

Beyond Recovery

AMERICA'S PUBLIC INVESTMENT DEFICIT



By **Eric Lotke, Alex Carter** and **Armand Biroonak**

February 2009

INSTITUTE FOR **AMERICA'S FUTURE**
ourfuture.org

The Institute for America's Future is a center of nonpartisan research and education. Its mission is to equip Americans with the tools and information needed to drive issues into the national debate, challenge failed conservative policies and build support for the progressive vision of a government that is on the side of working people. To achieve our mission, IAF spearheads the development of a compelling progressive economic agenda and message—which makes clear what progressives stand for, articulates the philosophy and values underlying these policies, and frames and argues for them in new ways that will resonate with the majority of average Americans. IAF also regularly convenes and educates progressive leaders, organizations, candidates, opinion-makers, and activists to encourage and facilitate their adoption and use of a common economic agenda and message so that our collective voices echo powerfully. Finally, IAF acts as an incubator of national campaigns in which progressives join together to form policies that advance economic prosperity and opportunity for lower and middle income Americans.

INSTITUTE FOR AMERICA'S FUTURE
ourfuture.org

1825 K STREET NW • SUITE 400 • WASHINGTON DC 20006 • (T) 202 955-5665 • (F) 202 955-5606 • WWW.OURFUTURE.ORG

Beyond Recovery

AMERICA'S PUBLIC INVESTMENT DEFICIT

Institute for America's Future

February 2009

It's time to look ahead. The need for a bold recovery plan to address the accelerating downturn understandably consumes Washington's attention. Nonetheless, the challenge of getting the economy growing again, though vital, is not sufficient. Our response to the crisis must plant the seeds for the new economy of the future.

We must not, once we pull the economy out of recession, return to business as usual – a high-consumption, low-wage economy based on asset bubbles and foreign borrowing. That strategy was never sustainable and is no longer available.

A sustained recovery will require a dramatic change of course – and a dramatic change of priorities. We must make the investments vital to a dynamic economy able to sustain a broad middle class in a global economy. This requires investing in the public goods that are the foundation of a healthy society and a dynamic economy – from a 21st century infrastructure to world-class public schools. We need to curb short-term private speculation and bolster long-term public investment.

The crisis forces us in that direction. And the Obama administration has wisely offered up a recovery plan – The American Recovery and Reinvestment Act Of 2009 – which would make an \$800 billion down payment on investments vital to our future, from clean energy to public schools.

Just a few months ago, adding \$6 billion above current spending was the outer range of debate on infrastructure renewal.¹ Even as bridges collapsed, levees sank and the American Society of Civil Engineers estimated infrastructure needs of \$1.6 trillion, our public imagination embraced only a tiny fraction of the need.² Now, at last, the government response is reaching the right number of digits.

But the recovery plan remains a short-term stimulus, with a focus on immediate action and “shovel-ready” projects. It necessarily is designed to staunch the bleeding.

We need to think beyond the recovery period, reordering our long-term priorities to sustain the investments vital to a healthy economy. And we should begin investing in those areas now.

That means building thoughtfully for the decades to come. We shouldn't hurry to build new highways – even if the projects are “shovel-ready” – if construction will foster urban sprawl. We should be investing in rail and mass transit, with new development patterns so people live closer to where they work.

Let's train teachers' aides now to become tomorrow's certified teachers, and fund scholarship programs so today's high school students can become tomorrow's college graduates. Let's think now about parents balancing work with young children, and what the public can do during the preschool years.

Let's remember that President Abraham Lincoln created Land Grant universities in 1862, in the middle of the Civil War. With the country breaking in half, he laid the foundation for colleges that we still use today. What are we doing today that will measure up, a hundred years from now?

The Investment Deficit

One thing is painfully clear. America's public investment deficit is deep and costly. The recovery plan makes a useful down payment in various areas of dramatic need. But as we detail below, the recovery plan is only a down payment. Glaring needs remain. So as we build the new economy coming out of this crisis, we must sustain increased public investment in areas vital to our social and economic health.

The core areas, detailed below, are also clear. We need to build a modern, efficient, 21st century infrastructure, the foundation on which the economy relies. Much of our infrastructure dates from the World War II era; many of our water pipes were laid in the 19th century. We need to rebuild our rail lines and mass transit systems. We need to clean our drinking water and replace aged sewer lines.

Second, global warming and our increasing dependence on foreign oil are clear and present dangers to our security. The recovery plan kick-starts investments in energy efficiency and the electric grid. We need a concerted drive for sustainable energy independence, while ending our addiction to foreign oil. We can aim for the skies with renewable wind and solar electricity, and a smart network that moves the power from these new sources to places of demand. And we can achieve simpler aims with more mundane investments, such as insulation and double-pane glass – generating green jobs with a long-lasting impact.

