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# Cutting the Army Corps of Engineers

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## Overview

The U.S. Army Corps of Engineers is a federal agency that constructs and maintains a wide range of infrastructure for military and civilian purposes.<sup>1</sup> This essay concerns the civilian part of the agency, which employs about 23,000 people and will spend about \$9.2 billion in fiscal 2012.<sup>2</sup>

The civilian part of the Corps—called "civil works"—builds and operates locks, channels, and other navigation infrastructure on river systems. It also builds flood control structures, dredges seaports, manages thousands of recreation sites, and owns and operates hydroelectric power plants across the country.

While the Army Corps has built some impressive infrastructure, many of its projects have been economically or environmentally dubious. The agency's activities have often subsidized private interests at the expense of federal taxpayers. Furthermore, the Corps has a history of distorting its cost-benefit analyses in order to justify its projects.

The civilian side of the Corps grew out of the engineering expertise gained by the agency's military activities early in the nation's history. In mid-19th century, Congress began adding civilian missions to the Corps in response to political demands and various natural disasters. Today we are left with an agency involved in far flung activities such as beach replenishment, upgrades to city water systems, agriculture irrigation, clean-up of hazardous waste sites, and efforts to revive the Florida Everglades.

The Corps has been greatly mismanaged over the decades, with problems ranging from frequent cost overruns on projects to the major engineering failures that contributed to the disaster of Hurricane Katrina. In addition, the dominance of special-interest politics on the agency's activities has resulted in it supporting many wasteful projects.

Fortunately, most of the Corps' activities do not need to be carried out by the federal government. Some of its activities—such as flood control and the management of recreational areas—should be turned over to state and local governments. Other activities—such as seaport dredging and hydropower generation—should be turned over to the private sector. This essay focuses on cutting the Corps' spending activities, and does not address the calls for reforming the agency's regulatory functions.<sup>3</sup>

The following sections look at the history of the Army Corps, the pork-barrel nature of its spending, its legacy of mismanagement, and its role in Hurricane Katrina. The essay concludes that the bulk of the agency's civilian activities and assets should be privatized or transferred to state and local governments. The remaining activities of the Corps that are truly federal in nature should be transferred to the Department of the Interior. The civilian side of the Army Corps should be closed down.

## Two Centuries of Mission Creep

The U.S. military has needed engineering services since General George Washington sought French engineers to help him prosecute the Revolutionary War.<sup>4</sup> In 1802 Congress created a separate and permanent Army Corps of Engineers focused on military support activities. However, as the 19th century progressed, the Corps became increasingly involved in civilian activities, such as river navigation and flood control. One activity led to the next, and today's sprawling Army Corps is the result of two centuries of mission creep.

As an engineering-based agency, the Corps has had a pro-construction mentality since the beginning. It has always been eager to expand its budget and build new structures. At the same time, members of Congress have been eager to have the Corps tackle projects in their states and districts, especially those members from states that have major rivers, seaports, and other water resources.

In 1824 the Supreme Court decision in *Gibbons v. Ogden* gave the green light to federal involvement in river navigation activities. The same year, Congress provided \$75,000 to the Corps to improve navigation on the Ohio and Mississippi Rivers, and it also gave the Corps a role in civilian surveying activities.<sup>5</sup> However, there have been concerns about the efficiency of the Corps' civilian activities since the beginning. In 1836 the House Ways and Means Committee called for reform because it discovered that at least 25 of the agency's projects were overbudget.<sup>6</sup> Nonetheless, Congress kept expanding the Corps' civilian activities, and by 1882 the agency was spending \$19 million annually on 371 separate projects.<sup>7</sup>

A number of congressional acts beginning in 1850 directed the Corps to aid with flood control on the Mississippi River. In 1861 an influential report set the Corps on a misguided "levees only" flood-control strategy.<sup>8</sup> Repeated floods in subsequent decades that broke through levees did not deter the Corps from its strategy.<sup>9</sup> After damaging floods in the early 20th century, Congress passed the Flood Control Act of 1917, which further expanded the Corps' levee-construction activities along major rivers.

In 1927 one of the most damaging floods in U.S. history occurred when the Mississippi River and its tributaries broke out of extensive levee systems in many places. The flood dramatically illustrated the failure of the Corps' single-minded approach to flood control that focused on building levees. In annual reports leading up to the disastrous 1927 flood, the Corps had confidently told Congress that the Mississippi was safe from serious flooding.<sup>10</sup>

After the flood, *Editorial Research Reports* noted that many experts thought that the "levees only" policy was unwise, but the Corps still resisted reforms. In a 1927 story the news service said: "After each flood there has been sharp criticism of the policy of placing sole reliance on the levee system, but the Army engineers heretofore have always successfully defended their position before Congress."<sup>11</sup>

The Corps did adjust its strategy somewhat, but the scope of its construction increased under flood control acts of 1928 and later years. The agency had failed, but its budget was greatly boosted.<sup>12</sup> Journalist Michael Grunwald noted of the "levees only" approach that worsened the 1927 flood: "Congress rewarded this failure by allowing the Corps to seize control of the entire river and its tributaries, an unprecedented big government project that foreshadowed the New Deal."<sup>13</sup>

During the 1930s, huge flood control projects were embraced as a way to create jobs, and the Corps—along with other federal agencies—spearheaded efforts to drain wetlands across the nation.<sup>14</sup> In his classic book about federal water infrastructure, *Cadillac Desert*, Marc Reisner said that the Corps has "ruined more wetlands than anyone in history, except perhaps its counterpart in the Soviet Union."<sup>15</sup>

The Corps' efforts to dam rivers for flood control led to its involvement in hydroelectric power. At the beginning of the 20th century, a political battle was waged over private versus government development of hydropower. At first, the Army Corps teamed with private power companies to build plants at its dam sites. But in the 1920s Congress authorized the Corps to start building its own plants, and by the 1930s huge federal power projects were being pursued, such as Bonneville Dam in Oregon.

