port, The Port of Toledo and the Indiana Port Commission were also used as comparisons during the analysis, but that data is not provided in this report. It was easily determined that based on size, shipping numbers, and types of cargo shipped, the Milwaukee Port functions in a manner that is consistent with goals for a Muskegon based port. Based on the analysis Muskegon and Milwaukee share the same market conditions and Milwaukee offers an opportunity for Muskegon to offer additional forms of shipping that are not currently available. Muskegon and Milwaukee currently share the Lake Express high speed ferry during the summer months as it has dock facilities in both ports.

PORT OF MILWAUKEE

The Port of Milwaukee serves as the regional transportation and distribution center for Wisconsin, Northern and Western Illinois, and Eastern Minnesota. The port has terminals designed for the efficient handling of general cargo, roll on/roll off trailers, containers, dry and liquid bulk, and heavy lift equipment with capacity in excess of two hundred tons. The port is also serviced by two major railroads that provide direct pier delivery and switching services. The Port of Milwaukee is owned and governed by the City of Milwaukee and has a Port Authority established to manage the facility. According to Betty Nowak, Marketing Manager for the Port of Milwaukee, the port oversees the city’s lakefront, which has many recreational properties, as well as its foreign and domestic shipping facilities that bring in steel, pipe, machinery, ocean containers, as well as bulk and liquid cargoes for local consumption (City of Milwaukee, 2009). The Port of Milwaukee handled a total of 3,568,929 metric tons of cargo including dry, general, liquid, and grain. This number increased from 2006 by 2.51%. Operating revenues for the port in 2007 were approximately $4.9 million, which equated to about $1.85 million in gross income after operating expenses. The port was also able to capture $366,283 in property taxes paid by port tenants in 2007. Mrs. Nowak indicated that the main benefits from the port and port authority are job creation and revenue to pay for port improvements.

PORT OF DETROIT (DETROIT/WAYNE COUNTY PORT AUTHORITY)

The Detroit/Wayne County Port Authority operates on a much larger scale than some of the others that were analyzed, but it is important to show the economic impact that the port has on the region and state. It is estimated that the Port of Detroit contributes an estimated $750 million dollars from waterborne commerce to the regional economy through jobs, taxes, and business revenue ((DWCPA), 2008). The Port of Detroit produces 70% of the total U.S. trade with Canada. That equates to nearly $7 billion dollars worth of trade. In 2005, the Port of Detroit shipped approximately 17.5 million tons of cargo through the port. In 2003, Michigan was number 14 in the top 20 in waterborne tonnage shipped. The following table is from the Port of Detroit web page and it explains the economic impact of the port based on 2005 numbers:
Direct Jobs 5,851
Induced Jobs 4,505
Total Jobs 10,356

INCOME
Personal Income $314,042,430
Total Income $550,899,000

TAXES
Total State and Local Taxes $201,629,000

BUSINESS REVENUE
Total Business Revenue $164,868,000

PORT OF GREEN BAY

The Port of Green Bay is operated by the Brown County Port & Solid Waste Department. They have a mission of “planning and promoting harbor improvements to spur economic development through trade, business and employment by developing and advocating safe, efficient and cost effective commercial transportation” (Department, 2007). The primary cargo is coal, shipping approximately 800,000 metric tons to Ohio, Illinois, and Michigan ports. The port also ships significant amounts of limestone, cement, salt, and forest products.

The economic impact of the Port of Green Bay has increased in the past four years, from $70 million in 2004 to $76 million in 2007. The Port of Green Bay handled 2.3 metric tons of cargo in 2007. Based on information provided on their website, the Port of Green Bay’s economic impact translates to 615 local jobs, $23 million in income, $2.5 million in state taxes, $2.1 million in local taxes, and $36 million in gross state product.

While the St. Lawrence Seaway does open up and continue options for ocean based shipping in Muskegon and the Great Lakes, that option has not proved to be as effective as originally thought when it opened in 1959. In fact, according to government data, less than 10 percent of all cargo transported on the Great Lakes is from ocean freighters. A majority of the shipments that come into Muskegon are domestic origin (Alexander J., 2009).

RECOMMENDATIONS

This research has shown that port development is both feasible and practical in the West Michigan area. There are many hurdles to overcome in the process, but the time is right for moving this idea forward. The economic and environmental effects on the region are significant, and with the economy the way it is, this could be the boost that Muskegon and the region need to get back on top. The focus should be directed to the development of a commission or authority that can facilitate the process from the start and provide decision-making capacity as a representative of the whole. Past studies have shown this as the key ingredient to making a port facility work. A typical authority or commission should include representatives from federal, state and local agencies including economic development, environmental quality and transportation officials. Planners and engineers from local municipalities as well as public works officials are important to have at the table. The U.S. Army Corp of Engineers and the U.S. Coast Guard should have representation. Private business and industry leaders as well as public representation are also crucial.