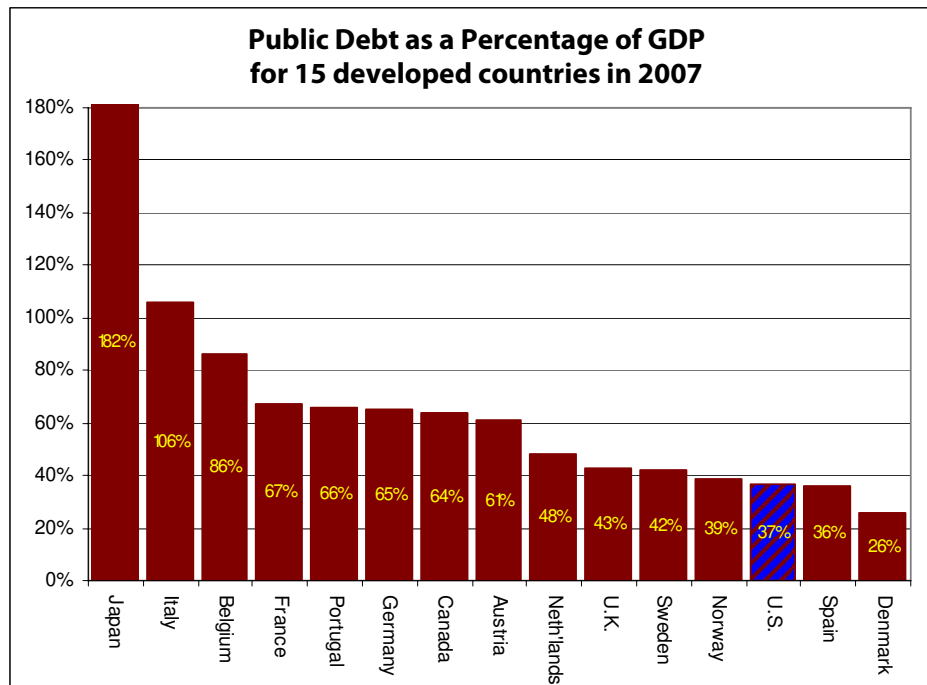
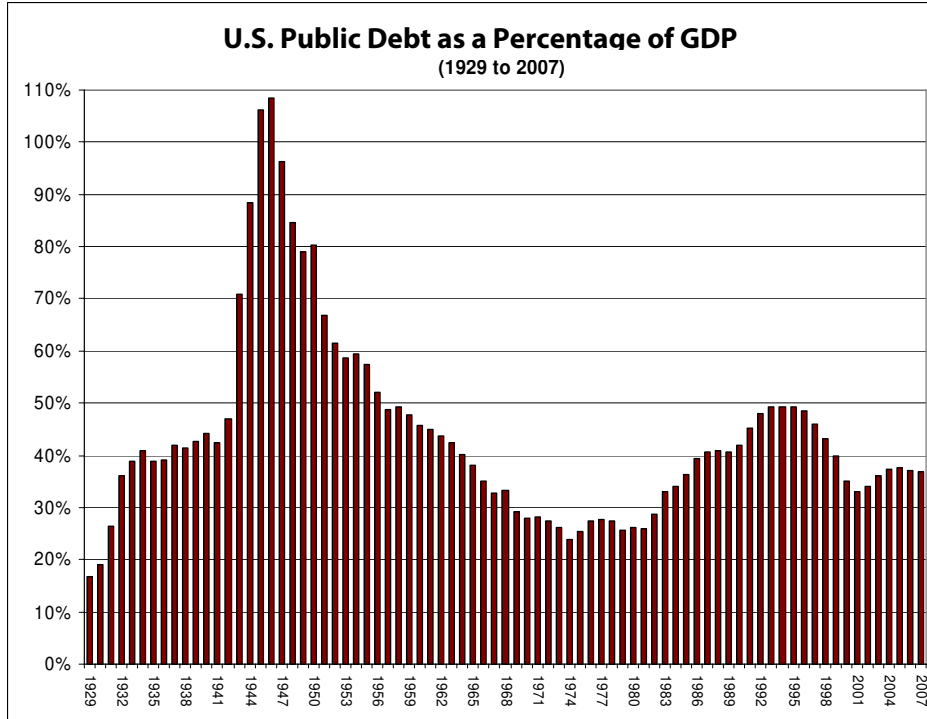
Finally, we need to invest in people. America has prospered by leading the world in public education, scientific research and technological invention. In a global economy, these areas are more important than ever. We need to invest in quality public education from pre-K to grade 12, with advanced education and training open to all. We need to make college affordable again. We need to ramp up our investments in basic science and technology, such as the public research that created the Internet. And we need to expand a public social compact to replace the private promises now shredded by the corporations, starting with affordable health care for all.

These core areas of investment are not controversial. The evidence of the glaring deficits in each area, described below, is incontrovertible. Now, as we begin to plan the new economy that arises out of the ruins of the old, it is time to commit the resources and priorities necessary to the task.

Deficits in Perspective

One concern that constrains our thinking is, of course, the federal budget deficit. Deficits have taken almost mythical hold of our imagination. The word “deficit” has become a stand-in for words like waste and irresponsibility – so running a deficit is nearly synonymous with irresponsibility rather than one economic variable to be taken into consideration among many others.

The U.S. annual budget deficit is likely to exceed \$1 trillion next year, a stunningly large number. But then the U.S. is a gigantic economy with a correspondingly huge gross domestic product. Measured as a percentage of GDP – that is, in proportion to a \$14 trillion economy – a \$1 trillion deficit appears more manageable. The question really is one of scale. Are we going so far in debt that we can't dig out?



In fact, our debt is not extraordinary by historical or international norms.³ Scott Lilly, former director of the Joint Economic Committee and senior fellow at the Center for American Progress, points out that a \$1 trillion federal budget deficit in 2009 “would push the public debt – even after the profligacy of the Bush years – to about 47 percent of GDP, and a \$2 trillion-dollar deficit will push it to only about 53-percent levels – only a few percentage points above where it was in the early 1990s.”

This level of debt is lower than that of most advanced industrial countries – all of whom are also now raising their deficits. France’s public debt is 67 percent of its GDP; Canada’s is 64 percent. Japan sets the scale at 182 percent.

So, large deficit spending to make

sensible investments to put people to work in this crisis is both necessary and affordable. In the long term, of course, sustained expansion of public investments vital to our future will have to be paid for. That will require new priorities – squandering fewer resources on policing the world and subsidizing agribusiness, for example. Progressive tax reforms would also be a good start – closing loopholes, collecting unpaid taxes, taxing income on wealth at the same rates as income on work. We can afford to make these investments. Indeed, it will cost us much more – in economic inefficiency, a poorly educated citizenry, lost markets – if we do not make them.