Once the Corps was building dams and reservoirs, the next step was to build and operate recreation sites near its facilities, which Congress authorized it to do in legislation of 1944 and later years. Today, the Corps operates more than 4,200 recreation areas across the nation.<sup>16</sup>

The Corps has a history of supporting environmentally damaging projects, although it has tried to adopt a "green" image in recent years. Since 1992 the agency has expanded into municipal water supply and wastewater treatment facilities, and 400 such projects have been authorized to date.<sup>17</sup> In 2000 the Corps helped launch an almost \$8 billion effort to fix the Florida Everglades—a project that is needed in part because of the damage done by the Corps' own infrastructure in prior decades.<sup>18</sup> For example, taxpayers paid for the Corps to straighten Florida's Kissimmee River in the 1960s, but that project was later determined to have been misguided. So today taxpayers are paying for the Corps to restore the Kissimmee River's original meandering course.<sup>19</sup> Bad environmental decisions by the Corps have thus cost federal taxpayers doubly.

While the Corps is part of the executive branch of government, the president has often had little control over its activities. The Corps has usually taken orders directly from

Congress, and particularly from those members who have their hands on the agency's purse strings. For decades, presidents have complained about their lack of control over the Corps, and some have even tried to cancel its most wasteful projects. President Jimmy Carter famously tried to save taxpayer money and stop 19 environmentally damaging water resource projects in the 1970s. He wanted to "get the Corps of Engineers out of the dam-building business," but he misplayed the politics of the issue and Congress was "swift and angry" in blocking Carter's proposals.<sup>20</sup>

President Ronald Reagan's reform efforts were a bit more successful. He pushed to increase local cost-sharing for Corps' projects, and that reform passed in 1986. The reform increased "the price of pork" for project supporters, which marginally reduced the incentive for local interests to lobby for federal subsidies.<sup>21</sup>

President Bill Clinton tried to cut wasteful Corps' projects, but big-spending Republicans in Congress helped to block his efforts.<sup>22</sup> President George W. Bush had some success at canceling wasteful Corps' projects, but a 2007 authorization bill for the agency was passed over his veto.<sup>23</sup>

Occasionally, the Corps has tried to save money by making its operations more efficient, such as by closing down some of its district offices. However, Congress has usually blocked such cost-saving efforts.<sup>24</sup> Similarly, members of Congress usually block efforts to close unneeded post offices or farm offices in their districts. Such congressional parochialism is one reason why the government can never operate as efficiently as a private business.

### **A Pork-Barrel Machine**

The decentralized and congressionally dominated structure of the Army Corps has made it an unparalleled pork-barrel machine. Virtually all the agency's construction budget is "earmarked" for individual projects in particular states. Politics dominates any rational process of trying to fund only those projects that have high returns. Taxpayer money is often directed to low-value projects in the districts of powerful politicians, not to those projects that make the most economic sense.

While Corps' projects are supposed to be based on detailed economic and environmental analyses, political pull often determines the agency's priorities. In an investigation of the Corps in 2003, the *Washington Post* noted that "powerful members of Congress dictate the selection, pace, and price tag for major projects."<sup>25</sup> While levee upgrades in central New Orleans were stalled prior to Hurricane Katrina, dubious projects elsewhere in Louisiana and other states moved ahead.

Leading lawmakers have long used the Corps as a tool to aid farm businesses, shipping companies, barge firms, developers, and other businesses in their states. An observer of the Corps in 1952 noted that the agency makes alliances between local businesses and "two or three congressional committee chairmen. Together they drive through the Congress whatever proposals they wish, irrespective of the public interest."<sup>26</sup> In recent years, many of the champions of dubious Corps' projects have been Republicans, including Sen. Thad Cochran (R-MS) and former senators Trent Lott (R-MS) and Christopher Bond (R-MO).<sup>27</sup>

The Corps' decentralized structure, which has been in place since 1893, encourages pork-barrel spending.<sup>28</sup> The structure consists of headquarters, eight regional divisions, and 38 local district offices, which plan, construct, and maintain projects. Members of Congress and local interest groups are plugged into the projects of their particular offices, and they resist any cuts to them. Political scientist Melvin Dubnick noted that the Corps' "civil works management structure created a unique situation where political responsiveness was nurtured and constantly reinforced."<sup>29</sup> A 2004 report by Taxpayers for Common Sense and the National Wildlife Federation described an "iron triangle" of interests between the Corps, members of Congress, and local special interests.<sup>30</sup>

The upshot is that the Corps' funding of infrastructure is often misallocated. State and local officials could better balance the costs and benefits of the Corps' local projects if their own taxpayers were paying the bills. Federal involvement in local infrastructure also creates a lack of accountability. For example, all three levels of government had responsibility for elements of flood control and hurricane response in New Orleans, but none of them had properly prepared for the disaster of Hurricane Katrina in 2005.

### **A Legacy of Mismanagement**

The Army Corps has built some impressive structures, such as the Washington Monument and the Panama Canal. But the agency's projects have been prone to large cost overruns, and they have often not produced the large benefits promised. Some projects have suffered from major failures, such as the levee system in New Orleans, while other projects have damaged the environment.

These sorts of problems started in the 19th century. Melvin Dubnick notes that in the post–Civil War period, "the wastefulness and mismanagement of Corps' operations were the subject of many articles in the professional and popular press of the time, and a growing list of fiascoes was being used by the agency's enemies to challenge its effort to develop a more comprehensive civil works program."<sup>31</sup>

In 1951 Arthur Maass wrote an influential book about the Army Corps, *Muddy Waters*, which detailed the agency's politically driven decisions and poor planning processes.<sup>32</sup> In the forward to the book, former secretary of the Interior, Harold Ickes, said, "no more lawless or irresponsible federal group than the Corps of Army Engineers has ever attempted to operate in the United States, either inside or outside the law."<sup>33</sup> The opinion of Ickes was harsh, but it reflected a common view that the Corps was outside of presidential control and working for special interests at the expense of the general public.

