

**All Congregations Together * Alliance for Affordable Energy * American Rivers
Citizens Against Widening the Industrial Canal * Delta Chapter Sierra Club
Eastern St. Bernard Association * Environmental Defense Fund
Gulf Restoration Network * Holy Cross Neighborhood Association
Hope House * Louisiana Environmental Action Network
Louisiana ACORN * Lower 9th Ward Community Organization/ACORN
Louisiana Audubon Council * Lower 9th Ward Health Clinic
Common Ground Relief, Inc.
Lower 9th Ward Homeowners Association
Lower 9th Ward Center for Sustainable Engagement and Development
Lower Mississippi Riverkeeper * National Wildlife Federation
New Orleans East Community Organization/ACORN
Old Arabi Neighborhood Association * Ouachita Riverkeeper
Pax Christi New Orleans * Seabrook Area Community Organization/ACORN
St. Bernard Beautification Association
Surfrider Foundation Central Gulf Coast Chapter
Upper Ninth Ward ACORN Group**

May 4, 2009

U.S. Army Corps of Engineers (PM-RP)
c/o Richard Boe
P.O. Box 60267
New Orleans, LA 70160-0267

**Re: Comments on the Final Supplemental Environmental Impact Statement for the
Inner Harbor Navigation Canal Lock Replacement Project**

Dear Mr. Boe,

On behalf of our thousands of members and supporters in the Gulf States and millions of members and supporters across the nation, please accept these as official public comments on U.S. Army Corps of Engineers' Final Supplemental Environmental Impact Statement (DSEIS) for the Inner Harbor Navigation Canal Lock Replacement Project. These comments are in addition to any comments that individual groups may be submitting separately. Based upon: 1) the environmental, social, health, cultural, economic and other impacts of the proposed expansion of the lock, 2) lack of economic justification for the project, 3) the Corps' failure to comply with NEPA by, among other things, not considering shallow-draft alternatives in the SEIS, and 4) the existence of much more pressing priorities for the community, including rebuilding, storm protection and environmental restoration, it is the strong conviction of the undersigned organizations and its members that the Corps should select the "no action" alternative and recommend that Congress deauthorize this project.

Project Background

This project seeks to replace the existing 640 ft. long / 75 ft. wide/ 31.5 ft. deep lock in the Industrial Canal (in New Orleans) with a larger 1,200 ft. long / 110 ft. wide / 36 ft. deep lock. The 1956 Rivers and Harbors Act authorized a lock replacement when “economically justified by obsolescence of the existing lock.” Over the course of the last 50 years, the Corps has proposed several other lock replacement locations, and has subsequently abandoned those alternatives due to similar concerns as those being put forth in these comments. In its 1997 Final Environmental Impact Statement and subsequent Record of Decision, the Corps proposed the current location for the lock replacement in the Lower 9th Ward, New Orleans, adjacent to the Holy Cross Neighborhood.

In 2003, the Gulf Restoration Network, Holy Cross Neighborhood Association, and Louisiana Environmental Action Network (represented by the Tulane Environmental Law Clinic) sued the Corps because, among other things, the 1997 Final Environmental Impact Statement failed to take a hard look at the environmental impacts of the project. The Court agreed that the Corps failed to take a hard look at the environmental impacts of the lock replacement project, suggested that the lock replacement project may no longer be in line with the Corps’ post-Katrina priorities, and enjoined the Corps from going forward with the project until it complied with the law. In response to the Court’s order, the Corps prepared the SEIS, which is the subject of these comments. The SEIS still recommends replacing the lock, but again fails to take a hard look at the environmental impacts of the project by, among other things, failing to consider a shallow-draft lock alternative, and thus the SEIS is out of compliance with NEPA. Until such time as the Corps has adequately complied with NEPA, and all other applicable environmental laws and rules, the Corps should halt all construction of this project and not commit any further resources to project construction.

Unacceptable Public Safety and Environmental Impacts

This project will produce unacceptable public safety impacts. The Corps’ own testing acknowledges that some of the canal sediments are “acutely toxic to benthic organisms.” Yet the Corps plans to put these toxic sediments in a so-called “confined disposal facility” (CDF) built in wetlands bordering the South East side of the Gulf Intercoastal Waterway near the border of Orleans and St. Bernard Parishes—where the waters of Hurricane Katrina flooded the area up to 17 feet deep, and where the City of New Orleans is proposing, in its new Master Plan, to be a ‘Natural Area.’ The Corps admits that water could be released from the CDF, putting an undue health burden on the citizens living near the CDF.

The construction of the lock and the location of the CDF will also temporarily or permanently harm approximately 300 acres of wetlands that are critical to protecting the region from storm surge events, such as the storm surge from Hurricane Katrina. Additionally, we believe the Corps wetlands mitigation plan is inadequate to make up for the lost wetlands functions that this project would entail.

Additionally, many community members are unsatisfied with the Community Mitigation Plan proposed in the SEIS, and have expressed concerns that the Plan does not

adequately address the adverse effects and risks to community members associated with project construction. The community was not allowed to play a meaningful role in the development of the Mitigation Plan and that the Plan does not represent the sentiments of the community.

Fails Corps Economic Justification Requirements

The Corps has not demonstrated that this project might be economically justified using traditional Corps methods of measuring costs and benefits. Over the last few years, as traffic has continued to decline, the case has been getting weaker and weaker. The Corps' analysis was scrutinized in a December 2007 report, *Failure to Hold Water*, authored by Dr. Robert Stearns. Dr. Stearns found that the project would not be justified unless both the levels of barge traffic and average delays at the existing lock increased dramatically (and unrealistically) in the future. By applying more realistic projections based on historical trends in traffic, Dr. Stearns concluded that the project's benefit-cost ratio would be at the most 0.40, far below the level of 1.00 where project benefits are at least high enough to equal project costs.

This conclusion was made before the closure of the Mississippi River Gulf Outlet (MRGO) Channel. Now even the Corps admits that traffic does not warrant a deep draft lock. The remaining justification relies even more on a significant reversal of the 20-year downward trend in barge traffic (see accompanying figure). Actual traffic levels in 2007 were significantly lower than traffic forecasts that the Corps made in 2005, and the gap between Corps traffic forecasts and actual traffic levels widened even more in 2008.

According to a more recent analysis by Dr. Stearns, unless current levels of traffic and delays increase, the benefit/cost ratio has actually fallen to 0.30 -- that is, it would only return 30 cents to every dollar invested. The Final SEIS falls far short of being an objective evaluation of project alternatives. Its primary purpose seems to be to justify a fundamentally flawed decision to continue to construct a replacement lock.

The Corps has either mischaracterized or seriously misunderstood Dr. Stearns analysis in Appendix S of the FSEIS materials. In Appendix S, the Corps stated:

“Dr. Stearns’ economic analysis is based on a single year of vessel traffic data and does not consider the actual trends observed in the historical data. The benefit cost analysis conducted for the SEIS (Appendix O) is based on an assessment of vessel traffic on the IHNC from 1992 to 2002, vessel traffic on adjoining waterways, and economic trends with consideration of the historical and future economic and regulatory factors which have affected the industries supported by waterborne traffic.”

The important point that he was making is that even a shallow draft replacement lock cannot be economically justified at current levels of traffic and delays. There is nothing in the Corps final SEIS that contradicts this finding or any of Dr. Stearns' calculations. Yet the Corps claimed that the levels of delay would not be significantly higher in the near future (see p 77 of the 2008 SEIS). So their entire case for economic justification comes down to the assertion that the downward traffic trends of the last 20 years will

somehow be mysteriously reversed. Lock proponents who claim that current conditions are already enough to justify a replacement lock are simply ignoring the basic economic facts.

We resubmit in their entirety Dr. Stearn's most recent analysis for the record [see Attachment #1] of this FSEIS, and Dr. Stearns' resume [see Attachment #2]. We particularly reiterate here Point 1 from Dr. Stearn's analysis, which shows the fundamental fallacy in continuing to recommend the deep-draft option in light of the recent closure of the Mississippi River Gulf Outlet.