Investments

This section itemizes important categories of investments. Each section briefly describes:

- The current level of investment
- The level contemplated by the 2009 American Recovery and Reinvestment Act introduced in the House of Representatives
- The need
- The jobs that can be created by meeting that need.

The list is neither exhaustive nor definitive. It does, however, give some sense of the need for expanded public investment that will remain after the recovery plan is over.

Energy

Energy is a linchpin issue, with consequences ranging from home heating to clean air to national security. Investment in energy solves many problems at once.

The U.S. Department of Energy 2009 baseline budget allocates roughly \$6 billion for energy research, though the vast majority is for capturing carbon emissions and improving nuclear fuel safety.⁴ Only \$156 million is expressly set aside for solar energy, and only \$20 million goes to the Federal Energy Management Program, whose mission is to increase energy efficiency in over 500,000 federal buildings and facilities.⁵ Altogether, less than \$10 billion advances long term goals.

The 2009 American Recovery and Reinvestment Act introduced by the House of Representatives went farther.⁶ It proposed \$32 billion over two years to transform the nation's energy transmission, distribution, and production systems with an improved grid and renewable technology; \$31 billion to modernize federal and other public infrastructure to make them more energy efficient; and \$10 billion for scientific research. It allocated \$350 million to the Department of Defense for research to improve energy generation, transmission and storage for military purposes. Altogether, roughly \$80 billion in the recovery bill would have constituted first steps in a long-term goal of clean energy and energy independence.

The Apollo Alliance has detailed what it would cost to sustain this concerted drive to a clean energy independence. This coalition, comprised of business, labor and environmental leaders, recommends an investment of \$500 billion over 10 years.⁷ The elements of the plan include \$7 billion to insulate and renovate private structures (estimated to create 400,000 jobs), \$11 billion to improve the power grid (an estimated 140,000 jobs), \$3 billion for research, \$22 billion for mass transit (an estimated 700,000 jobs), and up to \$25 billion in loan guarantees for retooling and retraining so new energy technologies are designed and *manufactured* in America.⁸

Energy	2009 baseline budget	2009 Recovery Bill	What's needed	Jobs required to meet the need
	\$10 billion annual ⁹	\$80 billion over two years ¹⁰	\$500 billion over 10 years	5 million over 10 years ¹¹

Education

Education is crucial to American prosperity and success. Education is a complex enterprise, with contributions from every level of government, especially the states. In 2007, fully 21 percent of state expenditures, \$260 billion, were for primary and secondary school education; another 11 percent, or \$135 billion, went to higher education.¹² County governments provide an additional \$46 billion for education¹³ and the federal government adds \$61 billion. But with a growing population in a high tech world, more is still needed.

Pre-Kindergarten. Educational investments begin in early childhood. Only a few states have universal pre-kindergarten programs, leaving most parents of young children to balance work and family on their own. The federal government supports pre-K programs with only \$7 billion annually.¹⁴ Oklahoma makes pre-K available to all of its four-year-olds; 85 percent of them accept the opportunity, for a total cost of \$118 million.¹⁵ Expanding similar high quality pre-K programs for four-year-olds nationwide would cost roughly \$28 billion annually.¹⁶ The National Head Start Association estimates that every \$4 billion could create 120,000 jobs; so if it went to scale it could create 840,000 jobs.¹⁷ The initial House of Representative's version of the American Recovery and Reinvestment Act of 2009 devoted \$2.1 billion toward such programs, a substantial step forward.

K-12. For K-12 education, attention focuses on standardized tests – even as schools are crumbling and roofs are leaking. The U.S. Department of Education reports that a third of our public schools are in condition bad enough to "interfere with the delivery of instruction."¹⁸ The National Education Association estimates that \$322 billion would be needed to repair our school infrastructure,¹⁹ and the 2009 Recovery and Reinvestment bill provided a \$14 billion beginning. Investment of just \$20 billion in school construction has been carefully estimated to create 250,000 jobs.²⁰

Still greater investment would be needed to address what many consider the most important reform of all: more teachers with smaller class sizes, and higher pay to attract quality instructors.

Higher Education. America should expect, and make it possible for, all high school graduates to either get a college education or some form of advanced career training. That means we should ensure that college is affordable for all who wish to and qualify to go, and we should also dramatically expand training programs, preferably located in community colleges and tied directly to regional employer needs. Tuition increases, however, are making college less affordable every year. Since 2000, tuition at a four-year public institution increased 35 percent while household incomes decreased 1 percent.²¹ One reason is that states have been decreasing their financial support, forcing universities to raise tuition to cover the difference.

To make college more affordable, states must return to their historical role in higher education. The National Association of State Universities and Land-Grant Colleges notes, "Nationwide, this would mean that states, on average, would return to supplying 77 percent of university educational budgets (defined as net tuition plus state appropriations), an increase from the current 63 percent level."²² To return to the historic 77 percent of university educational budgets, states in total would need to invest \$84 billion a year.²³

At the federal level, the 2009 Recovery Bill would provide \$39 billion to public colleges and universities. Beyond that infusion lie such steady investments as the Pell Grant Program, which has diminished in value over time. In 1979, a Pell Grant could cover 77 percent of tuition costs.

Now it covers only 34 percent.²⁴ An annual investment of \$51 billion would restore the Pell Grant to its 1979 level.²⁵ The 2009 Recovery and Reinvestment Act started with an additional \$15.6 billion for the program.