A 1971 book by Arthur Morgan, *Dams and other Disasters*, was even more critical. The book rips into the Corps for its arrogant and damaging mismanagement. Morgan found that "there have been over the past 100 years consistent and disastrous failures by the Corps in public works areas . . . result[ing] in enormous and unnecessary costs to ecology [and] the taxpayer."<sup>34</sup> Morgan was a former chairman of the Tennessee Valley Authority and a highly distinguished engineer, who had worked on water resource issues for decades. In his book, he documents how the Corps—with a bullheaded mentality—consistently underestimated the costs of its projects, followed shoddy engineering practices, treated Native American tribes poorly, lied to the public, hid information, pursued environmentally damaging projects, and demonized its enemies in order to silence dissent.



Some of these charges still ring true. The nation was reacquainted with the Corps' shoddy engineering with the tragic failure of the levees in New Orleans during Hurricane Katrina. In recent years, the Corps has hidden information from the public, and has been caught distorting economic analyses to justify wasteful projects. Because of its pro-construction mindset, the Corps continues to pursue projects that would damage the environment and produce limited economic benefits. In recent decades, for example, "the Corps has channelized dozens of rivers for barges that never arrived."<sup>35</sup>

These longstanding problems are the result both of the agency's pro-building culture and congressional politics. The ad hoc way that the agency's projects are funded creates further problems. New projects are typically authorized in Water Resources Development Acts, which are passed every few years. The last of such acts was enacted in 2007 over a veto by President George W. Bush.<sup>36</sup> After authorization, each project included may or may not receive funding a year at a time in annual appropriations bills.

The problem is that Congress has crammed far too many projects into the Corps' pipeline, with the result that progress on each project is slow and erratic. For example, Congress has authorized more than 400 municipal water and sewer projects for the Corps, with a total price tag of more than \$5 billion. However, only about \$140 million or so is actually appropriated for these projects each year.<sup>37</sup>

The slow progress of Corps' projects contrasts with private sector construction projects, which are built as quickly as possible to hold down costs. A Government Accountability Office report on the Corps found that "funding projects in increments hinders project efficiency by increasing costs and timelines."<sup>38</sup> One Corps' official told the GAO, "this is one of the reasons that a civil works project takes 20 years to execute, instead of 3 if we were fully funded from the start."<sup>39</sup> The Corps currently has a backlog of more than 1,000 feasibility studies and construction projects worth more than \$80 billion that have been authorized but not funded.<sup>40</sup>

The Corps is an engineering and construction organization, and in our economy such activities are usually carried out by private businesses. The Corps has never been run like a private business—it doesn't have an efficient structure, it doesn't pursue the highest-return projects, and it doesn't construct projects quickly and efficiently. Former Senate majority leader Tom Daschle (D-SD) said the Corps is "one of the most incompetent and inept organizations in all the federal government."<sup>41</sup> The good news is that we don't need a civilian Army Corps organization because most of its functions could be carried out by state and local governments and the private sector.

### **Wasteful Projects and Faulty Analyses**

The Army Corps is supposed to do a careful and detailed analysis of proposed projects to ensure that the benefits will outweigh the costs. However, the Corps has often pursued projects based on analyses that were theoretically flawed, had faulty data, or had been deliberately manipulated. The costs of projects are often underestimated and the benefits overestimated.

The Corps does the analyses of proposed projects that it will build itself, thus it usually favors big and expensive projects.<sup>42</sup> The Pentagon's inspector general found that the Corps has a "systemic bias" towards large-scale construction.<sup>43</sup> A number of years ago, a

series of leaked internal memos by Corps' leaders revealed a strategy to "get creative" in accounting in order to "get to yes as fast as possible" on proposed projects.<sup>44</sup>

The bias in the agency's analyses has been a problem for decades. In a 1952 book, Sen. Paul Douglas (D-IL) noted that the Corps has "never been restrained in estimating the benefits which will result from their projects and . . . in recent years [has] greatly underestimated the costs."<sup>45</sup> As governor of Georgia in the 1970s, Jimmy Carter complained of "computational manipulation" and dishonesty by the Corps regarding a proposed dam in his state.<sup>46</sup>

Arthur Morgan's 1971 book provides many examples of how the Corps provided faulty analyses over many decades.<sup>47</sup> He concludes that "many of the Corps' projects cost two or more times the amount of the first estimates."<sup>48</sup> He quotes House Appropriations chairman Clarence Cannon in 1959 saying that the Corps was either "incompetent or deliberately misleading" Congress with its routinely faulty cost estimates.<sup>49</sup>

Corps' managers and analysts are encouraged to "get to yes" by the local interests that benefit from projects and by their congressional sponsors. Over the decades, the Corps has proactively searched the nation looking for places to pour concrete.<sup>50</sup> The consequence of the agency's eagerness to build and the political pressure to spend is the construction of numerous white elephant projects.<sup>51</sup>

Journalist Michael Grunwald notes that investigations "have repeatedly caught the Corps skewing its analyses to justify wasteful and destructive projects that keep its employees busy and its congressional patrons happy."<sup>52</sup> A 2006 Government Accountability Office report found that the analyses supporting a number of Corps' projects were "fraught with errors, mistakes and miscalculations, and used invalid assumptions and outdated data."<sup>53</sup> Furthermore, the GAO report found that "the Corps' analyses often understated costs and overstated benefits."<sup>54</sup> Studies for inland waterway projects, for example, have used inflated barge traffic projections to justify approval.

In 2002 the GAO lambasted a Corps' study justifying a \$332 million project to deepen a ship channel in the Delaware River. It said that the study "was based on miscalculations, invalid assumptions, and outdated information."<sup>55</sup> The GAO found that "the project benefits for which there is credible support would be about \$13.3 million a year, as compared to the \$40.1 million a year claimed" by the Corps.<sup>56</sup>

Having efficient and modernized ports is important to the U.S. economy, and supporters of the Delaware project have completed newer analyses claiming large positive returns.<sup>57</sup> But why does the federal government need to be involved? If this project makes economic sense, state and local governments and nearby businesses—such as oil refineries—should be willing to fund it themselves.