1. The cost of building the proposed lock is inflated by the decision to build it deeper than the traffic needs. The Corps' own analysis suggests that "even if you build it this deep, they will not come."

The SEIS claims that a larger and deeper lock is needed to accommodate deep draft traffic no longer able to use the deauthorized Mississippi River/ Gulf Outlet (MRGO) Channel:

"It is also predicted that the number of deep-draft trips would increase in the IHNC as the deep-draft lock would provide access where access is now limited because of the lack of dredging operations and closure of the MRGO."

This is in direct contradiction to the findings of the Economic Appendix:

"[I]n anticipation of the MRGO's de-authorization, most companies along the MRGO section of the Port of New Orleans that required deep draft vessel support via the MRGO have either moved or are planning to move operations to the Mississippi River section of the port or to other ports along the gulf coast. The companies that choose to continue to operate along the MRGO area are those that can use the existing IHNC lock.

Consequently, the deep draft activities that supported the deep draft benefits identified in the 1997 Evaluation Study and 2005 Investigative Study are no longer occurring. While future demand for deep draft lockages through the IHNC lock may arise, none appears to exist in the present aftermath of the MRGO's closure. Therefore, this SEIS assumes no deep draft benefits associated with the authorized plan over the period of analysis."

If the conclusions in the Economic Appendix are correct, the Corps will be building a project that is unnecessarily expensive to accommodate traffic that **does not exist and will not exist in the future**. No decision about this lock should be made unless and until the contradictory claims of these two documents can be resolved.

Additionally, continuing to plan for a deep-draft design means large unjustified costs for U.S. taxpayers and the local community, and huge environmental impacts stretched over many years for local residents.

Unacceptable Community Health Impacts

The Ninth Ward neighborhoods that are adjacent to both sides of the Industrial Canal include New Orleans East, Seabrook, Gentilly, Upper 9th Ward/St. Claude, Bywater, Lower 9th Ward and Holy Cross. Many community organizations in these neighborhoods have been heavily involved in post-Katrina planning and rebuilding, and share a vision for the Ninth Ward of solid community residential neighborhoods, with appropriate parks, schools, hospitals, wetlands, and small businesses. More than a thousand of individuals have put all of their resources into returning and re-establishing their lives in these communities. Both private and public rebuilding projects (including projects by Global Green, ACORN, and Brad Pitt and Angelina Jolie's Make It Right Housing Project) have restored thousands of homes and could use assistance, **not the disruption** that a major expansion of the Industrial Lock would entail.

The Industrial Canal area is no longer the industrial outpost that it once was when it was first utilized in the 18th century as a shipping lane. This is in part due to the recent post-Katrina closure of the Mississippi River Gulf Outlet, which is steering shipping business out of the canal and onto the Mississippi River.

The neighborhoods adjacent to the Industrial Canal are overwhelmingly African-American, and would be exposed to a disproportionate level of increased contaminants as a result of an Industrial Lock expansion. These citizens have already felt the brunt of environmental justice issues when the Corps' engineering failed and cost over a thousand lives when Hurricane Katrina's storm surge hit. Because of these environmental justice issues, this project should not go forward.

Air Pollution: The dust and particulate matter that would be created from an Industrial Lock expansion would be excessive, and would impact neighborhoods from the Mississippi River to Lake Pontchartrain, for at least a decade. New Orleans residents already have among the highest asthma rates in the country, and the humid air of the Gulf Coast region exacerbate the effects of particulate matter inhalation, now found to be linked with congestive heart failure.

Noise Pollution: The noise pollution from current routine industrial activities on the Industrial Canal already affects residents at night in the Ninth Ward. The noise from a lock expansion would increase from dawn till dusk, further adversely impacting local residents, including students who are within a half mile of the proposed project location. This noise will further debilitate the lives of families who are already stressed from the traumas of Hurricane Katrina.

Further, the expansion of the canal will almost certainly lead to the development of more industrial businesses that will further pollute air, water and land. This will impair the redevelopment of the communities that are now working so hard to return since the aftermath of Hurricane Katrina.

Community Re-building, Storm Protection and Wetlands Restoration Needs

The massive expenditures on this unnecessary and unjustified project will, practically speaking, preclude other investments that are much more critical to the future health of the region. Authorized but not-yet-funded coastal restoration projects and projects to protect coastal residents should be prioritized over spending \$1.3 billion on an unnecessary lock expansion. A recent analysis by a coalition of national and local conservation organizations recommended spending \$1.58 billion on several authorized, ready-to-go construction projects that would restore the health, safety, and resilience of coastal communities by rebuilding and restoring coastal wetlands and assisting communities with reducing their exposure to flood risks.

These projects include spending over the next two years: \$660 million on Beneficial Use of Dredge Sediment, \$300 million on Storm-Proofing & Elevating Homes, \$120 million on Coastal Wetland Planning, Protection, and Restoration Act (Breaux Act), \$55 million on Central Wetlands Restoration, \$130 million on Mississippi River Reintroduction into B. Lafourche, and \$65 million on the Myrtle Grove Sediment Diversion. All of these projects are un-met needs of the community, which the region needs to survive and flourish.

Developing and implementing a comprehensive plan to restore the wetlands and storm buffering capacity lost to the Mississippi River Gulf Outlet is another critical need for the region. The need to fund these projects is a stark contrast to the notion of spending \$1.3 billion on the proposed lock expansion.

Conclusion

The Inner Harbor Navigation Canal Lock Replacement Project proposal does not meet the needs of the Greater New Orleans and South Louisiana coastal community, fails the most basic economic tests, and takes away vital federal resources that are needed to address fundamental safety issues of the region. The SEIS's failure to analyze the shallow draft option render the SEIS out of compliance with NEPA. Our organizations, whose members live, work, go to school and play in the communities that would be impacted by this construction, oppose the Industrial Lock Expansion, recommend the "no action" alternative and recommend that Congress deauthorize the project.

Thank you for taking these comments into consideration.

Sincerely,

Charles Allen III
President
Holy Cross Neighborhood Association

Richard W. Bryan Jr.
Vice President
Louisiana Audubon Council

Theresa Billeaud & Paul Troyano
Co-chairs
Pax Christi New Orleans

David Conrad
Senior Water Resources Specialist
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Lower 9th Ward Center for Sustainable
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Cheryl Diggins
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Don Everard
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Community Comments on Industrial Lock FSEIS

May 4, 2009

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Jill Witkowski
Chairperson
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Karen F. Wimpelberg
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Alliance for Affordable Energy

Attachment # 1: Economic Analysis by Dr. Robert N. Stearns

November 15, 2008

John Koefel
President
Citizens Against Widening the Industrial Canal

Dear John,

In accordance with your request, I have reviewed the Army Corps of Engineers' Draft Supplemental Environmental Impact Statement (SEIS), "Inner Harbor Navigation Canal Lock Replacement Project Orleans Parish, Louisiana (Oct 2008) as well as the SEIS's Economic Appendix, Appendix O. As part of this work, I have compared the information contained in these documents with two earlier Corps reports, "Mississippi River- Gulf Outlet, New Lock and Connecting Channels, Evaluation Report, Economic Analysis, Appendix E" (Mar 1997) and "Mississippi River- Gulf Outlet, New Lock and Connecting Channels (Inner Harbor Navigation Canal [IHNC] Lock Replacement) – Evaluation Report, Supplement No. 1" (Sep 20, 2000).

The 2008 SEIS falls far short of being an objective evaluation of project alternatives. Its primary purpose seems to be to justify a fundamentally flawed decision to continue to construct a replacement lock. I base this conclusion on the following observations.

