

Rebuilding Waterways Is Badly Needed, Unfunded

by Richard Freeman and
Mary Jane Freeman

America's nation-wide waterways system needs an emergency mobilization to save it. Water-management—especially the inland waterways system of rivers, ports, and harbors—is, due to age and obsolescence, on the verge of breakdown, which could so severely disrupt goods transport, as to cause paralysis of the U.S. physical economy. Half of river lock and dam systems, essential to navigation are 50-90 years old, with crumbling infrastructure causing “unscheduled unavailability”—shutdown. On an integrated series of river systems, this could prove fatal.

The George W. Bush Administration's Fiscal Year 2006 budget, presented by the Office of Management and Budget (OMB), is driven by ferocious budget slashing, which intensifies the crisis brought on by 30 years' systematic and gross underfunding of construction, operations, and maintenance for waterways.

Lyndon LaRouche has proposed (see *Feature*) that the U.S. rebuild its water-management and waterways system to “standards of the pre-Nixon, pre-Brzezinski era. Without a major national infrastructure-rebuilding program, . . . this U.S. economy would never recover from the presently on-rushing catastrophe.” This policy would include the retooling of the auto industry's embedded advanced machine-tool capacity and its skilled workforce, to produce goods that are necessary for the economy's development, including magnetically levitated train systems, power transmission systems, and goods that could be used in the rebuilding of waterways. We review here a first-pass list of critical, ready-to-go water infrastructure projects, that would be considered for construction immediately under such an economic reconstruction mobilization.

Table 1 and **Figures 1** and **2** show these projects' location, total cost over their lifetime, and the funding amount—in most cases zero—that the Bush Administration has provided to fund them in the FY 2006 budget. The construction of these projects would be directed by the U.S. Army Corps of Engineers—America's leading water infrastructure-building agency. They are part of a growing category of Corps projects that are called “authorized, but non-funded.” In the budgeting process, when a project receives *authorization*, it is deemed valuable, but that is only the first step; the project must also receive *appropriation*, the second step, under which the money is actually disbursed so that it can be spent, and construction can actually take place. A Corps of Engineers told

official *EIR* April 6, “The Army Corps has \$40 billion worth of projects that have been authorized, but are not appropriated, non-funded.”

LaRouche proposes credits to build the \$40 billion “authorized, but non-funded” projects, and consider building several other worthy waterways projects that have sat on drawing boards for decades.

Waterborne Travel

Today, America can ship internal waterborne freight to most places in the nation, upon a water navigation system that is 12,000 miles (20,000 kilometers) long, directly bordering 38 of the 50 states. (Figure 1's map shows, in an inset, the Columbia/Snake River system in the Northwest states, principally Washington and Oregon; it also shows, as part of this nation-wide system, the East and Gulf coast ports and harbors, and coastal shipping lanes which carry domestic freight.) This system transports 500 billion ton-miles of goods annually, which represents about 15 % of U.S. intercity freight transport (excluding petroleum going through a pipeline). Rationally, it should transport 25% of America's internal freight. Of course, some of these goods exit through American ports as exports to other countries.

Water transport's advantage does not exist for goods that need to arrive in 24-48 hours. However, when delivery time is from half a week to a few weeks, especially for bulk goods, its efficiency stands out. The Army Corps reported, “One jumbo barge has the same capacity as 15 railroad cars or 58 trucks.” Further, because transport by ship/tow boats utilizes the natural buoyancy of water for support, the cost of transporting a certain weight of goods a defined distance is a mere one-tenth that of transporting the same goods the same distance by truck.

Decisive in the functioning of the navigation system are 242 operational deep- and shallow-draft Army Corps and Tennessee Valley Authority (TVA) navigational locks. They overcome the river's “natural” water level, to facilitate ships' movement. The Army Corps reports: “Each dam on a navigable river. . . has at least one lock chamber to enable river traffic to go safely from one pool to the next. The lock chamber is essentially a concrete box fixed into the riverbed with two matching gates at each end that close at an angle directed upstream against the river flow. The gates can open or close only when the water level is the same on both sides. One set opens to let the watercraft enter, and then closes to allow the water level in the chamber to be raised or lowered depending on the direction of travel. The other set of gates then opens to let the boat leave.”

With the series of locks and dams spaced along the river like a ladder's rungs, they raise or lower a ship to enable it to journey on the river.

