

WATERWAYS COUNCIL, INC.

INTERIM REPORT

STUDY OF THE EFFECTS ON THE ECONOMY OF THE UPCOMING EMERGENCY CLOSURE OF THE MCALPINE LOCK

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The Waterways Council is the nationwide public policy organization advocating a modern and well-maintained national system of ports and inland waterways. The Council is made up of companies and public bodies with a stake in efficient inland waterways, and it advocates in Washington and in the states and communities for needed maintenance and capital improvements to the system.

The Corps of Engineers has scheduled closure of the McAlpine Lock on the Ohio River, near Louisville, KY, for emergency repairs, for a two week period during August, 2004. This is of concern to many users of the waterways system because, unlike most navigation locks on the system, there is no auxiliary lock at McAlpine, and the river will be closed to all navigation at this location for the duration of the repairs.

This situation is the result of a drawn out period for construction of a second lock at McAlpine because federal funding has been less than is needed for completion of the second lock on schedule. The second lock was originally authorized in the early 1990s. If its schedule would have been maintained it would be open by now, and closure of the existing McAlpine Lock for repairs would have little effect on river traffic.

Closure of the McAlpine Lock will affect traffic over a wide area -- from the Gulf Coast and the Lower Mississippi Region to the headwaters of the Ohio River and its many tributaries.

The Waterways Council has commissioned a study of the effects on the economy of the upcoming closure of the McAlpine Lock. The study has involved interviews with producing and consuming companies which are users of the Lock for transportation, and a survey of commercial water carriers which provide transportation service through the Lock.

Thankfully, in this instance, the Corps of Engineers was able to give industry ten weeks notice of the upcoming closure. This has allowed many companies to advance their shipping schedules, stockpile commodities and otherwise adjust to the anticipated closure. Consequently, the situation investigated in this study might be called a *best case scenario*. *If there were to be a failure of the lock and early notice of a lock closure were not possible, the effects would be much greater.*

The following is a summary description of the study and its interim findings:

- A canvass was made targeting 101 companies which are involved with shipping or receiving waterborne commodities in the Ohio River Basin.
- Information was obtained from 74 companies which transport a range of commodities, including coal, petrochemicals, aggregates, metallic ores, scrap metal, iron & steel products, ferro-alloys, minerals, grain and fertilizer.
- The companies were asked: whether they would be affected by the lock closure; how they would be affected; provisions underway to minimize effects; and estimates of added costs due to the closure.
- Based upon the responses, the affected companies were given a rating ranging from *No Effect* to *Severe Effect*.
 - Seven of the 74 companies are projected to have a *Severe Effect*, meaning that there are likely to be cut-backs in production and employment or very high costs for alternate transportation to avoid production losses. These seven companies will see the flow of about 165,000 tons of commodities disrupted by the lock closure.
 - The closure is expected to have a *Heavy Effect* on another seventeen companies, with 800,000 tons of traffic affected during the two week period.
 - Twenty-two different companies will have *Moderate Effects*. Their traffic for the two-week closure amounts to more than 900,000 tons.
 - There are five other companies, with more than 70,000 tons of affected traffic over the two-week period, for which the effects are uncertain. These have been rated as *Possible Effects*.
 - Finally, for a variety of reasons, including the fact that they have no or very little traffic using the lock, or they can easily adjust to the closure, 23 companies anticipate *No Effect* of the lock closure.

- Taken together, over two million tons of commodities will be affected by the two-week closure. This amounts to more than 1,250 loaded barges, over 550 empty barges and 190 towboats passages, to be delayed by the lock closure. If the affected traffic were converted to truck, it would amount to 80,000 truckloads and a similar number of empty truck return trips, traveling the streets and highways of the affected communities.
- Completing the movements of 1,250 loaded barges and positioning 550 empty barges where they are needed is a complex challenge for water carriers. It suggests that the disruption to waterborne commerce will last well beyond the period of the lock closure.
- Two of the companies projected as having a *Severe Effect* are involved with the same traffic, which is the steady flow of chlorine from a major petrochemical producer located in the Upper Ohio Valley to its customer, another major petrochemical company, located on the Tennessee River.

Chlorine is a hazardous material and *product of national significance* which is used as feedstock in several manufacturing processes. It goes directly from producer to consumer and, because of environmental regulations, may not be stored at either the producer or consumer end of the move. Chlorine moves in specialized barges which are in short supply.

Provision has been made to partially substitute chlorine from the Ohio Valley producer with chlorine produced down-river of the McAlpine Lock, which will largely satisfy the customer's needs. However, there will have to be reduced production of chlorine by the Ohio Valley producer, and attendant loss of revenue and possibly temporary curtailment of employment at this plant.

- Two of the companies facing *Heavy Effects* are aluminum producers located in the Upper Ohio Valley. These companies depend on aluminum ore which is imported in shiploads through the Gulf Coast, and transported upriver by barge. They also receive some fuel and ship some products downriver by barge. All of this traffic transits the McAlpine Lock.