The “group” would be charged with initiating studies, market analysis, reviews, and assessments of the current and future conditions in much detail. Careful review of other port facilities such as the ones looked at in this study would be very helpful in determining roles and
funding scenarios for the body. Engineers and consultants would be needed for much of this work.

According to the U.S. DOT (US Department of Transportation), expanded use of America’s Marine Highway is an effective and desirable way to help relieve landside rail and highway congestion as waterborne transportation in general is underutilized. It is also a goal to alleviate environmental issues along the shoreline, and most of all, provide economic effects for a community. The development of a port in Muskegon is a vital component in keeping with the spirit of the city and their plans for the lakefront. Economic impacts will be felt regionally and statewide if successful. Communication and consensus between public and private partners is crucial for a project of this caliber to happen. Funding sources from both private and public entities is also necessary. The project can be sustainable with proper planning and funding structure in place. Private investors, Revenue Bonds, General Obligation Bonds, and potential Taxing Authority are all possible ways to achieve sustainability.

Although bulk shipping on the Great Lakes has been greatly diminished in recent years, it is obvious that the lake figures no less importantly in the economic future of Muskegon, as it did in the past. Although tourism should no doubt play an important role in such a future, tourism alone tends to be seasonal, acutely sensitive to the vagaries of the economy, and the whims of the traveling public. Moreover, it tends not to create jobs that pay family-supporting wages. Greater economic balance would be afforded by investments in lakeside residential and commercial development, as well as additional Foreign Trade Zone (FTZ) designations. Such developments often require substantial public expenditures for infrastructure but can help spur ancillary economic activity resulting in an active, year round, lakefront. A major premise of this plan is that all manner of land uses proposed for the lakefront need not be mutually exclusive, and are in fact desirable. Industrial, recreational, commercial and residential land uses can and do successfully coexist, often with great effect. In fact, their coexistence has proven to be the crucial ingredient in the projects cited above and dozens of others both in the U.S. and abroad. With its sizable lake frontage and proud industrial past, there is no reason to believe that Muskegon’s prospects for a revitalized lakefront, incorporating such varied uses as residential development to port facilities, cannot also attain the same level of acclaim (MEGA, 1999).

REFERENCES


Mulnix/Port Development in Muskegon

Evans, K. (2009). Program Manager, WMSRDC Environmental Dept. (B. Mulnix, Interviewer)
Jelier, Richard. G. S. *Metropolitan Affairs and the Triple Bottom Line in Michigan.*
Lakefront Development Task Force.

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APPENDIX

SHIPPING INFORMATION
The following table shows recent tonnage information for the various ports for comparison.

<table>
<thead>
<tr>
<th>Port</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muskegon</td>
<td>2,684,000</td>
<td>2,063,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milwaukee</td>
<td></td>
<td></td>
<td>3,481,541</td>
<td>3,568,929</td>
</tr>
<tr>
<td>Green Bay</td>
<td>2,200,000</td>
<td>2,545,500</td>
<td>2,625,000</td>
<td></td>
</tr>
<tr>
<td>Detroit/Wayne County</td>
<td></td>
<td></td>
<td>17,500,000</td>
<td></td>
</tr>
<tr>
<td>Toledo</td>
<td>2,200,000</td>
<td>2,545,500</td>
<td>2,625,000</td>
<td></td>
</tr>
</tbody>
</table>

[Map of the Great Lakes]
Student Profile: Brian Mulnix

Brian received a BS with an emphasis in Environmental Policy and Land Use Planning from Central Michigan University (1997). He has been in the public planning field for the last 10 years, and chose the MPA program at GVSU because it fit into his career goals and allowed him to expand his knowledge and experience in the field. Brian’s favorite classes in the program were Economic Development (PA641) and the Capstone class (PA619). He currently works as a Program Manager for a regional planning agency in Muskegon. His primary focus is on Transportation, but he also works with some local government and economic development projects as well. In addition, Mr. Mulnix serves as Treasurer for the Michigan Transportation Planners Association (MTPA), Secretary for the Whitehall Township Planning Commission, and many other committees for the township. He also teaches Geography and GIS classes at Muskegon Community College. Brian is married to his wife, Melissa, with two children (Maddie & Mason), and lives in Whitehall, Michigan.