Building the Locks and Dams System

The principle of making government improvements in water and other infrastructure was supported at the founding

TABLE 1

Status of Ready-To-Go Inland Waterways Projects

Name, Location	Total Project Cost	FY 2006 Bush Budget Request	Efficient Funding Level
Construction Projects			
Chickamauga L/D, Tenn.*	\$315,000,000	0	\$10,000,000
Inner Harbor Navigation Canal, La.*	\$770,600,000	0	\$25,000,000
Kentucky Lock Addition, Tennessee River, Ky.*	\$639,700,000	0	\$40,350,000
J.T. Myers L/D, Ohio River, Ind./Ky.	\$227,000,000	0	\$5,000,000
Major Rehabilitation Projects			
L/D 3 Upper Mississippi River, Minn./Wisc.*	\$48,800,000	0	\$5,300,000
Lockport L/D, Ill.	\$112,200,000	0	\$2,480,000
General Investigations			
Ohio R. Main Stem Study (includes Emsworth, Dashields, Montgomery Locks) (study only)	\$ 51,300,000	0	\$1,000,000
Upper Mississippi/Illinois River	\$2,600,000,000	0	\$24,000,000
Greenup L/D, Ohio River, Ky./Oh. (study and construction)	\$226,000,000	0	\$3,500,000

L/D = Lock and Dam *Designated "Priority Infrastructure Project" by the Waterways Council, Inc.
Source: U.S. Army Corps of Engineers; Waterways Council, Inc.; *EIR*.

of the United States. In his 1791 *Report on Manufacturers*, U.S. Treasury Secretary Alexander Hamilton said that government should have responsibility for and make significant investment in "internal improvements," as he called infrastructure. He showed they would increase productivity, economic activity, and tax revenue to an amount greater than the costs to build the projects.

In 1804, the networks of Benjamin Franklin and Hamilton founded the Army Corps of Engineers (with its twin, the U.S. Military Academy at West Point, New York) for the specific purpose which it has carried out, using science for nation-building. It participated in and/or directed the earliest canal and railroad building. In 1824, Congress entrusted to the Corps the authority to clear snags and make improvements in rivers to make them navigable; and in 1885, the Army Corps built the first of what would be 46 locks and dams on the Ohio River system.

During the 1930s, President Franklin Roosevelt implemented the greatest combined undertaking of water-management projects—hydro-electric power, flood control, river navigation—in America's history. It featured a magnificent series of locks and dams on the Mississippi, Tennessee, and Illinois Rivers, and other waterways.

However, during the mid-1960s, the City of London-Wall Street bankers imposed a post-industrial-society policy shift upon the United States, which has made it a parasitical consumer society, dependent upon importing physical goods for its survival. Funding for the Army Corps was cut dramatically: The allocation/appropriation of funds to it for construction of all water projects—river management, ports and harbors, etc.—plunged from \$4.6 billion in 1968 to just \$1.5 billion in 2005, a fall of two-thirds. The underfunding continued through Democratic and Republican administrations.

Speaking in Kyoto, Japan on March 18, 2003, Robert Pietrowsky, director of the Institute of Water Resources of the Army Corps, asserted that the U.S. waterways system is "already a generation behind in channel design or lock capacity at key U.S. load centers and system choke points."

However, the Bush Administration has unleashed the cost-accountants at the OMB to carve up the Corps water projects much further, using a procedure it calls "Performance-Based Project Rankings." In many budget areas, a listing and analysis of benefits is undertaken before the project is commenced. However, the OMB uses this procedure for particularly nasty purposes. The OMB writes in the FY 2006 budget about the Army Corps that, excepting aquatic restoration projects, "In all mission areas . . . projects are *ranked based on their remaining benefits, relative to their remaining costs*." In turn, "The performance rankings will determine what level of funding projects will receive," and "*low performance projects will receive reduced funding levels, and in some cases, may be suspended*" (emphasis added).

The OMB budget asserts that much of Congress's authorized funds for the Army Corps' projects, "was for work on projects with relatively low [performance-based] benefits or [work that is] outside the Corps' three main mission areas." The OMB says that *authorized* Army Corps projects have reached \$50 billion, but that only \$15 billion meets the criteria that OMB has decided to set. The OMB statement implies that the remaining \$35 billion in authorized projects falls short of the criteria to receive funding.

Figure 3 shows the lunacy of Bush's OMB policy: The engineered design life of a lock chamber is 50 years. Currently, 121—half—of America's waterways' 241 operational lock chambers equal or exceed the engineered design life of the locks. Within 10 years, two-thirds of the locks will be in

FIGURE 1

Critical Ready-To-Go Waterways Projects



Sources: U.S. Army Corps of Engineers; Waterways Council, Inc.; *EIR*.

that condition. This will produce the the breakdown of the waterways system. The OMB approach is intended to intensify the crisis. This makes adopting LaRouche's mobilization absolutely essential.