The Corps and some members of Congress have pushed a \$108 million project to drain tens of thousands of acres of flood-prone land in Southeastern Missouri to benefit a small number of corn, soybean, and cotton farmers.<sup>58</sup> The area currently acts as a beneficial relief valve for the Mississippi River during floods. Many experts think that this project is absurd, but the Corps sought to speed project approval on the basis of a manipulated cost-benefit analysis.<sup>59</sup> In 2007 D.C. District Court Judge James Robertson harshly criticized the Corps' analysis as "arbitrary and capricious," and he said that "the Corps has demonstrated its willingness to do whatever it takes to proceed."<sup>60</sup>

The Corps also cooked the books on a study for a \$2 billion project for navigation improvements on the Upper Mississippi River. An initial Corps' analysis found that the project wasn't cost effective, so senior agency officials fiddled with the numbers to get a more favorable result.<sup>61</sup> Studies by the Army's Inspector General and the National Academy of Sciences found that the Corps' study justifying this project was bogus.<sup>62</sup>

Members of Congress are often indignant when their pet projects are threatened by evaluations showing that they don't make economic sense. With regard to the Upper Mississippi project, then-senator Christopher Bond (R-MO) "vowed to make sure the projects are funded no matter what the economic studies ultimately conclude."<sup>63</sup> Similarly, the former head of the Senate subcommittee overseeing the Corps, George Voinovich (R-OH), blurted out at a hearing, "We don't care what the Corps cost-benefit is . . . we're going to build it anyhow because Congress says it's going to be built."<sup>64</sup> Or consider one senator's response when her project to aid the shipping industry in Louisiana was threatened: "After a \$194 million deepening project for the Port of Iberia flunked a Corps cost-benefit analysis, Sen. Mary Landrieu (D-LA) tucked language into an emergency Iraq spending bill ordering the agency to redo its calculations."<sup>65</sup>

Aside from economics, many Corps' projects don't make sense from an environmental perspective. The Congressional Research Service says that "the Corps has been widely criticized for the environmental harm its water resources projects have caused to ecosystems."<sup>66</sup> For example, the Corps' single-minded efforts since the 1940s to redirect water flows in Florida to aid developers and farmers have damaged the Everglades.<sup>67</sup> Federal sugar subsidies have added to the damage. Taxpayers are now footing the bill for an almost \$8 billion Corps' effort to reverse the damage to the Everglades caused by prior federal policies.<sup>68</sup>

The Corps' navigation and flood-control structures on the Mississippi and other rivers may have actually made flooding worse over the decades by forcing rivers into narrow channels, destroying wetlands, and encouraging the development of flood-prone areas.<sup>69</sup> River navigation is important to the economy, but the Corps seems to have long undervalued the negative effects that its projects are having.

A study by Taxpayers for Common Sense and the National Wildlife Federation in 2004 identified 29 Corps' projects that they argued would impose environmental damage and waste a total of \$12 billion.<sup>70</sup> Similarly, a group of taxpayer and environmental groups produce an annual "Green Scissors" report, which lists billions of dollars in dubious Corps' spending.<sup>71</sup> Environmental groups often support wrongheaded anti-development positions, but fiscal conservatives find common cause with environmentalists in opposing government subsidies for dubious projects.

A good example of an anti-taxpayer and anti-environment boondoggle was a \$220 million project to drain 67,000 acres of wetlands near the Yazoo River in Mississippi for the benefit of a small number of farmers and land owners. The area that was to be drained for farming acts as an emergency relief valve during rises in the Mississippi River. By draining and blocking the floodplain, the Corps would increase the risk of flooding for other areas along the river.

This project was condemned by experts, but Republican politicians including Thad Cochran, Trent Lott, and Haley Barbour continued pushing it for years. The subsidies to the Corps for the project were bad enough, but the *New York Times* noted that the project



would also help landowners gain more federal farm subsidies: "Increasing farmland increases the opportunity for federal price supports. Some of the nation's biggest recipients of the supports are in the lower Delta."<sup>72</sup> Luckily, the George W. Bush administration blocked this project in 2008, and it now appears to be dead.<sup>73</sup>

It may make sense to proceed with projects that harm the environment if the economic benefits are large. The problem with government subsidies is that they tilt the balance in a pro-development direction. If the owners of swampy land want to drain their properties for farming with their own money, it is likely that the increased value of farm production outweighs the project's cost. But if farmers can lobby the Army Corps to get their land drained for free, government policy is biased in an anti-environmental direction.

Economists generally support government spending on true "public goods." However, the purpose of many Corps' projects is to generate private gains, not broad public benefits. The Corps would look favorably on a project that cost taxpayers \$100 million and generated private benefits to farmers, developers, or shipping companies of \$110 million. But private interests should be willing to invest their own funds in such projects that have positive returns.<sup>74</sup>

In sum, the Corps' infrastructure activities have often been based on faulty economics and pork-barrel politics. To better ensure efficient investment decisions, policymakers should transfer those Corps' activities that can be supported in the marketplace to the private sector, and transfer most of the rest of the agency's activities to state and local governments.