Investments in the Federal College Work Study program and college facilities are also needed. The U.S. Public Interest Research Group and United States Student Association note an investment of \$1.5 billion would increase the College Work-Study program funding by 25 percent and allow more low-and-moderate-income students to get valuable job experience while working to help pay for college.²⁶ The 2009 Recovery and Reinvestment bill called for a \$490 million investment in the work-study program.

College facilities are also in need of upgrades and repair. Michael Crow, President of Arizona State University, recommends an investment of \$45 billion for “shovel-ready” projects, which could create almost 2 million jobs.²⁷ The 2009 Recovery and Reinvestment bill called for a \$6 billion investment for higher education repair and modernization.

Lifetime learning. People need to learn even after college graduation. Lifetime learning programs are especially valuable for workers who have lost their jobs due to companies moving facilities overseas or other dislocations caused by the modern economy. Currently, the United States operates the \$260 million Trade Adjustment Assistance program to provide worker retraining and employment opportunity for displaced workers.²⁸ But this is only a sliver of the need. Denmark, for example, spends fully 5 percent of GDP on “Flexicurity,” a worker retraining and unemployment system.²⁹ The 2009 Recovery and Reinvestment bill called for \$4 billion in worker training through the Workforce Investment Act.

Education					
	Federal Investment	State Investment	2009 Recovery Bill	What’s needed	Jobs required to meet need
Pre-K	\$6.9 billion	\$3.7 billion ³⁰	\$2.1 billion	\$28 billion (annual)	840,000
K-12	\$45.3 billion	\$260 billion	\$14 billion	\$322 billion	
Infrastructure	(in total) ³¹	(in total) ³²			
Higher Education	\$15.3 billion ³³	\$135 billion ³⁴	\$23.5 billion ³⁵	\$84 billion (annual)	
Pell Grant	\$14.4 billion ³⁶	\$8 billion ³⁷	\$15.6 billion	\$51 billion (annual)	
Work Study	\$1.2 billion ³⁸	-	\$490 million	\$1.5 billion (annual)	
Infrastructure	-	-	\$6 billion	\$45 billion	1,900,000
Lifetime Learning	\$260 million	-	\$4 billion		

Transportation

Transportation is crucial to move goods and people through our continent-sized country. Yet we haven't had major, concerted reexamination of our national transportation priorities since the transcontinental railroads of the 1800s and the interstate highways and Federal Aviation Administration after World War II. It's time to look to the 21st century. Our nation's roads, runways and rails require expansion and repair.

The current annual federal investment for transportation is roughly \$72 billion, including \$41 billion dedicated to highways, \$1.6 billion for rail, \$9 billion for mass transit, \$15 billion to aviation and \$167 million for waterways.³⁹ States add another \$121 billion annually.⁴⁰ Counties contribute \$24 billion.⁴¹

The 2009 American Recovery and Reinvestment Act called for an additional \$30 billion for highway and bridge repairs, \$6 billion for public transportation, \$3 billion for airport improvements, \$1.2 billion for Amtrak and passenger rail service. An additional \$3 billion was committed for capital infrastructure projects.

Yet it would still fall short. The American Society of Civil Engineers calls for over \$200 billion annually over 20 years just to bring our transportation infrastructure back to good condition. To repair our roads, \$186 billion is needed annually; to eliminate all bridge deficiencies requires \$17 billion a year.⁴² The Federal Transit Administration estimates \$20.6 billion annually will improve transit to "good" conditions and meet growing demand.⁴³ To upgrade and expand capacity for aviation requires \$15 billion annually.⁴⁴ To keep trains moving, rail deserves \$13 billion a year.⁴⁵ For our navigable waterways to flow easily with barges once more, a total of \$125 billion is called for.⁴⁶

Our expansive transportation infrastructure needs will put millions of unemployed workers back to work. The Department of Transportation estimates that every \$1 billion of federal funding for transportation infrastructure supports 27,800 jobs.⁴⁷ According to the Federal Highway Administration, approximately 835,000 jobs will be generated through road construction.⁴⁸ "Ready-to-go" public transportation projects alone would create an estimated 1.3 million jobs.⁴⁹ Over 75,000 jobs would result from aviation projects that upgrade and expand capacity.⁵⁰ The Army Corps of Engineers predicts 33,300 direct jobs would be generated by waterway construction.⁵¹ And beyond job creation, transportation investment lays the foundation for long-term economic benefits and growth, boosting our productivity and quality of life.

Transportation				
	2009 baseline budget	2009 Recovery Bill	What's needed⁵² (annual for 20 years)	Jobs required to meet the need
Roads, bridges	\$41 billion	\$30 billion	\$203 billion	835,000
Rail	\$1.6 billion	\$1.2 billion	\$13 billion	-
Transit	\$9 billion	\$7.2 billion	\$21 billion	1,300,000
Aviation	\$15 billion	\$3 billion	\$15 billion	75,000
Waterways	\$167 million	-	\$6.3 billion	33,000

Water

Safe drinking water and adequate wastewater treatment are critical for any community to survive. The vast majority of our nation’s water infrastructure was built in the post-World War II era, and much of it has exceeded its 50-year useful life-span.⁵³ Many people and businesses rely on pipes that are over 100 years old, putting health, safety and the economy at risk.⁵⁴

Most water infrastructure —approximately 90 percent —is paid for at the county and local level.⁵⁵ Cash-strapped municipalities pay \$4.5 billion annually for water supply services, and another \$5.3 billion for sewerage.⁵⁶ States contribute \$300 million to the Clean Water and Drinking Water State Revolving Funds.⁵⁷ Meanwhile, federal funding has decreased by around 20 percent over the past decade, with federal contributions for water infrastructure totaling just over \$3 billion annually.⁵⁸

The 2009 American Recovery and Reinvestment Act would have provided some relief, with \$11.8 billion over two years for water and wastewater projects. A total of \$8 billion is allocated for the Clean Water State Revolving Fund —including waste disposal —and the Drinking Water State Revolving Fund. \$1.5 billion is allocated for rural water and waste disposal, while \$500 million is set for water reclamation. The remainder is allocated for U.S. Army Corps of Engineer Projects and Department of Interior agencies.