- The cost of building the proposed lock is inflated by the decision to build it deeper than the traffic needs. The Corps' own analysis suggests that "even if you build it this deep, they will not come."
- The SEIS misreports the current cost-sharing arrangements and thereby distorts the amount required from the general taxpayer. The taxpayer's stake is a lot higher than the report suggests, making reconsideration of the merits of this project even more urgent.
- The Corps has not show any interest in determining whether or not this project is still economically justified; instead it clings to the assertion that because it is an authorized project, no further economic analysis is warranted.
- The Corps believes that the current level of navigation delays is sufficient justification for building the new lock. By any standards of rigorous economic analysis, this is simply not true. In fact eliminating current delays will return at most only \$0.30 for every one dollar spent.

I address each of these points separately in an attachment to this letter.

In addition, my research has led me to have other concerns about the Corps' approach to project evaluation and to its conclusions regarding the IHNC replacement lock. These concerns (also discussed in my attachment) are:

- By any objective standard, the Inner Harbor Navigation Canal Replacement Lock will have a hard time competing for funds in a tight Federal budget.
- The Corps' analysis continues to be based on the belief that future traffic trends through the Industrial Canal Replacement Lock would be a significant reversal of the last 20 years.
- The model and data the Corps uses for measuring delays and assigning costs to these events has never been made fully available for public evaluation. The failure to make such disclosures, severely limits the ability to evaluate the potential benefits from delay reduction or to judge the efficacy of on-going Corps efforts to minimize the impact of current delays.
- The Corps has never chosen to address the specific concerns of its critics in any systematic or scientific way; consequently, there are many remaining unresolved issues.

There is a compelling need for independent review of this project. Certainly, this review should be completed before any more money is spent. This is especially important since the Corps only presents its conclusions and limits access to all of its data and assumptions. It is my hope that common sense will prevail and that the money that would be wasted on this project (now estimated to be more than \$1 billion) will be put to better use. If the "no action / deauthorization" alternative finally gets its "day in court," I am convinced it would quickly become the preferred alternative.

Sincerely,

Robert N. Stearns

Attachment

Attachment

Unresolved Issues and Concerns Regarding the Proposed Replacement of the Inner Harbor Navigation Canal Lock

1. The cost of building the proposed lock is inflated by the decision to build it deeper than the traffic needs. The Corps' own analysis suggests that "even if you build it this deep, they will not come."

The SEIS claims that a larger and deeper lock is needed to accommodate deep draft traffic no longer able to use the deauthorized Mississippi River/ Gulf Outlet (MRGO) Channel:

"It is also predicted that the number of deep-draft trips would increase in the IHNC as the deep-draft lock would provide access where access is now limited because of the lack of dredging operations and closure of the MRGO."¹

This is in direct contradiction to the findings of the Economic Appendix:

"[I]n anticipation of the MRGO's de-authorization, most companies along the MRGO section of the Port of New Orleans that required deep draft vessel support via the MRGO have either moved or are planning to move operations to the Mississippi River section of the port or to other ports along the gulf coast. The companies that choose to continue to operate along the MRGO area are those that can use the existing IHNC lock.

Consequently, the deep draft activities that supported the deep draft benefits identified in the 1997 Evaluation Study and 2005 Investigative Study are no longer occurring. While future demand for deep draft lockages through the IHNC lock may arise, none appears to exist in the present aftermath of the MRGO's closure. Therefore, this SEIS assumes no deep draft benefits associated with the authorized plan over the period of analysis."²

If the conclusions in the Economic Appendix are correct, the Corps will be building a project that is unnecessarily expensive to accommodate traffic that **does not exist and will not exist in the future**. No decision about this lock should be made unless and until the contradictory claims of these two documents can be resolved.

¹ Corps of Engineers, 2008 SEIS, p 160

² Corps of Engineers, 20088 SEIS Economic Appendix O, p O-5

2. The SEIS misreports the current cost-sharing arrangements and thereby distorts the amount required from the general taxpayer. The taxpayer's stake is a lot higher than the report suggests, making reconsideration of the merits of this project even more urgent.

The SEIS acknowledges that the Corps' recommended project is not the alternative that produces the greatest net economic benefit and claims incorrectly that the added costs of this "locally preferred plan" will be picked up by the local sponsor, the Port of New Orleans:

"The recommended plan in the 1997 EIS would construct a new lock north of Claiborne Avenue with a usable draft depth of 36 feet, a length of 1,200 feet and a width of 110 feet. This recommended plan was a larger lock than the plan which maximized the National Economic Development (NED) benefits. The NED Plan was a lock with a usable draft depth of 22 feet instead of 36 feet, and a length of 900 feet instead of 1,200 feet. It was determined that the deeper lock would accommodate deep-draft vessels which utilize the Port of New Orleans facilities in the MRGO and IHNC. This recommended plan was also the locally preferred plan (LPP)."³

"The cost sharing for this project was set forth in the WRDA of 1986 and described in the 1997 EIS and is incorporated herein by reference. It required that all costs for the project be allocated between shallow-draft and deep-draft navigation. The shallow-draft costs would be cost-shared 50-50 between the regular USACE appropriations and the Inland Waterway Trust Fund. The deep draft increment would be the responsibility of the local sponsor, the Port of New Orleans, since the increment is not justified on its own."⁴

The SEIS fails to mention that the cost sharing arrangements described in the 1997 report were modified in the Corps' 2000 Supplement 1:

"The 1997 Evaluation Report in the Syllabus in the front of Volume 1, contained a statement that '... The Port of New Orleans owns the real estate required for this project and will be given credit for these lands, presently estimated at \$45,200,000 towards their requirement for the project.' Using the \$45.2 million figure cited in Volume I of the Report, the Port's required cash contribution toward the deep draft increment would have been \$23.1 million. The Port has stated that it used that figure to prepare their financial plan to support this project. Unfortunately, that statement in the syllabus was in error...."

"The original cost-sharing premise was based on a willing and capable non-Federal government entity contributing all of the costs in excess of NED Plan

³ Corps of Engineers, 2008 SEIS, p 5

⁴ ID, p 19

costs. This analysis did not take into account the specific statutes authorizing the project, which envisioned that the costs of the project would be allocated between inland and general cargo (deep draft) navigation based on use.... [C]osts allocated to general cargo will [now] be cost shared in accordance with the requirements in Section 101 of WRDA [Water Resources Development Act] 1986.⁵

The practical consequence of this change is first, that the shallow-draft costs would continue to be shared on a 50-50 basis between the regular USACE (general taxpayer) appropriations and the Inland Waterway Trust Fund. However, 65 percent of the deep draft increment (referred to as the “general cargo (deep draft) costs” in the 2000 Supplement Report) have been shifted away from the Port of New Orleans to the general taxpayer.⁶

Unless, as the SEIS suggests, the cost-sharing arrangements of the 1997 Report have been restored, the majority of the costs of the unjustified deep draft increment are now borne by the general taxpayer. It is hardly surprising that the Port of New Orleans is unwilling to foot the bill, especially if the Economic Appendix is right and there is no need to build to this depth. But why should not this standard apply equally to the general taxpayer? Any critical evaluation of project alternatives should recognize this significant change in the cost sharing arrangement and ask whether or not this is really a wise use of Federal tax dollars.

3. The Corps has not show any interest in determining whether or not this project is still economically justified; instead it clings to the assertion that because it is an authorized project, no further economic analysis is warranted.

The SEIS never seriously considers “no action/without project” as a viable alternative. The main report simply does not make any comparison of benefits to costs, the standard measure of a project’s economic value. Instead, the no action/without project alternative is summarily dismissed early in the report:

“Since the North of Claiborne IHNC Lock Replacement Site was selected in the 1997 EIS, is the authorized plan, (sic) and components of that design have been implemented, the No Action Alternative as described in the 1997 EIS is eliminated from further evaluation.”⁷

The failure to include estimated costs and benefits is a glaring omission in the report and may have been made because under the SEIS assumptions discussed in Section 4 of this attachment, this project would not be able to pass any serious economic test.