### **The Corps and Hurricane Katrina**

The dismal performance of the flood protection system in New Orleans was the focus of much attention after the Hurricane Katrina disaster in 2005. Michael Grunwald has researched Katrina and the Corps in detail, and he concludes that "it wasn't a natural disaster. It was a man-made disaster, created by lousy engineering, misplaced priorities, and pork-barrel politics."<sup>75</sup> He argues that most of the damage to New Orleans was attributable to failures of the Corps.<sup>76</sup>

Prior to 1965 Louisiana generally handled its own storm protection systems. But Hurricane Betsy that year prompted Congress to pass the Flood Control Act of 1965, which directed the Corps to construct levees in New Orleans to withstand a category 3 storm. The project fell far behind schedule, went many times overbudget, and was not completed by the time of Hurricane Katrina in 2005.<sup>77</sup> The huge damage caused by Katrina was largely the result of preventable design failures in the city's flood-control systems.<sup>78</sup> The American Society of Civil Engineers concluded that "a large portion of the destruction from Hurricane Katrina was caused by . . . engineering and engineering-related policy failures."<sup>79</sup>

There are at least five ways that the activities of the Army Corps magnified the damage done to people and property from Hurricane Katrina. First, there were fundamental design flaws in Army Corps' infrastructure around New Orleans. The levees failed in numerous places because of engineering and construction defects, such as the use of unstable soils in levee structures. Most of the flooding was due to water breaching the levees at weak points.

Second, the Corps' extensive levee and floodwall structures throughout the New Orleans area encouraged development in dangerous, low-lying areas. After Hurricane Betsy in 1965, the Corps was charged with improving the city's flood protection, but "rather than focusing its full efforts on protecting the existing city, the Corps decided to spend millions of dollars to extend levees into the virgin wetlands of New Orleans East specifically for the purpose of spurring development."<sup>80</sup> That turned out to be a very bad idea: "Some of the areas in New Orleans where Katrina wreaked the greatest damage were intensively developed only recently as a result of the U.S. Army Corps of Engineers' flood-control projects."<sup>81</sup>

Third, the Corps' focus on building economic development infrastructure, such as ship channels, reduced available funds for hurricane protection. Louisiana had received \$1.9 billion for Corps' projects in the five years before Katrina, but only a small share was spent on protecting central New Orleans from possible hurricanes.<sup>82</sup> Grunwald notes: "Before Katrina, the Corps was spending more in Louisiana than in any other state, but much of it was going to wasteful and destructive pork."<sup>83</sup>

Fourth, Corps' infrastructure helped to deplete wetlands around New Orleans, which had provided a natural defense against hurricanes. The Corps' navigation and flood control structures have caused silt from the Mississippi to disperse into the Gulf over the decades, rather than being naturally used to rebuild the wetlands. As writer John McPhee noted, "sediments are being kept within the mainline levees and shot into the Gulf . . . like peas through a peashooter, and lost to the abyssal plain."<sup>84</sup> As a result, the wetlands have shrunk decade after decade.

Fifth, the Corps' Mississippi River Gulf Outlet (MRGO) shipping channel acted to funnel Hurricane Katrina into the heart of New Orleans. The 76-mile MRGO was built in 1965 at great expense based on optimistic projections of ship traffic, but the traffic never materialized. Constructing MRGO destroyed thousands of acres of protective wetlands, and it acted to channel salt water inland, which killed fresh water marshes and cypress forests.<sup>85</sup> During Katrina, the channel is thought to have intensified the storm surge as it headed toward the city.<sup>86</sup>

In 2009 a federal judge found that the Corps' mismanagement of MRGO was responsible for part of the flood damage to the city.<sup>87</sup> U.S. District Judge Stanwood Duval Jr. concluded, "the Corps' lassitude and failure to fulfill its duties resulted in a catastrophic loss of human life and property in unprecedented proportions."<sup>88</sup> And he found that "the negligence of the Corps, in this instance by failing to maintain the Mississippi River Gulf Outlet properly, was not policy, but insouciance, myopia and shortsightedness."<sup>89</sup>

Some of the "natural disasters" of recent decades have been partly man-made disasters. Despite massive federal spending on flood control by the Corps and the Bureau of Reclamation over the decades, for example, floods cause more damage today in constant-dollar terms than they did in the earlier decades.<sup>90</sup> One of the problems is that government infrastructure and subsidies have encouraged Americans to live in harm's way along ocean coasts and in river floodplains. Unfortunately, even after Katrina, that message does not seem to have sunk in with federal policymakers.

## Reform Options

The first step toward cutting the budget of the Army Corps is to end passage of new water resource authorization bills. It makes no sense for Congress to keep putting new civilian projects into the Corps' pipeline when the agency already has hundreds of projects previously authorized but not funded.

Then Congress should go through the Corps' budget and cut out all those activities that could be financed and operated by state and local governments or the private sector. Given the agency's long-standing mismanagement and misallocation of spending, it should be removed from those activities where federal involvement is not essential.

Many of the Corps' activities should be privatized. Activities such as harbor construction and maintenance, beach replenishment, and hydropower generation could be provided by private construction, engineering, and utility companies. Those companies could contract directly with customers, such as local governments, to provide those services.

Consider the Corp's harbor maintenance activities on the seacoasts. These activities are funded by a Harbor Maintenance Tax (HMT) collected from shippers based on the value of cargo. The tax generates about \$1.4 billion a year and is spent on projects chosen by Congress and the Corps. But the federal government is an unneeded middleman here—port authorities could simply impose their own charges on shippers to fund their own maintenance activities, such as dredging. By cutting out the middleman, ports could respond directly to market demands, rather than having to lobby Washington for funding.

Groups representing shipping interests complain that Congress is not spending enough on harbors to keep America competitive in international trade. But the current federal system allocates funds inefficiently, creating large cross-subsidies between seaports. The Congressional Research Service notes that harbor maintenance funds are often "directed towards harbors which handle little or no cargo" and "there is no attempt to identify particular port usage and allocate funds accordingly."<sup>91</sup> The Port of Los Angeles, for example, generates a large share of HMT revenues, but it receives very little maintenance spending in return. The Congressional Research Service further explains:

Examining where trust fund monies have been spent indicates that little or no shipping is taking place at many of the harbors and waterways that shippers are paying to maintain. . . . Given the amount of HMT collections not spent on harbors, and the amount spent on harbors with little or no cargo, a rough estimate is that less than half and perhaps as little as a third of every HMT dollar collected is being spent to maintain harbors that shippers frequently use.<sup>92</sup>

The solution to these sorts of inefficiencies is not more federal funding, but greater port independence and self-funding. One step toward that goal would be to privatize U.S. seaports, which are generally owned by state and local governments today. Britain pursued such reforms in 1983 when it privatized 19 seaports to form Associated British Ports (ABP).<sup>93</sup> Today ABP operates 21 ports, and its subsidiary, UK Dredging, provides dredging services in the marketplace. ABP and UK Dredging earn profits and pay taxes. Today two-thirds of British cargo goes through efficient privatized seaports.<sup>94</sup> One advantage of private seaports is that they can expand their facilities when market demands warrant, free of the uncertainties created by government budgeting.