Our water infrastructure needs run much deeper, however. The Environmental Protection Agency warns of an investment shortfall of around \$263 billion for drinking water over the next 20 years, and over \$390 billion for wastewater infrastructure.⁵⁹ The Water Infrastructure Network, a broad-based coalition of local elected officials, water service providers, health administrators, engineers and environmentalists, estimates that \$23 billion is needed annually on top of current funding is required to replace aging drinking and wastewater infrastructure to comply with Clean Water Act standards.⁶⁰ The American Society of Civil Engineers and the Water Infrastructure Network estimate that \$12 billion annually is needed just for sewerage.⁶¹

Investing in water infrastructure can create a wave of new jobs. Every \$1 billion in water infrastructure investment is estimated to create 57,400 jobs, both directly and indirectly.⁶² The recovery plan alone is estimated to generate over 500,000 jobs.⁶³ Construction by the U.S. Army Corps of Engineers’ allows for 125,000 jobs.⁶⁴ The Association of State and Interstate Water Pollution Control Administrators state the Clean Water Fund and Drinking Water Fund projects can generate nearly 400,000 jobs.⁶⁵ The Congressional Research Service estimates that nearly 9,500 jobs can be created by water recycling programs.⁶⁶ Beyond job creation, water infrastructure is the staple for the multibillion dollar commercial and recreation industries.

Water					
Program	2009 federal baseline budget	2009 state, county budgets	2009 Recovery Bill	What’s needed (annually for 20 years)	Jobs required to meet the need
Total Water	\$3.3 billion	\$10.4 billion	\$11.8 billion	\$33 billion	500,000+
Drinking	\$1.77 billion	\$4.8 billion	\$3.25 billion	\$13 billion	210,000
Sewer	\$1.56 billion	\$5.6 billion	\$6.75 billion	\$20 billion	325,000

Natural Resources

America has a long tradition of protecting its natural resources. Preserving parkland. Protecting fish and wildlife. Cleaning the environment and restoring brownfields. This, too, is economic development.

National Parks Service. In 2007, national parks recorded over 270 million visits to their parks. The 2009 baseline budget for the National Park Service is \$2.4 billion,⁶⁷ though it estimates a backlog of \$7 billion for national park facilities.⁶⁸ The Recovery Bill of 2009 would have started to fill this backlog. It would devote \$1.7 billion toward park service infrastructure investment. In addition, it provides \$325 million for the Bureau of Land Management and \$650 million for the Forest Service. It is estimated that 3,000 jobs are created for each \$100 million of National Parks Service deferred maintenance investment.⁶⁹

Wetlands Conservation and Fish and Wildlife Services. Wetlands protect against flooding, help maintain water quality, and provide habitat to wildlife. The 2009 baseline budget for the U.S. Fish and Wildlife Service was \$1.3 billion, but it has more than \$3 billion in backlogged maintenance.⁷⁰ The Recovery Bill of 2009 would devote \$300 million toward this investment, which would create an estimated 11,000 jobs.

Environmental protection is not always expensive. The U.S. Fish and Wildlife Service has been protecting coastal wetlands through a matching grants program since 1990. To date, \$165 million have been awarded to protect over 200,000 acres of coastal wetlands from agricultural and urban run-off, shoreline modification, invasive species, oil spills, municipal waste disposal and residential or commercial development.⁷¹

Environmental Protection. The EPA Superfund, an environmental program established to address abandoned hazardous waste sites, has steadily lost funding since 1998. In 2009, the baseline budget for the Superfund was \$1.3 billion.⁷² Currently, there are over 1,200 sites that are on the National Priorities List for Superfund cleanup, plus an additional 15,000 uncontrolled hazardous waste sites.⁷³ The initial House recovery plan would have provided \$800 million for cleanup, which the EPA has estimated would create over 3,000 jobs. The recovery dedicates an additional \$100 million for brownfields restoration, which has been estimated to create 5,000 new jobs.

Natural Resources				
Area	2009 Baseline Budget	2009 Recovery Bill	What's needed	Jobs required to meet the need
National Parks and Land management	\$2.4 billion	\$2.6 billion	\$7 billion	3,000 (Per \$100 million spent)
Fish and Wildlife Services	\$1.3 billion	\$300 million	\$3 billion	11,000 (Per \$300 million spent)
Environmental Protection Agency	\$7.1 billion ⁷⁴	\$9.4 billion	-	-
Superfund and brownfields	\$1.4 billion	\$900 million	-	8,000

Conclusion

Economic recovery is only the beginning. The 2009 economic recovery bill was a step in the right direction, but just a step. Key to sustained recovery and a healthy economy is a return to government that works. We need to maintain the recovery-bill level of investment in the long run.

In his inaugural address, President Obama defined what it would mean for government to work: “It helps families find jobs at a decent wage, care they can afford, a retirement that is dignified.” Central to that is making the public investments vital to an economy that works for working people.

This will require shedding the wrong-headed conservative myths of the last decades. Government involvement doesn’t choke entrepreneurship, but enables it. Great inventors grow out of public schools, great inventions grow out of publicly funded research, goods travel across public roads and children play in public parks. We need to restore government to its essential role in public life.