⁵ Corps 2002 “Supplement 1” Report pp 2-3

⁶ ID, p 5

⁷ Corps of Engineers, 2008 SEIS, p 31

4. The Corps believes that the current level of navigation delays is sufficient justification for building the new lock. By any standards of rigorous economic analysis, this is simply not true. In fact eliminating current delays will return at most only \$0.30 for every one dollar spent.

According to the SEIS, the Corps expects navigation delays to remain at the current average of eight hours per tow so long as a replacement lock is not built:

“Under the no-build alternative, it is anticipated that delays would be similar to those experienced in 2004 through 2007, which average approximately 8 hours, and that over 67 percent of all waterborne traffic would experience a delay at the IHNC Lock.”⁸

The authors of the SEIS do not seem to understand the implications of this assumption. **If they are right, this project fails even the most basic economic test.** The savings associated with eliminating current delays come nowhere near to matching the costs of building the new lock.

The SEIS Economic Appendix concludes that at a discount rate of 4.875 percent (currently used by the Corps to evaluate new projects), the “remaining benefits remaining cost ratio” (RBRCR) is 1.57,⁹ well above the 1.0 threshold that is required to establish economic viability. But this calculation depends crucially on the underlying assumptions that traffic levels and average hourly delays will increase dramatically in future years.¹⁰ The Corps’ 2008 reports do not include a RBRCR for the scenario when there is no growth in traffic or delays and the reports, by themselves, do not provide enough methodological detail to make such an estimate. However, by updating the cost of tow delays from the Corps’ 1997 report and applying this information to the data of the 2008 reports it is possible to derive independently a “no-growth” RBRCR.

To calculate the benefits to barge transportation, it is necessary to estimate the probable costs of delay at the old lock and compare this to the cost of delay at a replacement lock. To simplify this analysis, it is assumed that the latter is zero (no delays at the new lock).¹¹ In its 1997 report the Corps estimated that the hourly delay cost per 1,000 tons moving through the existing lock ranged from \$49 to \$82, depending on the commodity being shipped.¹² The average

⁸ Corps of Engineers, 2008 SEIS, p 77

⁹ Corps of Engineers, 2008 SEIS Economic Appendix O, p O-14

¹⁰ The Corps displays future traffic levels used to calculate benefits on p 6 of its 2005 “Investigative Study,” included as an attachment to Appendix O. Delays are discussed extensively in the Corps’ 1997 report which remains the basis of the Corps’ most recent analysis: “The General Equilibrium Model (GEM) used in the 1997 analysis was also used in this updated analysis to evaluate the existing conditions, the future without-project conditions, and the future conditions with the improved IHNC Lock in place.... The model estimates the total transportation costs, including congestion costs [emphasis added], incurred by individual movements desirous of using all or portions of a navigation system”.(p 11)

¹¹ This assumption was made for the ease of calculation. Even with a new lock, varying arrival rates and scheduled maintenance closures will make it impossible to eliminate all delays.

¹² Corps 1997 Report, p E-103

cost is \$61, using the 2007 commodity distribution as weights.¹³ The Corps described the delay cost estimates as applicable to fiscal year 1991.¹⁴

Delay costs can be updated to 2007 by using the Producer Price Index for Inland Waterway Transportation. The ratio of midyear 2007 costs to mid fiscal year 1991 costs is 1.905. Applying this to the average costs reported in the 1997 Report yields a 2007 cost estimate of \$117 per hour of delay per 1,000 tons. This means that at 2007 traffic levels (17.412 million tons) and delays (8 hours). The total cost of delay would be:

$$17,412 * 8 * \$117 = \$16.3 \text{ million}$$

Assuming no change in either traffic levels or delays, this represents the annual average benefits to barge transportation under any assumed discount rate.

There are two other benefit categories in the Corps calculated RBRCR. The first (\$5.0 million) is derived from the fact that once the old lock is gone, it will not require any additional Operation and Maintenance (O&M) expenditures.¹⁵ The second category (\$0.8 million) is derived from the fact that the newer lock will require fewer closures for major maintenance. These closures obviously have an adverse impact on navigation. The sum of all other average annual benefits (at a 4.875 percent discount rate) is \$5.8 million.¹⁶ Combining the navigation benefits calculated above with the other average annual benefits yields a grand total of \$22.1 million (16.5 + 5.8).¹⁷ This can now be compared to the Corps' estimate of annual average remaining costs of \$82.5 million:¹⁸

$$\text{RBRCR} = 22.1 / 82.5 = 0.27$$

This is well below the threshold of 1.0. There are only two ways to make the RBRCR higher, first to assume that traffic will increase (reversing the trends over the last 20 years); second to assume there will be more delays in the future (contrary to the assertion of the SEIS).

This recalculation leads to an important conclusion: if, as the SEIS suggests, the new lock is being built primarily to eliminate current delays at the lock, each additional dollar spent constructing the project should bring in no more than \$0.30 in additional benefits.

¹³ This information is available on line at: www.iwr.usace.army.mil/ndc/lpms/keylock/key107r.htm

¹⁴ Corps 1997 Report, p E-101

¹⁵ The O&M costs for the new lock are included in the project's average annual costs; the denominator of the RBRCR.

¹⁶ Corps of Engineers, 2008 SEIS Economic Appendix O, p O-14

¹⁷ The Corps' 1997 report included two other benefit categories; cost savings to deep draft navigation and reductions in vehicular delays. Appendix O concludes that neither category should be included in the revised calculation.

¹⁸ Corps of Engineers, 2008 SEIS Economic Appendix O, p O-14

Additional Concerns

1. Budget: By any objective standard, the Inner Harbor Navigation Canal Replacement Lock will have a hard time competing for funds in a tight Federal budget.

Even after a project has been authorized for construction, money must be appropriated by Congress before construction can begin or continue. The first step in the appropriations process is the submission of a budget proposal by the Administration. From a national perspective, the backlog of Corps projects far exceeds the likely amounts that will be made available for the Civil Works program. The Bush administration established the following position for making choices among projects:

“Flood and storm damage reduction, commercial navigation, and hydropower projects will be ranked by their total benefits divided by their total costs (BCR), calculated at a seven percent real discount rate.... Ongoing flood and storm damage reduction, commercial navigation, and hydropower construction projects with a BCR of 1.5 or higher ... will receive at least the amount needed to pay estimated contractor earnings required under ongoing contracts and related costs.”¹⁹

The IHNC Lock project fails this test by a wide margin. According to Appendix O, the remaining benefits to remaining costs ratio at 7 percent is only 0.92²⁰ even if one assumes that the Corps’ unrealistically high traffic forecasts will be met. The budgetary justification for the project becomes even weaker when, as required, total benefits are compared to total costs. Total costs include all future costs plus amounts already spent on the project (referred to as “sunk costs”). Adding sunk costs to the formula mathematically must reduce the benefit cost ratio (there is no equivalent “sunk benefits” category). Using data available in Appendix O, total benefits divided by total cost (BCR) would be 0.81.²¹

The problem of prioritization is compounded by the fact that half of the money used to build the “shallow draft portion” of the lock is to come from the Inland Waterway Trust Fund (IWWTF). In its 2008 Economic Appendix, the Corps estimates remaining total project costs to be \$1,112 million.²² The amount required from the IWWTF is not given. However, according to the Corps’ Supplement 1, 2000, when total project costs were estimated to be \$690 million,²³ the expected payments from the IWWTF were \$283.1 million.²⁴ It is likely therefore that required payments from the IWWTF to support construction of the IHNC Lock will be in excess of \$450 million. That money is simply not available.

¹⁹ U.S. Office of Management and Budget, “Budget of the United States Government, Fiscal Year 2009,” p 1013

²⁰ Corps Appendix O, p O-14

²¹ Appendix O lists “total project costs” to be \$1,263 million (p O-12), “total remaining project costs” at \$1,112 million (p O-13) The benefit cost ratio given in the text is the Corps’ remaining benefits remaining costs ratio multiplied by (1,112 / 1,263).