These aluminum companies depend on the efficiencies of Just-In-Time delivery. They do not use on-site storage, but move the aluminum ore directly into their production processes. The importance of this steady stream of ore is made clear by the fact that one of the companies is planning to unload ore downriver of the McAlpine Lock, transport it by truck through the Louisville area, and reload it into barges upriver of the lock, for continued transport to the plant. This will double the transportation cost of the ore. The added cost will come out of profits since the price

of aluminum is set by the market and is beyond the control of one producer.

One aluminum company will be advancing delivery schedules and will build up stockpiles of ore prior to the closure. It has space for stockpiling ore because it has already reduced production and idled workers in anticipation of material shortages due to the lock closure. This company will be further impacted by the cost of transferring the ore to stockpiles, holding excess inventory, and reclaiming the ore to maintain its reduced production levels.

- Another company with a *Severe Effect* is an integrated steel manufacturer, located in the Upper Ohio Valley, which transports by water more than two million tons per year of raw materials and products. This company receives a steady flow of iron ore, scrap steel and lime upriver, and ships steel downriver. So as not to curtail steel production, this company expects to shift modes of transport which will cost up to \$2 million in added transportation cost. The company anticipates that the two week lock closure will cause a 4 to 6 week disruption in its steel production process.
- A similar effect is anticipated by a terminal operator in the Upper Ohio Valley which handles coke, lime, pig iron and steel coils. This company anticipates layoffs by one of its customers, a steel manufacturer, while another customer plans to switch to railroad at greatly increased cost.
- Several other petrochemical manufacturers are also judged to be facing *Severe Effects*, due to the lack of storage capacity on-site and shortage of specialized barges for the hazardous materials transported. These companies are doing all they can to position materials in advance of the lock closure and are hoping that the closure does not last longer than the scheduled two weeks. If it does, production will have to be curtailed.
- There is a great deal of coal moved through the McAlpine Lock which will be disrupted by the closure. Coal accounts for more than 500,000 tons of traffic over a typical two-week period.

Generally speaking, the coal producers and power companies transporting coal through the lock will be able to accommodate the closure by stockpiling coal in advance. Nonetheless, there will be costs to accelerating shipments, and stockpiling and reclaiming coal, which will be borne by these companies, with some of the added cost passed on to consumers of electricity.

If the closure were to last longer than the scheduled two weeks, there could be cut-backs in power production at power plants at a time of peak demand. Transporting coal by railroad is not possible since the power plants are configured to receive coal

by water and adequate railroad facilities are not in place.

- Many of the companies are thankful to the Corps of Engineers for the early notice (ten weeks) of the emergency closure and for the Corps cooperation in adjusting this and other lock closures to accommodate user needs.

The Delta Queen Steamboat Company will have a *Moderate Effect*. Because of the early notification of the closure it was able to adjust its schedules sufficiently in advance to avoid having to cancel any of its cruises, although some port calls will be missed and a few customers may be inconvenienced. There will be economic losses at ports which are eliminated from the excursions.

Several other companies with *Moderate Effects* were able to advance production and shipping schedules so that commodities are moved through the lock in advance of the closure to meet customer needs. Others expect delay in receipt of shipments until after the lock reopens and the queue clears and anticipate paying overtime and possibly some layoffs, although they will schedule maintenance for the down time while awaiting shipments.

- Many of the companies interviewed indicated uncertainty of the effects until they know if they will be able to get their shipments through the lock in advance, exactly how long the closure will last, and how long it will take for traffic flow to return to normal conditions. The Waterways Council has made provisions to check back with the companies during and after the closure to assess actual effects.
- The Waterways Council has also begun a program for monitoring the effects (including added operating cost) of the lock closure on water carriers, the companies which will be most directly affected.
- There was nearly unanimous opinion among the shipping and receiving companies that waterways transportation is absolutely necessary to the continued existence of the companies interviewed. Many of the companies are so tied to water transportation that transport by other modes is either physically infeasible or highly unreliable and would be much more costly. These companies would not be able to continue their production at these locations without waterway transportation.
- Many of the companies interviewed were troubled by the need for the emergency closure and the fact that this will completely close the river to navigation for the duration. Some are aware that there are funds, amounting to nearly \$400 million, which have been collected by the Federal government from the user tax on

navigation fuel, sitting unused in the Inland Waterway Trust Fund. They stated resentment at *having to pay twice* for the needed repairs.

- The disruption to the economy from closure of the McAlpine Lock is a direct result of inadequate funding over several decades of maintenance and modernization of the vital national resource – the inland waterways system. This is only one incident of many in which inadequate funding has resulted or potentially will result in breakdown in efficiency and reliability of the system. The Waterways Council is committed to working with the Corps of Engineers and other Federal officials, and state and local governments, to encourage adequate funding and completion of improvements without delay, to assure that disruptions, such as the emergency closure of the McAlpine Lock, do not occur again in the future.

If you have questions or comments on this study, or on the needs to maintain and modernize the inland waterways system, they may be directed to:

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