Privatization is also a good option for the Corps' 75 hydropower plants. More than two-thirds of the roughly 2,400 hydropower plants in the nation are privately owned.<sup>95</sup> While federal facilities—including those of the Army Corps—dominate hydropower in some states such as Washington, other states such as New York and North Carolina have substantial private hydropower. The point is that the private sector is entirely capable of running hydropower plants, and thus Congress should begin selling the generating facilities of the Corps.

Many of the Corps' assets should be turned over to state and local governments. These assets include flood control infrastructure, municipal water and sewer projects, the Washington, D.C., aqueduct system, and recreational areas. The financing and control of flood control infrastructure in Louisiana, for example, should be handed over to the State of Louisiana. That would give citizens direct responsibility over their hurricane defenses, rather than to have them rely on a distant Washington bureaucracy. State and local officials could better balance the costs and benefits of levees and other infrastructure if their own citizens were footing the bill.

The Commerce Clause of the Constitution allowed the federal government to assert control over navigable rivers, and the Corps has taken the lead role in river navigation activities since the 19th century. However, Congress should consider reforms to reduce the costs on general taxpayers of these activities. Currently, a barge fuel tax generates revenues for the Inland Waterways Trust Fund, but this fund only pays half the cost of constructive projects on the inland waterways and none of the operation and maintenance costs.<sup>96</sup> One reform step would be to raise fees to cover a higher share of system's costs, as proposed by the Simpson-Bowles fiscal commission in 2010.<sup>97</sup>

An expert on the system, Steve Ellis, testified to Congress last year about the inefficiency of the current funding structure. One problem is that "since users don't have to pay anything for maintenance, they are constant cheerleaders for new construction."<sup>98</sup> Another problem is that spending is allocated based on politics, not on market demands such as barge traffic levels. Some rivers in the system receive very little barge traffic, yet receive substantial spending from the Corps. Ellis also notes that inland waterway projects suffer from the Corps' usual distorted analyses and cost overruns: "None of the inland navigation projects the Corps has green-lighted in recent decades have met their economic predictions."<sup>99</sup>

To create more efficient inland waterways, Congress should consider transferring the Corps' activities to state governments or private businesses. In 2002 the Bush administration determined that the Corps' civilian activities were not a "core competency" of the government and should be opened to private contractors.<sup>100</sup> It proposed allowing private bidding for 2,000 Corps jobs involved in the operation of locks and dams on the waterways, but that plan did not come to fruition.<sup>101</sup> Another idea is to create a self-funded organization to operate the inland waterways, either as an arms-length part of government or as a private entity.<sup>102</sup>

To conclude, the nation's long experience with the Army Corps illustrates how federal involvement in local infrastructure often leads to mismanagement, inefficiency, and pork-barrel spending. It's time to revive federalism in infrastructure investment and begin to privatize Army Corps activities or transfer them to the states. Those remaining activities of the Corps that are truly federal in nature should be moved to the Department of the Interior and the civilian side of the Corps closed down.

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<sup>1</sup> The civilian side of the Corps is part of the Department of Defense, but it is usually shown as a separate agency in federal budget presentations.

<sup>2</sup> *Budget of the U.S. Government, Fiscal Year 2013, Analytical Perspectives* (Washington: Government Printing Office, 2012), Table 33-1. Spending refers to net outlays. The employee count refers to full-time equivalents.

<sup>3</sup> For a discussion of the Corps' regulatory activities, see David Sunding, "An Opening for Meaningful Reform," *Regulation* 26, no. 2 (Summer 2003); and see Jonathan H. Adler, "The Clean Water Land Grab," *Regulation* 31, no. 4 (Winter 2009–2010). For an alternative view, see American Rivers and National Wildlife Federation, "A Citizen's Guide to the Corps of Engineers," 2009.

<sup>4</sup> For a brief history of the Corps, see Melvin Dubnick, "Army Corps of Engineers," in George T. Kurian, ed., *A Historical Guide to the U.S. Government* (Oxford: Oxford University Press, 1998). For an official history, see U.S. Army Corps of Engineers, "The U.S. Army Corps of Engineers: A History," 2007, [www.usace.army.mil/History/Pages/Brief.aspx](http://www.usace.army.mil/History/Pages/Brief.aspx).

<sup>5</sup> U.S. Army Corps of Engineers, "The U.S. Army Corps of Engineers: A History," 2007, p. 41, [www.usace.army.mil/History/Pages/Brief.aspx](http://www.usace.army.mil/History/Pages/Brief.aspx).

<sup>6</sup> Taxpayers for Common Sense and National Wildlife Federation, "Crossroads: Congress, the Corps of Engineers, and the Future of America's Water Resources," March 2004, p. ii.

<sup>7</sup> U.S. Army Corps of Engineers, "The U.S. Army Corps of Engineers: A History," 2007, p. 47, [www.usace.army.mil/History/Pages/Brief.aspx](http://www.usace.army.mil/History/Pages/Brief.aspx).

<sup>8</sup> U.S. Army Corps of Engineers, "The U.S. Army Corps of Engineers: A History," 2007, p. 59, [www.usace.army.mil/History/Pages/Brief.aspx](http://www.usace.army.mil/History/Pages/Brief.aspx). For a discussion of early levee-building on the Mississippi, see John McPhee, "Atchafalaya," *New Yorker*, February 23, 1987.