²² Appendix O, p 0-13

²³ Corps 2002 “Supplement 1” Report, p 6

²⁴ ID p 7

In its March 2007 presentation to the Inland Waterways User Board, the Corps projected that the balance in the IWWTF at the end of Fiscal Year 2008 would be \$56 million, after projected outlays for FY 2008 of \$207 million.²⁵ Clearly, the Corps cannot maintain its current level of construction activity at other inland waterway locations, let alone take on new projects such as the IHNC Lock unless and until the IWWTF “funding crisis” is resolved. In fact, the Corps explicitly identified not funding the IHNC Lock as one of the consequences of the anticipated trust fund short fall.²⁶

This is a very uncertain time to predict how future budget issues will be resolved. The United State is facing its worse economic crisis in 70 years. Federal budget deficits are out of control to the point where there is almost no flexibility in discretionary spending. The Obama Administration will need to make difficult choices among Civil Works projects. Given the Corps’ own estimate of the economic returns to a new IHNC Lock, it is doubtful that it will be able to meet any objective criterion for inclusion in the new President’s budget requests.

2. Traffic forecasts: The Corps’ analysis continues to be based on the belief that future traffic trends through the Industrial Canal Replacement Lock will would be a significant reversal of the last 20 years.

With growth in traffic, if the existing lock is not replaced, it is probable that eventually not all of the additional tonnage would be shipped via the IHNC. If traffic levels grow, tows may begin to experience increasing delays while waiting to lock through. The higher costs of delays would be an incentive for some to find an alternative mode or route. This choice would be made by comparing the costs of the alternative mode or route to the costs, including delay costs, of using the IHNC. Over time, more and more traffic would be diverted. There may even be a “practical capacity” to the existing lock that defines the maximum amount that could be locked through.

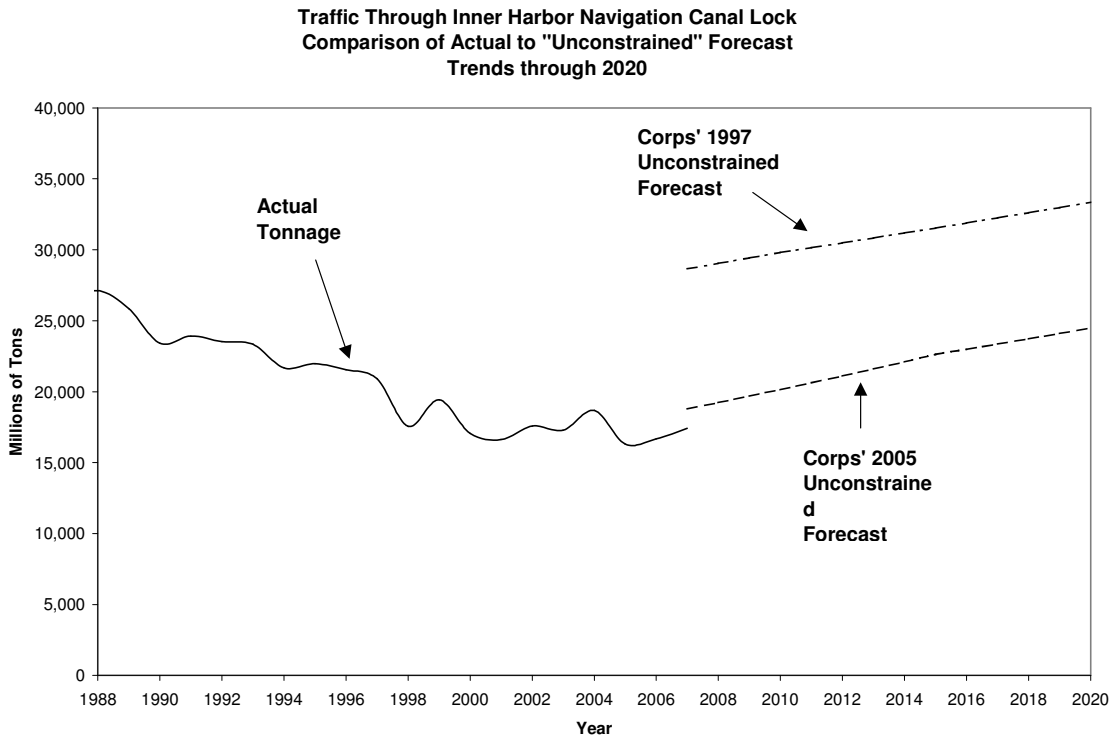
The Corps’ traffic forecast is an estimate of future traffic through a larger lock where there are no (or minimal) delays. This is called the “unconstrained traffic forecast.” If the new lock were not built, a high rate of growth of unconstrained traffic would generate longer and longer delays at the existing lock (because it is smaller than the proposed replacement lock). Under these circumstances, the traffic would be divided into two parts:

- traffic that would be diverted from the existing lock to other modes (e.g. rail) or water routes (which would become the low cost alternatives because of the delays at the existing IHNC Lock); and
- traffic that would use the existing lock (despite delays) since this would still be the low cost alternative.

²⁵ The Corps’ presentation may be viewed at <http://www.waterways.org/GrierNWCMar07.ppt>.

²⁶ ID

In 1997, the Corps predicted that by 2007, the level of unconstrained traffic would reach 28.7 million tons.²⁷ By 2005, the forecast for 2007 had been revised downward to 18.8 million tons.²⁸ The actual tonnage equaled only 17.4 million tons.²⁹ The 1997 forecast was certainly excessively optimistic, but even the forecast made in 2005 (the data at that time ended in 2002) was eight percent higher than actual traffic. A comparison of actual versus forecast is shown in the figures below.



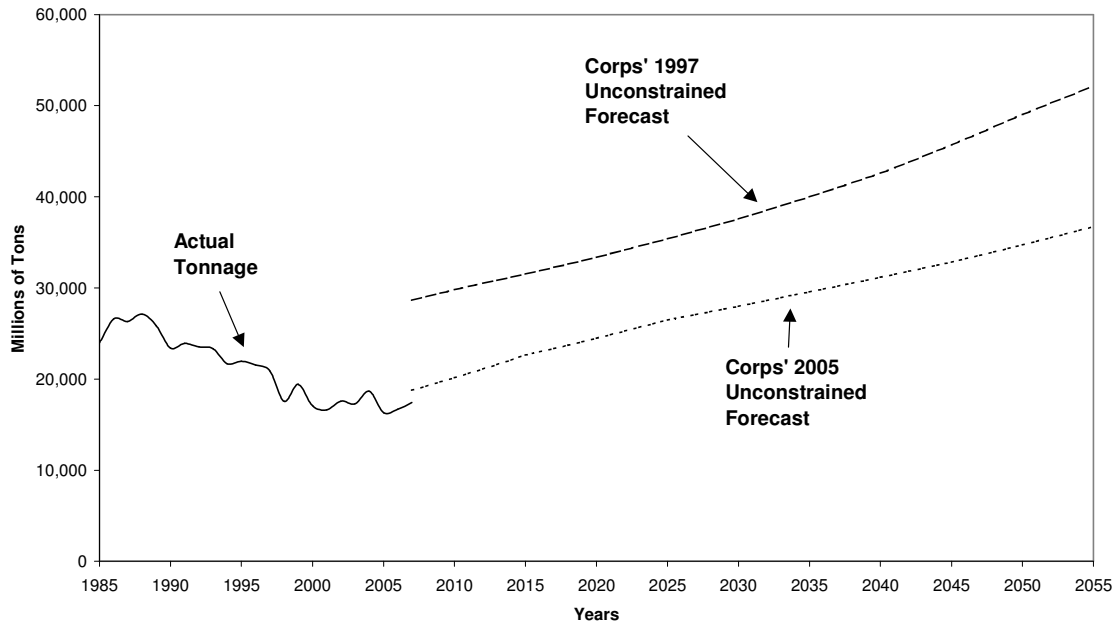
Sources: 1988- 1993 actual, Corps Report 1997, p E-17
1993- 2007 actual, Corps of Engineers, Lock Performance Monitoring System, Locks by Waterway, Tons Locked by Commodity Group Calendar years 1993-2007
Corps 1997 Forecast, Corps 2005 Investigative Study, Table 4, p 8
Corps 2005 Forecast, Corps 2005 Investigative Study, Table 2, p 6

²⁷ The traffic forecasts from the 1997 study are reproduced in the Corps' 2005 Investigative Study (Table 4, p 8). The table gives only the amount for 1900, 2000, and for each additional ten year increment. The estimated forecast presented in the text for 2007 is derived by interpolating the 2000 and 2010 forecasts (assuming a constant percentage growth between these years).