Resources will be needed. As a nation we have starved the public sector for decades. Our roads are potholed, our school roofs leak and we depend on foreign countries for our energy. The American Society of Civil Engineers now sees a need for \$2.2 trillion in infrastructure repair over the next five years. The work will take decades and employ millions of people. It’s the first step in the next America.

Investment Needs				
	Current Investment	2009 Recovery Bill (House version, annual over two years)	Current annual investment (assuming House bill)	Need (annual for 10+ years)
Energy	\$10 billion	\$80 billion	\$50 billion	\$50 billion
Education	\$292 billion	\$66 billion	\$325 billion	\$532 billion
Transportation	\$234 billion	\$41 billion	\$254 billion	\$258 billion
Water	\$25 billion	\$22 billion	\$36 billion	\$65 billion
Natural Resources	\$12 billion	\$13 billion	\$19 billion	\$5 billion

Endnotes

- ¹ S. 1926 called for \$60 billion over ten years. See Eric Lotke, *Orders of Magnitude*, Campaign for America's Future. 10 June, 2008. <http://www.ourfuture.org/blog-entry/orders-magnitude>.
- ² The American Society of Civil Engineers (ASCE) estimate in 2005 was \$1.6 trillion in total needs. In January 2008 the ASCE revised its estimate upwards, to \$2.2 trillion. "2009 Report Card." <http://www.asce.org/reportcard/2009/grades.html>
- ³ Scott Lilly, "Pumping Life Back Into the U.S. Economy: Why a Stimulus Package Must Be Big and Targeted," Center for American Progress, Jan. 2009. http://www.americanprogress.org/issues/2009/01/pdf/lilly_stimulus.pdf
- ⁴ Throughout this report, the "baseline budget" is the one offered by the President to Congress for fiscal year 2009 or agency fiscal year 2008 enacted budgets. Obviously, changes in virtually every line occurred as matters were enacted into law – but the budget submission provides overall perspective. Office of Management and Budget (OMB), "Budget of the U.S. Government, Fiscal Year 2009." <http://www.whitehouse.gov/omb/budget/fy2009/pdf/budget.pdf>
- ⁵ OMB, Federal Energy Management Program Assessment. <http://www.whitehouse.gov/omb/expectmore/detail/10003401.2005.html>
- ⁶ The American Recovery and Reinvestment Act of 2009. All estimates in this report are based on the version of the bill introduced in the House and summarized by the Appropriations Committee on January 15, 2008. <http://appropriations.house.gov/pdf/PressSummary01-15-09.pdf>
- ⁷ Apollo Alliance, "The New Apollo Program: Clean Energy, Good Jobs: An Economic Strategy for American Prosperity," Full Report. <http://apolloalliance.org/apollo-14/the-full-report/>
- ⁸ Apollo Alliance, "The Apollo Economic Recovery Act." <http://apolloalliance.org/downloads/apollorecoveryact.pdf>
- ⁹ OMB, "Fiscal Year 2009."
- ¹⁰ For all further references to the American Recovery and Reinvestment Act of 2009, see endnote #7.
- ¹¹ Apollo Alliance, "New Apollo Program."
- ¹² National Association of State Budget Officers (NASBO), "Figure 4: Total State Expenditures by Function, Fiscal 2007; State Expenditures Report, Fiscal Year 2007," Fall 2008. <http://www.nasbo.org/Publications/PDFs/FY07%20State%20Expenditure%20Report.pdf>
- ¹³ The most recent official figures for county expenditures on education are from 2002. The 2002 figures were revised for inflation to 2008 dollars, but not adjusted for changes in baseline finding during the intervening years. U.S. Census Bureau, "Finances of County Governments: 2002," 2002 Census of Governments, vol. 4 no. 3, Government Finances, Feb. 2005. <http://www.census.gov/prod/2005pubs/gc02x43.pdf>.
- ¹⁴ Steve Barnett and Ellen Frede, "Federal Early Childhood Policy Guide for the First 100 Days," National Institute for Early Education Research (NIEER), 8 Jan. 2009. <http://nieer.org/resources/policybriefs/18.pdf>
- ¹⁵ Jason T. Hustedt, Allison H. Friedman, Judi Stevenson Boyd and Pat Ainsworth. "The State of Preschool 2007," NIEER. 2007. <http://nieer.org/yearbook/pdf/yearbook.pdf>.
- ¹⁶ Campaign for America's Future (CAF), "The Investment Deficit in America," Oklahoma Pre-K. Nov. 2008. <http://assets.ourfuture.org/documents/inv-20081117-investment-deficit.pdf>
- ¹⁷ Lydia Gensheimer, "Head Start Advocates Join Stimulus Lobbying Crowd," *CQ Today Online News*, 8 Jan. 2009. <http://www.cq.com/document/display.do?docid=3005194&sourcetype=6>
- ¹⁸ U.S. Department of Education, "Public School Principals Report on Their School Facilities: Fall 2005," National Center for Education Statistics, Jan. 2007. <http://nces.ed.gov/pubs2007/2007007.pdf>
- ¹⁹ Susan Boren, "School Facilities Infrastructure: Background and Legislative Proposals," Congressional Research Service. 28 Aug. 2003. http://assets.opencrs.com/rpts/RS20171_20030828.pdf. National Education Association, "New Study Shows Cost of School Modernization Has Reached \$322 Billion," 3 May 2000. <http://www.nea.org/nr/nr000503.html>; ASCE, "2009 Report Card."
- ²⁰ Economic Policy Institute, "\$20 Billion in Federal Investment in School Infrastructure Would Provide Major Boost to Education, Economy," 29 Apr. 2008. <http://www.epi.org/page/-/old/newsroom/releases/2008/04/20080429-school-infrastructure-release.pdf>
- ²¹ All comparative historical cost estimates adjust for inflation. U.S. Department of Education, "Table 317: Average Undergraduate Tuition and Fees and Room and Board Rates Paid by Full-Time-Equivalent Students in Degree-Granting Institutions, by Control of Institution and by State: 1999-2000 and 2000-01," National Center for Education Statistics, August 2001. <http://nces.ed.gov/programs/digest/d01/dt317.asp>; U.S. Department of Education, "Table 317: Average Undergraduate Tuition and Fees and Room and Board Rates Paid by Full-Time-Equivalent Students in Degree-Granting Institutions, by Control of Institution and by State: 2005-2006 and 2006-07," National Center for Education Statistics, July 2007. http://nces.ed.gov/programs/digest/d07/tables/dt07_321.asp; Carmen DeNavas-Walt, Bernadette D. Proctor, and Jessica C. Smith, "Income, Poverty, and Health Insurance Coverage in the United States: 2007," U.S. Census Bureau, August 2008. <http://www.census.gov/prod/2008pubs/p60-235.pdf>; Alemayehu Bushaw and Jessica Semega, "Income, Earnings, and Poverty Data From the 2007 American Community Survey," U.S. Census Bureau, Aug. 2008. <http://www.census.gov/prod/2008pubs/acs-09.pdf>.