<sup>9</sup> John McPhee, "Atchafalaya," *New Yorker*, February 23, 1987.

<sup>10</sup> Arthur E. Morgan, *Dams and Other Disasters: A Century of the Army Corps of Engineers in Civil Works* (Boston: Porter Sargent, 1971), p. 233.

<sup>11</sup> C. Perkins, "Mississippi River Flood Relief and Control," *Congressional Quarterly (Editorial Research Reports)*, May 19, 1927.

<sup>12</sup> John McPhee, "Atchafalaya," *New Yorker*, February 23, 1987.

<sup>13</sup> Michael Grunwald, "The Threatening Storm," *Time*, August 2, 2007.

<sup>14</sup> For example, the Department of Agriculture and the Civilian Conservation Corps launched efforts in the 1930s to drain wetlands.

<sup>15</sup> Marc Reisner, *Cadillac Desert* (New York: Penguin, 1993), p. 172.

<sup>16</sup> U.S. Army Corps of Engineers, [www.corpsresults.us/recreation/fastfacts/nationalreport.cfm](http://www.corpsresults.us/recreation/fastfacts/nationalreport.cfm).



<sup>17</sup> Nicole T. Carter and Charles V. Stern, "Army Corps of Engineers Water Resource Projects: Authorization and Appropriations," Congressional Research Service, September 29, 2010, p. 13.

<sup>18</sup> Nicole T. Carter, H. Steven Hughes, and Pervaze A. Sheikh, "Army Corps of Engineers Civil Works Program," Congressional Research Service, June 9, 2005, p. 5.

<sup>19</sup> Jennifer Weeks, "Protecting Wetlands," *Congressional Quarterly*, October 3, 2008.

<sup>20</sup> "Water: A Billion Dollar Battleground," *Time*, April 4, 1977. See also Marc Reisner, *Cadillac Desert* (New York: Penguin, 1993), Chapter 9.

<sup>21</sup> Taxpayers for Common Sense and National Wildlife Federation, "Crossroads: Congress, the Corps of Engineers, and the Future of America's Water Resources," March 2004, p. 39.

<sup>22</sup> Michael Grunwald, "Working to Please Hill Commanders," *Washington Post*, September 11, 2000.

<sup>23</sup> This was the Water Resources Development Act of 2007.

<sup>24</sup> Government Accountability Office, "Army Corps of Engineers: Organizational Realignment Could Enhance Effectiveness, but Several Challenges Would Have to Be Overcome," GAO-10-819, September 2010, p. 17.

<sup>25</sup> Eric Pianin and Christopher Lee, "Corps of Engineers Chief Drafts Plan to Reorganize Agency," *Washington Post*, September 24, 2003.

<sup>26</sup> James H. Rowe, Book Review of *Muddy Waters*, in *American Political Science Review* 46, no. 2 (June 1952): 572.

<sup>27</sup> For a description of the Corp's pork-barrel machine, see Michael Grunwald, "Working to Please Hill Commanders," *Washington Post*, September 11, 2000.

<sup>28</sup> Government Accountability Office, "Army Corps of Engineers: Organizational Realignment Could Enhance Effectiveness, but Several Challenges Would Have to Be Overcome," GAO-10-819, September 2010, pp. 14–15.

<sup>29</sup> Quoted in Melvin Dubnick, "Army Corps of Engineers," in George T. Kurian, ed. *A Historical Guide to the U.S. Government* (Oxford: Oxford University Press, 1998), p. 72.

<sup>30</sup> Taxpayers for Common Sense and National Wildlife Federation, "Crossroads: Congress, the Corps of Engineers, and the Future of America's Water Resources," March 2004.

<sup>31</sup> Quoted in Melvin Dubnick, "Army Corps of Engineers," in George T. Kurian, ed. *A Historical Guide to the U.S. Government* (Oxford: Oxford University Press, 1998), p. 71.

<sup>32</sup> Arthur Maass, *Muddy Waters: The Army Engineers and the Nation's Rivers* (Cambridge, MA: Harvard University, 1951).

<sup>33</sup> Quoted in James H. Rowe, Book Review of *Muddy Waters*, in *American Political Science Review* 46, no. 2 (June 1952): 572. See also Marc Reisner, *Cadillac Desert* (New York: Penguin, 1993), p. 181.

<sup>34</sup> Arthur E. Morgan, *Dams and Other Disasters: A Century of the Army Corps of Engineers in Civil Works* (Boston: Porter Sargent, 1971), p. xxiii.

<sup>35</sup> Michael Grunwald, "An Agency of Unchecked Clout," *Washington Post*, September 10, 2000.

<sup>36</sup> The White House, "President Bush Vetoes Water Resources Development Act of 2007," press release, November 2, 2007.

<sup>37</sup> Nicole T. Carter and Charles V. Stern, "Army Corps of Engineers Water Resource Projects: Authorization and Appropriations," Congressional Research Service, September 29, 2010, p. 13.

<sup>38</sup> Government Accountability Office, "Army Corps of Engineers: Organizational Realignment Could Enhance Effectiveness, but Several Challenges Would Have to Be Overcome," GAO-10-819, September 2010, p. 20.

<sup>39</sup> Government Accountability Office, "Army Corps of Engineers: Organizational Realignment Could Enhance Effectiveness, but Several Challenges Would Have to Be Overcome," GAO-10-819, September 2010, p. 20.

<sup>40</sup> Nicole T. Carter and Charles V. Stern, "Army Corps of Engineers Water Resource Projects: Authorization and Appropriations," Congressional Research Service, September 29, 2010, p. 2.

<sup>41</sup> David Hosansky, "Reforming the Corps," *Congressional Quarterly*, May 30, 2003.

<sup>42</sup> For example, see the discussion in Marc Reisner, *Cadillac Desert* (New York: Penguin, 1993), Chapter 6.