²⁸ Corps of Engineers, Appendix O, p O-3. The revised estimated forecast presented in the text for 2007 can be derived by interpolating the Corps' 2005 and 2015 forecasts (assuming a constant percentage growth between these years) - see the Corps' 2005 Investigative Study (Table 2, p 6). The revised forecast is well below traffic of 15 years ago and thus below any theoretical limitation of the throughput capacity of the existing lock.

²⁹ Corps of Engineers, Appendix O, p O-3

**Traffic Through Inner Harbor Navigation Canal Lock
Comparison of Actual to "Unconstrained" Forecast
Trends through 2055**



Sources: 1988- 1993 actual, Corps Report 1997, p E-17
1993- 2007 actual, Corps of Engineers, Lock Performance Monitoring System, Locks by Waterway, Tons Locked by Commodity Group Calendar years 1993-2007
Corps 1997 Forecast, Corps 2005 Investigative Study, Table 4, p 8
Corps 2005 Forecast, Corps 2005 Investigative Study, Table 2, p 6

According to the Corps, somehow the 20-year downward trend in traffic is going to be reversed.³⁰ This claim is based on a new analysis in the 2005 Investigative Study for coal and petroleum products, the two largest commodity groups in the 1997 Report and for other commodities, on an analysis done by the National Ports and Waterways Institute (NPWI) also in 2005.³¹ The first conclusion is that coal and petroleum products traffic is not likely to recover significantly.³² Instead, the big “winners” will be industrial chemicals, agricultural chemicals and non-metallic minerals all expected to more than triple in amounts from 2002 to 2055.³³

In order to assess the credibility of the forecasts for chemicals and non-metallic minerals, it is necessary to review the NPWI study.³⁴ This document contains no data for the IHNC Lock

³⁰ The most recent (2005-2007) “up tick” in the data results from the effect of Hurricane Katrina in 2005.

³¹ National Ports and Waterways Institute, “Traffic Projections on the Shallow-Draft Inland Waterways System in Louisiana” 2005

³² The 2005 Investigative Study concludes that there will be a minor restoration of coal traffic at an annual growth rate of 1.2 percent but no recovery for petroleum products. Industrial and agricultural chemicals are actually expected to grow by almost four times between 2002 and 2055- an annual growth rate of 2.6 percent.

³³ Corps 2005 Investigative Study, p 6

³⁴ A second NPWI study referenced in the Corps’ 2005 Investigative Study, “Inner Harbor Navigation Canal (IHNC) Lock Investigative Study” was unavailable for this report.

but includes actual tonnage figures for the Louisiana portion of the Gulf Intra-Coastal Waterway. While this may not include all the traffic moving through the IHNC, it may be a reasonable proxy for IHNC traffic levels.³⁵ Comparing 2002 to 1997, non-metallic minerals tonnage fell by 16 percent; industrial chemical tonnage fell by 12 percent.³⁶ Given these facts, why should such commodity groups have such strong growth through the IHNC Lock in the future? Where did the NPWI forecasts come from?

NPWI based its medium growth (and therefore most likely) forecast on a study done by the Institute of Water Resources (IWR) in 1999. Since the 1999 study did not (and lacking the data, could not) take into consideration the traffic declines between 1997 and 2002, NPWI acknowledged that IWR's most likely traffic forecasts were overly optimistic. Instead of undertaking its own analysis, it chose to adopt IWR's low growth forecast as the revised most likely:

“The low growth rates in 1999 IWR projections are used as the most probable growth rate in the current study.”³⁷

NPWI had a choice. It could have included the actual traffic as a basis for future traffic or it could have based its conclusions on a forecast made at an earlier point in time. It chose the latter. Remarkably, even NPWI's low growth scenario refused to accept the fact that traffic trends might continue downward:

“The low growth rates were developed by applying a semi-logarithmic function to actual data from 1993-2002 and extrapolating the trend through 2010. From 2010 to 2020 a gradual recovery in waterborne cargo, with low projections approaching the medium estimates is assumed [emphasis added]. Beyond 2020, it is assumed [emphasis added] that the growth patterns will be similar to the ‘most probable’ scenario, running parallel but at a lower base.”³⁸

As is evident, the source of the optimistic forecasts can be traced back to 1999. Yet the Corps continued to use these forecasts despite the fact that traffic in 2007 was actually below the (revised) forecast amount. Here is the Corps' full explanation:

“Although the actual tonnage for the most recent year of 2007 is lower than the forecasted value, ... small annual variations in tonnage were anticipated in the 2005 Investigative Study traffic forecast. Since no discernable new trend can be identified that might call into question the assumptions of the forecast, it remains the best available empirical model for estimating long-run future trends in traffic

³⁵ The study did not include data or forecasts for the Inner Harbor Navigation Canal.

³⁶ National Ports and Waterways Institute, “Traffic Projections on the Shallow-Draft Inland Waterways System in Louisiana” 2005, p II-7. There are no estimates for agricultural chemicals in the table.

³⁷ ID, p III-7

³⁸ ID

at the IHNC Lock. Consequently, no major reanalysis is warranted to update this category of benefits.”³⁹

According to the Corps, by 2055, over 70 percent of the total traffic through the lock will be in commodities whose forecasts were made in 1999 (using even earlier data). It is hard to see how any objective evaluation could possibly support the Corps’ conclusion that no major reanalysis is warranted.

3. Delays: The model and data the Corps uses for measuring delays and assigning costs to these events has never been made fully available for public evaluation. The failure to make such disclosures, severely limits the ability to evaluate the potential benefits from delay reduction or to judge the efficacy of on-going Corps efforts to minimize the impact of current delays.

Traffic delays are an inevitable by-product of any transportation system, whether it is by land, air or water. These delays are caused by bottlenecks; when too many vehicles/ planes/ tows show up at the same time, each must wait their turn and the delays that result to each user represent a loss of economic value. As explained above, the mere presence of delays does not by itself justify any level of expenditures to “fix the problem.” Instead, the value regained by reducing delays must be compared to the cost of any proposed solution.

The Corps’ explanation of delays at the IHNC Lock is limited to a simple exposition of the most basic facts: vessels, on average, experience an eight-hour delay and 2/3 of all vessels experience at least some delay. Mathematically, this means that the vessels that are delayed must experience an average of 12 hours (8 hour average = $(0+12+12)/3$). How do these delays occur? Here are two possible explanations:

- Vessels show up at random times, but the level of traffic is so large that even with random arrivals (not necessarily uniformly spaced) they cannot all be served at the time of arrival.
- Most vessel operators prefer traveling during the same time of each day and/or week. Weekdays may be preferred to weekends; mid afternoon to late night or early morning.

In an independent analysis completed last year,⁴⁰ a third hypothesis was offered:

- Data from the Corps’ website showed that for most of the time, delays were well below the eight-hour average, but peaked significantly higher when the lock was closed for a day or two either by weather or most often for pre-scheduled minor repairs.

³⁹ Corps of Engineers, Appendix O, p O-3.