-
- ²² Peter McPherson and David Shulenburg, "University Tuition, Consumer Choice and College Affordability," National Association of State Universities and Land-Grant Colleges, Nov.2008. <https://www.nasulgc.org/NetCommunity/Document.Doc?id=1296>. Note: Paul Hassen, Vice President for Public Affairs at the National Association of State Universities and Land-Grant Colleges, indicated that \$83,706,537,432 would return states to supplying 77% of university educational budgets (defined as net tuition plus state appropriations). The calculation was made using the State Higher Education Executive Officers "2008 State Higher Education Finance FY 2007 report;" http://www.sheeo.org/finance/shef_fy07.pdf.
- ²³ Ibid.
- ²⁴ U.S. Department of Education. "Table 320: Average Undergraduate Tuition and Fees and Room and Board Rates Charged for Full-Time Students in Degree-Granting Institutions, by Type and Control of Institution: 1964-65 Through 2006-07," National Center for Education Statistics, July 2007. http://nces.ed.gov/programs/digest/d07/tables/dt07_320.asp; Jacqueline E. King, "2003 Status Report on the Pell Grant Program," American Council on Education and the Center for Policy Analysis, Oct. 2003. http://www.acenet.edu/bookstore/pdf/2003_pell_grant.pdf; American Council on Education and the Center for Policy Analysis, "Fact Sheet on Higher Education," Nov. 2004. <http://www.acenet.edu/AM/Template.cfm?Section=InfoCenter&Template=/CM/ContentDisplay.cfm&ContentFileID=647>; Sandy Baum and Kathleen Payea, "2008 Trends in Student Aid," College Board, 29 Oct. 2008. <http://professionals.collegeboard.com/profdownload/trends-in-student-aid-2008.pdf>; CAF, "The Investment Deficit in America."
- ²⁵ CAF, "The Investment Deficit in America."
- ²⁶ United States Public Interest Research Group and the United States Student Association, "Letter to Nancy Pelosi," 11 Dec. 2008. http://projectonstudentdebt.org/files/pub/stimulus_ltr_12-11-08.pdf; College Board, "Trends in Student Aid," Trends in Higher Education Series, 2008, federal work study. <http://professionals.collegeboard.com/profdownload/trends-in-student-aid-2008.pdf>
- ²⁷ Michael M. Crow, "Federal Investment in Public University Infrastructure to Stimulate the Economy, Increase Bachelor's Degree Attainment in the Workforce, and Enhance National Competitiveness," Dec. 2008. <http://president.asu.edu/files/University%20Infrastructure%20White%20Paper%20120508.pdf>
- ²⁸ Department of Labor, "Trade Adjustment Assistance 2007 Base Allocations," TAA Statistics. http://www.doleta.gov/tradeact/taa_stats.cfm
- ²⁹ David Corderi and Gustav Ranis, "When Labor Loses Out to Trade," *YaleGlobal*, 10 Aug. 2006. <http://www.econ.yale.edu/~granis/papers/labor-loses-yaleglobal.pdf>
- ³⁰ NIEER "The State of Preschool 2007."
- ³¹ NASBO, "Table 7: Elementary and Secondary Education Expenditures; State Expenditures Report, Fiscal Year 2007."
- ³² Ibid.
- ³³ NASBO, "Table 12: Higher Education Expenditures—Capital Inclusive; State Expenditure Report, Fiscal Year 2007."
- ³⁴ Ibid.
- ³⁵ Total of pell grants, infrastructure repair, student loan lender special allowance payments, student loan limit increase, infrastructure, work study, student aid administration, and teacher quality enhancement grants.
- ³⁶ Federal pell grants. College Board, "Trends in Student Aid."
- ³⁷ State grants. College Board, "Trends in Student Aid."
- ³⁸ Federal Pell grants. College Board, "Trends in Student Aid."
- ³⁹ Total federal transportation spending based upon FY '08 enacted budgets of the Department of Transportation and related agencies: Federal Highway Administration <http://www.dot.gov/bib2009/hfm/FHA.html>; Federal Rail Administration <http://www.dot.gov/bib2009/hfm/FRA.html>; Federal Transit Administration <http://www.dot.gov/bib2009/hfm/FTA.html>; Federal Aviation Administration <http://www.dot.gov/bib2009/hfm/FAA.html>; U.S. Army Corps of Engineers FY '09 budget <http://www.usace.army.mil/CEPA/News/Pages/CivilWorksBudget.aspx>.
- ⁴⁰ NASBO, "State Expenditures Report, Fiscal Year 2007."
- ⁴¹ Census, "Finances of County Governments: 2002."
- ⁴² ASCE, "2009 Report Card."
- ⁴³ U.S. House of Representatives, Committee on Transportation and Infrastructure, "Hearing on Maintaining our Nation's Highways and Transit Infrastructure," Subcommittee on Highways and Transit, 4 June 2008. http://transportation.house.gov/Media/File/Highways/20080605/SSM_HT_6-5-08.pdf
- ⁴⁴ ASCE, "Report Card 2005."
- ⁴⁵ Ibid.
- ⁴⁶ ASCE, "Report Card 2009."
- ⁴⁷ Figure revised downward from earlier FHWA estimate of 47,500 jobs per \$1 billion. <http://fastlane.dot.gov/2008/09/chief-economist.html>
- ⁴⁸ American Recovery Act 2009.
- ⁴⁹ American Public Transportation Association, "Economic Stimulus Package Remains Under Consideration," 11 Dec. 2008. http://www.apta.com/government_affairs/washrep/documents/2008december11.pdf
- ⁵⁰ American Recovery Act 2009.