<sup>43</sup> Michael Grunwald, "Reining in the Corps of Engineers," *Time*, September 20, 2007.

<sup>44</sup> Michael Grunwald, "An Agency of Unchecked Clout," *Washington Post*, September 10, 2000.

<sup>45</sup> Paul H. Douglas, *Economy in the National Government* (Chicago: University of Chicago Press, 1952), p. 105.

<sup>46</sup> Marc Reisner, *Cadillac Desert* (New York: Penguin, 1993), p. 308.

<sup>47</sup> Arthur E. Morgan, *Dams and Other Disasters: A Century of the Army Corps of Engineers in Civil Works* (Boston: Porter Sargent, 1971), pp. 32–37.

<sup>48</sup> Arthur E. Morgan, *Dams and Other Disasters: A Century of the Army Corps of Engineers in Civil Works* (Boston: Porter Sargent, 1971), pp. 393.

<sup>49</sup> Arthur E. Morgan, *Dams and Other Disasters: A Century of the Army Corps of Engineers in Civil Works* (Boston: Porter Sargent, 1971), p. 33.

- <sup>50</sup> Marc Reisner, *Cadillac Desert* (New York: Penguin, 1993), Chapter 6.
- <sup>51</sup> For some examples, see Taxpayers for Common Sense and National Wildlife Federation, "Crossroads: Congress, the Corps of Engineers, and the Future of America's Water Resources," March 2004.
- <sup>52</sup> Michael Grunwald, "Reining in the Corps of Engineers," *Time*, September 20, 2007.
- <sup>53</sup> Government Accountability Office, "Corps of Engineers: Observations on Planning and Project Management Processes for the Civil Works Program" GAO-06-529T, March 15, 2006, p. 5.
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- <sup>56</sup> Government Accountability Office, "Delaware River Deepening Project," GAO-02-604, June 2002, p. 5.
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<sup>82</sup> Environmental Defense, Taxpayers for Common Sense, National Wildlife Federation, and National Taxpayers Union, "Katrina's Costly Wake," 2006, p. 5.

<sup>83</sup> Michael Grunwald, "The Threatening Storm," *Time*, August 2, 2007.

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<sup>85</sup> Long before Katrina, at least one writer recognized the damage caused by the Mississippi River Gulf Outlet. See John McPhee, "Atchafalaya," *New Yorker*, February 23, 1987.

<sup>86</sup> Environmental Defense, Taxpayers for Common Sense, National Wildlife Federation, and National Taxpayers Union, "Katrina's Costly Wake," 2006, p. 7.

<sup>87</sup> Campbell Robertson, "Ruling on Katrina Flooding Favors Homeowners," *New York Times*, November 18, 2009.

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<sup>91</sup> John Frittelli, "Harbor Maintenance Trust Fund Expenditures," R41042, Congressional Research Service, January 10, 2011, pp. summary, 6.

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<sup>93</sup> See Associated British Ports, [www.abports.co.uk](http://www.abports.co.uk) and [www.ukdredging.co.uk](http://www.ukdredging.co.uk).

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<sup>95</sup> However, publicly owned plants are often larger than private plants, with the result that about three-quarters of the capacity is public. See Douglas G. Hall and Kelly S. Reeves, "A Study of United States Hydroelectric Plant Ownership," Idaho National Laboratory, June 2006, p. 2.

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<sup>99</sup> Steve Ellis, testimony before the Subcommittee on Water Resources and Environment, House Committee on Transportation and Infrastructure, September 21, 2011.



<sup>100</sup> Sean Reilly, "Corps Ordered to Open Door to Privatization," *Newhouse*, October 17, 2002.

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The Corps of Engineers of the Indian Army has a long history dating back to the mid-18th century. The earliest existing subunit of the Corps (18 Field Company) dates back to 1777 while the Corps officially recognises its birth as 1780 when the senior most group of the Corps, the Madras Sappers were raised. The Corps consists of three groups of combat engineers, namely the Madras Sappers, the Bengal Sappers and the Bombay Sappers. A group is roughly analogous to a regiment of Indian infantry, each The Army Corps of Engineers provides public engineering services in peace and war to strengthen national security, energize the economy, and reduce risks from disasters. Agency Details. Website: U.S. Army Corps of Engineers. Contact: Contact the U.S. Army Corps of Engineers. Local Offices The United States Army Corps of Engineers (USACE) is made up of approximately 34,600 civilian and 650 military men and women. As a staff officer at the Pentagon, the Chief advises the Army on engineering matters and serves as the Army's topographer and the proponent for real estate and other related engineering programs. As commander of the US Army Corps of Engineers, the Chief of Engineers leads a major Army command that is the world's largest public engineering, design and construction management agency. His office defines policy and guidance and plans direction for the organizations within the Corps. The US Army Corps of Engineers Headquarters is made up of made up of an Executive Office and 17 Staff Pri

The United States Army Corps of Engineers (USACE) is a U.S. federal agency under the Department of Defense and a major Army command made up of some 37,000 civilian and military personnel, making it one of the world's largest public engineering, design, and construction management agencies. Although generally associated with dams, canals and flood protection in the United States, USACE is involved in a wide range of public works throughout the world. The Corps of Engineers provides outdoor recreation The U.S. Army Corps of Engineers launched the book, *Engineering With Nature*: an Atlas, at a celebratory event held at the National Building Museum on January 16, 2019. Among those in attendance were Dr. Todd Bridges, EWN lead; James Dalton, director of Civil Works; Catherine Wright, Environment Agency, United Kingdom; and Cees Brandsen, Rijkswaterstaat, the Netherlands. WASHINGTON, D.C. (Jan. 24, 2019) - The U.S. Army Corps of Engineers launched the book, *Engineering With Nature*: an Atlas, at a celebratory event held at the National Building Museum on January 16, 2019. Among those in attendance were Dr. Todd Bridge Huntington District, U.S. Army Corps of Engineers shared R.D. Bailey Lake, US Army Corps of Engineers's post. 22 hrs