⁴⁰ Citizens Against Widening the Industrial Canal, “Failure to Hold Water, Economics of the New Lock Project for the Industrial Canal, New Orleans,” December 2007, pp 10-14.

Since the lock closures are announced and therefore known well in advance, what happens during this time? Do tows simply show up anyway knowing that they will have to wait, but wanting to assure their place in line? When the Corps reports that there are 10 or more vessels “waiting to lock through” does this mean they are all tied up at mooring sites close to the lock? What are the Corps and the water transportation industry currently doing (for example with regard to scheduling) that may help to reduce the economic impact of current delays?

There is clear evidence of present coordination between the Corps and the industry regarding the availability of the lock on a day-to-day basis. The Corps provides information via its lock status report (the report is updated two or three times a day).⁴¹ The Gulf Intracoastal Canal Association also maintains information about the lock, including any scheduled maintenance, and the names and phone numbers for the IHNC Lock Master and the Corps’ New Orleans District point of contact.⁴²

The definition and measurement of delays is a critical element in the decision regarding construction of a new lock. As part of its effort to achieve analytical transparency, the Corps should make the definition of delay, the data on existing delays, and their methodological assumptions of measuring the economic cost of delay fully available to the public. By sharing this information, the Corps would be able to make a better case that it is doing everything possible to minimize delay impacts at the current lock. This would also give a clearer picture of what benefits might be gained by building the larger lock.

4. Criticism: The Corps has never chosen to address the specific concerns of its critics in any systematic or scientific way; consequently, there are many remaining unresolved issues.

If one does not agree with the Corps’ conclusions regarding a project of this magnitude, it is very hard to get the Corps’ attention and even harder to get the Corps to respond publicly to what many would consider legitimate criticism. Instead, the Corps appears to prefer to take the position that all controversial economic issues have already been resolved in favor of the project.

In this response as well as in analysis completed last year,⁴³ all assumptions and source material have been laid out in excruciating detail. This was intended to give the Corps every opportunity to find weaknesses in the arguments presented and to criticize the conclusions. Given the full menu of concerns discussed in this paper, it is likely that the Corps would fail in this effort and perhaps that is why it chooses to act as if this analysis simply does not exist.

The public deserves better treatment. If some disagree with the Corps’ conclusions, the Corps should make this disagreement part of the public record. This is one reason why

⁴¹ Available at <http://www.mvn.usace.army.mil/od/lockupdates/lockstatus.asp?lockid=3>

⁴² Available at <http://www.gicaonline.com/pages/news/traffic.htm>

⁴³ Citizens Against Widening the Industrial Canal, “Failure to Hold Water, Economics of the New Lock Project for the Industrial Canal, New Orleans,” December 2007

independent reviews of controversial projects should always be included in their overall evaluation. The Corps needs to answer the specific concerns raised by its critics, not ignore them.

Appendix A

Example Derivation of Corps Navigation Benefits

As explained above, the Corps' traffic forecast is an estimate of future traffic through a larger lock where there are no (or minimal) delays. This is called the "unconstrained traffic forecast." If the new lock were not built, a high rate of growth of unconstrained traffic would generate longer and longer delays at the existing lock (because it is smaller than the proposed replacement lock). Under these circumstances, the traffic would be divided into two parts:

- traffic that would be diverted from the existing lock to other modes (e.g. rail) or water routes (which would become the low cost alternatives because of the delays at the existing IHNC Lock); and
- traffic that would use the existing lock (despite delays) since this would still be the low cost alternative.

To illustrate these points it is possible to make a calculation of navigation benefits for 2045 using the data presented in Appendix O and the 2005 Investigative Study.⁴⁴ Table 6 of the Investigative Study gives a distribution of gross cost savings (dollars per ton) when traffic moves through an unconstrained IHNC lock instead of another mode or route.⁴⁵ The analysis outlined in this Appendix uses the midpoint of the range of costs savings as the amount saved for every ton in that category. For example, the Corps estimates that in 2002, 1.8 million tons going through the IHNC Lock had gross cost savings between \$1.50 per ton and \$4.00 per ton. In the table below, this tonnage is called "Commodity C." It is assumed that the savings to each ton of Commodity C is \$2.75.

It is further assumed that unconstrained traffic in all commodity groups will grow at the same rate through 2045. Since the unconstrained forecast (32.9 million tons) is 1.91 times the observed 2002 tonnage (17.3 million tons), this means for Commodity C, the unconstrained tonnage in 2045 would be 3.4 million tons.

Finally, based on the Corps' 1997 report, it is assumed that there is a practical capacity of the existing lock of 27 million tons.⁴⁶ When unconstrained traffic equals 32.9 million tons, this means that 5.9 million tons will be diverted to another mode or route. The mechanism that leads to diversion is the increase in delay costs at the existing lock. If for example, the costs of delay are \$5.50 per ton, all of Commodity C (with a cost saving of \$2.75) will be diverted.

⁴⁴ It is not possible to match the Corps' benefit estimate precisely, because the Corps reports do not contain all the necessary data and assumptions.

⁴⁵ Suppose, for example, that traffic could be shipped via the IHNC for \$7.50 per ton, while the cheapest alternative, an all rail route, would cost \$11.00 per ton. In this case, the "gross cost savings" derived from using the IHNC would be \$3.50 per ton (\$11.00 - \$7.50).

⁴⁶ See Corps' 1997 report. In its Table 7-5, p E-175, the Corps' projected traffic through the existing lock never exceeds 26.7 million tons

Total cost savings (and therefore project benefits) for all commodity groups are listed in the table below. In order to divert enough traffic, average delay costs at the existing lock must reach \$5.50 per ton by 2045. Some of the savings accrues to traffic that has been diverted because of the delays (11 percent of total benefits). Most of the savings accrues to traffic that would use the old lock if it were not replaced despite the costs of delay (89 percent of total benefits).

	2002 Lock Tonnage (1,000 tons) (a)	2045 New Lock Tonnage (1,000 tons) (b)	2045 Old Lock Tonnage (1,000 tons) (c)	Diverted Tons (1,000 tons) (d)	Gross Cost Savings (\$ per ton) (e)	Benefits from Diverted Tons (\$1,000) (f)	Benefits from Tons not Diverted (\$1,000) (g)
Commodity A	307	585	0	585	0.00	0	0
Commodity B	167	318	0	318	0.75	239	0
Commodity C	1,797	3,425	0	3,425	2.75	9,419	0
Commodity D	3,336	6,359	4,804	1,554	5.50	8,549	26,423
Commodity E	5,915	11,274	11,274	0	9.00	0	62,008
Commodity F	2,789	5,316	5,316	0	13.50	0	29,238
Commodity G	1,719	3,276	3,276	0	20.00	0	18,021
Commodity H	731	1,393	1,393	0	27.50	0	7,663
Commodity I	245	467	467	0	33.50	0	2,568
Commodity J	130	248	248	0	39.00	0	1,363
Commodity K	109	208	208	0	46.00	0	1,143
Commodity L	7	13	13	0	55.00	0	73
Total	17,252	32,883	27,000	5,883		18,207	148,500

a- 2005 Investigative Report, Table 6, p 12, in thousands of tons

b- Column a times ratio of forecast 2045 total traffic to 2002 traffic, in thousands of tons

c- Old lock capacity = 27million tons (see total)

d- Diverted tons when delay cost at old lock = \$5.50 (some but not all of Commodity D is diverted)

e- Gross cost saving = cost of cheapest alternative mode or route less cost of using IHNC with unconstrained new lock

f- With new lock these tons would not be diverted, benefits = gross cost saving * diverted tons = (d) * (e); benefits expressed in thousands of dollars.

g- Even with no replacement, these tons would move via IHNC cost of diverting to another mode exceed delay costs at IHNC old lock. Benefits = \$5.50 (assumed cost per ton of delay) * tonnage = \$5.50 * (c); benefits expressed in thousands of dollars

Without fully replicating the data and methods used by the Corps, this illustration comes close to the Corps' own estimate of navigation benefits in 2045. There is only a 12 percent difference between the estimate presented in this Appendix, \$166.7 million (see table above) and

the amount reported by the Corps, \$189 million.⁴⁷ Much of this difference may be explained by the fact that the future mix of traffic contains more commodities where the cost savings is high (chemicals, non-metallic minerals) and less where the cost saving is low (coal, petroleum products).