The "authorized, non-funded" projects represented in Figures 1 and 2, are but a portion of the 30 projects that fall in that category and should be funded. The OMB may say that these projects don't meet its criteria, but they are indispensable. For most of them, the feasibility, environmental, and other studies are completed; they just await start-up. We look at three listed projects.

- *Emsworth, Dashields, and Montgomery Locks on the Ohio River:* Funds are being spent and work is ongoing on the Emsworth dam, but funds are not being spent to rehabilitate the locks on any of these systems. The work on the Emsworth dam exemplifies the problem in this area overall. Congress has authorized and given \$75 million in funding for a project to repair/rehabilitate the decrepit dam. An Army Corps official reported April 6, "The dam has 14 gates. Even as we work to rehabilitate the dam, every year, one of the gates breaks, and has to be fixed. But to fix the gate, you have to set the bulkhead [to hold the water flow in that area]. But

FIGURE 2

The Upper Mississippi River System Locks and Dams



Sources: U.S. Army Corps of Engineers

the bulkheads are in such condition, that it is not safe to work next to them. So, we have the gate out of the water, put it on a pier, raise it 50 feet into the air, just to fix it.” He reported, that in the case of repairing dams, the money comes in so slowly, that the Corps has to spend extra money to keep them functioning while under repair, which takes away from its ability to spend on other things.

If the aged lock of the Emsworth combination is not fixed, this creates enormous problems. The map shows that this lock and dam lies on the Ohio River, immediately to the west of Pittsburgh. The Corps official stated, “The Emsworth lock and dam forms the critical lock pool that runs into Pittsburgh. Problems in this lock and dam directly affect Pittsburgh; and if it doesn’t work, navigation traffic from the Monongahela River through to the Ohio River doesn’t function.”

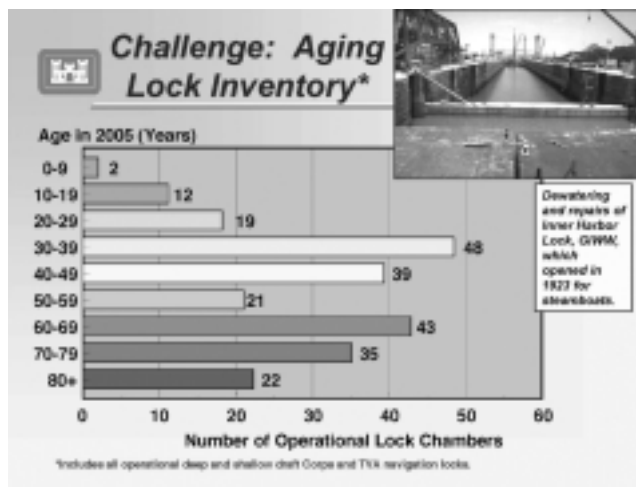
Pittsburgh has the highest freight traffic of any American inland port.

• Chickamauga Lock and Dam on the Tennessee River

Built in 1940, this lock and dam, which powers a hydroelectric generating plant, needs to double its lock chamber’s size from the current 360-by-60 feet, and be rehabilitated. But

FIGURE 3

Aging Lock Inventory



Source: U.S. Army Corps of Engineers.

the OMB treated this as an entirely new project, and made it justify itself on a “performance-based cost-benefit analysis.” An official reported, “There are existing navigation, industrial, and other projects in this area that are already dependent on this lock and dam. The Chickamauga Lock and Dam actually could show a good cost-benefit ratio. But the OMB simply went down the list of projects, based on the cost-benefit ratio, and decided how much total funds to spend. When it reached the cut-off line for the funds it was willing to spend, it gave no funding to projects below that level. The Chickamauga Lock and Dam was cut off.”

• *Upper Mississippi River system (Locks and Dams 14-18, 20-22, 24-25) and Illinois River system (LaGrange and Peoria).* The nearly 2,000 mile (3,333 kilometer) Upper Mississippi system comprises that section of the Mississippi, the Missouri, and the Illinois rivers. Most of the inland waterborne trade of such major Midwestern cities as Minneapolis, Chicago, and St. Louis travels on this system. All but seven of the system’s 38 locks and dams were built before 1940, under FDR, and thus are 65-70 years old. Moreover, most of the lock chambers are only 600 feet long, whereas barge-tows routinely are 1,100 feet, and must break in half to pass through the locks. These Upper Mississippi system locks and dams need new 1,200 foot lock chambers and 1,200 foot guidewalls to be efficient. But so far, there has only been spending of some money for a study, and none for actual construction of a project of such importance.

The construction of most “critical, ready-to-go water infrastructure” could start up immediately. They would prevent the breakdown on America’s vital inland waterways system, and actually increase the productivity of the entire U.S. transportation system. These projects would generate tens of thousands of jobs in construction, and in production of goods for them.