-
- ⁵¹ American Recovery Act 2009.
- ⁵² Per year for 20 years; ASCE.
- ⁵³ U.S. Environmental Protection Agency (EPA), "The Clean Water and Drinking Water Infrastructure Gap Analysis," Office of Water, September 2002. <http://www.epa.gov/owm/gapreport.pdf>.
- ⁵⁴ EPA, "Sustaining Our Nation's Water Infrastructure." http://www.epa.gov/waterinfrastructure/pdfs/brochure_si_sustainingournationswaters.pdf.
- ⁵⁵ Water Infrastructure Network (WIN), "Water Infrastructure Now: Recommendation for Clean and Safe Water in the 21st Century." <http://win-water.org/reports/winow.pdf>
- ⁵⁶ Census Bureau, "Finances of County Governments: 2002."
- ⁵⁷ State contributions of: \$159.4 million for the Clean Water State Revolving Fund. EPA, "Clean Water SRF Investment, by State, July '06-June-07." <http://www.epa.gov/owm/cwfinance/cwsrf/cwnims/pdf/invst07.pdf>; \$118.7 million for the Drinking Water State Revolving Fund; EPA "Annual U.S. Drinking Water SRF State Contributions, by Source." <http://www.epa.gov/safewater/dwsrf/nims/dwmatchus.pdf>
- ⁵⁸ Historic funding data: EPA, "Clean Water State Revolving Fund Allotments (FY 1986-2006)." <http://www.epa.gov/owm/cwfinance/cwsrf/cwsrfallots.pdf>; EPA, "Comparison of Annual U.S. Drinking Water SRF Federal Capitalization Grants and Annual Outlays," <http://www.epa.gov/safewater/dwsrf/nims/dwcapoutus.pdf>; Current funding data includes federal contributions of: \$829 million for the Drinking Water SRF. EPA, "DWSRF Annual Allotments." <http://www.epa.gov/safewater/dwsrf/allotments/index.html>; \$786.5 million for the Clean Water SRF. EPA, "Clean Water SRF Investment, by State, July '06-June-07." <http://www.epa.gov/owm/cwfinance/cwsrf/cwnims/pdf/invst07.pdf>; \$1.7 billion for the United States Department of Agriculture's (U.S.DA) Rural Utility Program with \$986 million for water and \$733 million for wastewater. U.S.DA, "Water & Environmental Programs Annual Activity Report Fiscal Year 2008," Rural Utility Program. <http://www.usda.gov/rus/water/docs/2008%20WEP%20Annual%20Report.pdf>;
- ⁵⁹ \$33 billion per year. ASCE, "2005 Report Card."
- ⁶⁰ WIN, "Water Infrastructure Now."
- ⁶¹ ASCE, "2005 Report Card."
- ⁶² CAF, "The Investment Deficit in America."
- ⁶³ The National Association of Clean Water Agencies, "Testimony of Marian A. Orfeo, Director of Planning and Coordination, Massachusetts Water Resources Authority & President, National Association of Clean Water Agencies (NACWA) before the House Committee on Transportation and Infrastructure," 22 Jan. 2009. <http://www.nacwa.org/images/stories/public/2009-01-22tisy.pdf>
- ⁶⁴ American Recovery Act 2009
- ⁶⁵ Ibid.
- ⁶⁶ Ibid.
- ⁶⁷ U.S. Government Printing Office, "Budget of the United States Government: Fiscal Year 2009." <http://www.gpoaccess.gov/usbudget/fy09/browse.html>
- ⁶⁸ American Recovery Act 2009.
- ⁶⁹ Ibid.
- ⁷⁰ U.S. GPO, "Budget: Fiscal Year 2009;" American Recovery Act 2009.
- ⁷¹ Department of the Interior, "National Coastal Wetlands Conservation Grant Program, Helping States Conserve Their Coastal Wetlands," U.S. Fish and Wildlife Service. <http://www.fws.gov/coastal/CoastalGrants/faq.html>
- ⁷² U.S. GPO, "Budget: Fiscal Year 2009."
- ⁷³ EPA, "Final National Priorities List (NPL) Sites-by Site Name," Superfund. <http://www.epa.gov/superfund/sites/query/queryhtm/nplfin1.htm>
- ⁷⁴ U.S. GPO, "Budget: Fiscal Year 2009."

INSTITUTE FOR AMERICA'S FUTURE

1825 K STREET NW • SUITE 400 • WASHINGTON DC 20006 • (T) 202 955-5665 • (F) 202 955-5606 • WWW.OURFUTURE.ORG