In the analysis presented in the attachment, it was estimated that current delays (average of eight hours) cost \$936 (8*\$117) per 1,000 tons, or \$0.94 per ton. The “cut off” cost savings (point where tonnage is diverted) in the table in this appendix is \$5.50 per ton (column e). To reach this point, delays would have to exceed the current level by a factor of five or 40 hours per tow, illustrating yet again how justification for this project depends critically on traffic growth that represents a significant departure from current trends.

⁴⁷ Corps Appendix O, Table 2, p O-11

Appendix B

References:

Citizens Against Widening the Industrial Canal, “Failure to Hold Water, Economics of the New Lock Project for the Industrial Canal, New Orleans,” December 2007

National Ports and Waterways Institute, “Traffic Projections on the Shallow-Draft Inland Waterways System in Louisiana” 2005

U.S. Army Corps of Engineers’ Draft Supplemental Environmental Impact Statement (SEIS), “Inner Harbor Navigation Canal Lock Replacement Project Orleans Parish, Louisiana (Oct 2008)

U.S. Army Corps of Engineers’ Draft Supplemental Environmental Impact Statement (SEIS), “Inner Harbor Navigation Canal Lock Replacement Project Orleans Parish, Louisiana (Oct 2008), Economic Appendix, Appendix O

U.S. Army Corps of Engineers, “Investigative Study” 2005, included as an attachment to Appendix O

U.S. Army Corps of Engineers, “Mississippi River- Gulf Outlet, New Lock and Connecting Channels, Evaluation Report, Economic Analysis, Appendix E” (Mar 1997)

U.S. Army Corps of Engineers, “Mississippi River- Gulf Outlet, New Lock and Connecting Channels (Inner Harbor Navigation Canal Lock Replacement) – Evaluation Report, Supplement No. 1” (Sep 20, 2000).

U.S. Army Corps of Engineers, Lock Performance Monitoring System, available at <http://www.iwr.usace.army.mil/ndc/lpms/lpms.htm>

U.S. Army Corps of Engineers, “Analysis of the Inland Waterways Trust Fund, Revenues Needed to Support Baseline and Capacity Programs, Presentation for the National Waterways Conference,” March 20, 2007 available at <http://www.waterways.org/GrierNWCMar07.ppt>

U.S. Office of Management and Budget, “Budget of the United States Government, Fiscal Year 2009”

Attachment # 2: Resume of Dr. Robert N. Stearns

ROBERT N. STEARNS

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Summary

Retired member of the federal government's Senior Executive Service and PhD economist with over 30 years experience as policy advisor and analyst in positions of increasing executive responsibility, primarily for the federal government, and before that, 10 years of college teaching. Currently engaged in teaching and consulting

Professional Experience

1996- Present TEACHER/ CONSULTANT

Serves as consultant to Environmental Defense and other private sector clients on the policies of the U.S. Army Corps of Engineers for building and maintaining water resource projects, primarily projects proposed and built for transportation- most recently (2007) completing a report on the proposed deepening of the Delaware River Main Channel, 1997-present;

Senior staff member for the National Academy of Public Administration's study of the Army Corps policies and procedures for developing the annual Civil Works budget, 2006-2007;

Consultant to the U.S. Department of Labor on revising procedures for calculating the "prevailing wage" used to establish rates for temporary foreign farm workers. 2004;

Research Scholar at the University of Maryland School of Public Policy. Taught graduate courses in Microeconomic and Macroeconomic Theory and Public Policy, 1997-2002;

1989-95 DEPUTY ASSISTANT SECRETARY, ARMY (CIVIL WORKS)

Directed implementation of new Project Management System for U.S. Army Corps of Engineers;

Developed models and processes to measure and evaluate federal government activities, including:

- Implementation of standard operating procedures for Corps of Engineers operation and maintenance program,
- Provision of Civil Works program inputs into Army's Annual Financial Report,
- Formulation and articulation of policy options for Arlington National Cemetery's 30 year Master Plan;

Directed study of Department of Energy's Environmental Restoration and Waste Management budget, prepared by Corps of Engineers for Office of Management and Budget;

Served as Administration spokesperson for proposed inland waterway user charge increase;

Represented Army on interagency task forces, including;

- White House Working Group on Infrastructure Strategy,

- Floodplain Management and Recovery from 1993 Midwest Flood Task Forces,
- Federal Facilities Policy Group for Environmental Restoration.

1986-89 SENIOR POLICY ADVISOR, U.S. ARMY CORPS OF ENGINEERS

Developed Army's "Ability to Pay" rule, establishing non-Federal cost share for qualifying flood control projects;

Created implementing guidelines for reimbursement of local construction of Federally authorized deep draft harbor projects;

Developed statistical measures of "cost of doing business" for Corps of Engineers Civil Works program.

1985-86 SENIOR ECONOMIST, TRANSPORTATION SYSTEMS CENTER (U.S. DEPARTMENT OF TRANSPORTATION)

Conducted economic studies of railroad/truck competition:

- Impact of Longer Combination Truck Vehicles on Railroad Industry;
- Safety/Economic Impact of Requirement for Wider Axles on 102-Inch Wide Trucks;
- Analysis of Market Share Evidence, Santa Fe/Southern Pacific Railroad Merger.

1984-85 SENIOR ECONOMIST, RICHARD J. BARBER ASSOCIATES

Conducted regulatory and economic analysis for railroad clients:

- Measures of reasonableness of railroad rate increases for coal traffic;
- Study of the coal export markets;
- Analysis of potential for coal slurry pipelines in the Eastern United States.

1979-84 DIRECTOR, OFFICE OF ECONOMIC ANALYSIS, FEDERAL RAILROAD ADMINISTRATION (FRA), U.S. DEPARTMENT OF TRANSPORTATION

Served as DOT expert witness before Interstate Commerce Commission (ICC) on proposed merger between a major railroad and major barge line;

Developed DOT positions on railroad regulatory issues raised by ICC;

Managed the FRA staff analyzing the national impacts of:

- Staggers Rail Act of 1980,
- National railroad strike, September 1982;

Served as Acting Associate Administrator for Policy November 1981 to April 1982.

1978-79 CHIEF, ECONOMIC PROGRAMS DIVISION, OFFICE OF ECONOMICS AND OPERATIONS POLICY, FEDERAL RAILROAD ADMINISTRATION

Conducted economic studies of railroad transportation issues:

- Impact of railroad regulatory reform on coal and wheat markets;
- Review of railroad investment projects where Federal assistance had been requested;
- Analysis of railroad investment potential in Sahel region of Africa.

1975-78 ECONOMIST, PORTS AND WATERWAYS PLANNING STAFF, U.S. COAST GUARD, U.S. DEPARTMENT OF TRANSPORTATION

Conducted economic analyses on water transportation issues:

- Evaluation of benefits and costs of Coast Guard's Search and Rescue and Vessel Safety programs;
- Assessment of proposed construction of Alton Locks and Dam 26;
- Preparation of maritime section of U.S. DOT publication, "National Transportation Trends and Choices to the Year 2000."

1968-75 ASSISTANT/ASSOCIATE PROFESSOR, ECONOMICS, CONNECTICUT COLLEGE

Taught courses in Micro- and Macroeconomic Theory, Statistics, and Econometrics.

1966-68 ASSISTANT PROFESSOR, ECONOMICS, OHIO STATE UNIVERSITY

Taught Courses in Money and Banking and Statistics.

Education

Ph.D., Economics, Yale University

M.A., Economics, Yale University

B.A. with Honors, Mathematics, Swarthmore College