Economic Recovery through Green Infrastructure and Restoration Projects

America's water infrastructure system is crumbling and cannot cope with our current drinking water, wastewater or flood protection needs, let alone with the larger floods and longer droughts associated with global warming. According to the EPA, at least $500 billion is needed in capital funding for water and wastewater systems. **Investments in green solutions to these problems will create jobs, save money, and protect public health and safety.**

Congress should invest in cost-effective 21st century green infrastructure solutions and restoration projects. Congress should also **fix existing infrastructure needs first,** and avoid the temptation to invest stimulus dollars in new highways or sewer lines that contribute to sprawl and only compound existing problems. "Sewer lines to nowhere" may create jobs in the short term but the negative effects of such infrastructure will be felt far into the future.

21st Century Green Infrastructure Solutions And Restoration Projects

Scores of U.S. cities are creating jobs in diverse sectors like plumbing, landscaping, engineering, building and design by using green infrastructure strategies to address their water needs. Many communities are ready to begin construction on green infrastructure but lack the financial resources.

American Rivers and our partners have identified **over 200 restoration and green infrastructure water-related projects in 25 states and the District of Columbia with a total cost of $1.1 billion that are ready-to-go.** Funding these projects would provide an immediate stimulus to the economy while ensuring that plentiful clean water will be available in the future to drive economic growth.

Economic Stimulus Investment Recommendations:

We urge Congress to prioritize the following three programs in an economic stimulus package:

Water, Wastewater, and Stormwater Green Infrastructure Grants – At least 15% of all clean water infrastructure funding should be dedicated to green infrastructure grants to restore wetlands and natural floodplains; plant urban forests; and install green roofs, rain gardens and permeable pavement.

Water Efficiency Grants – At least 20% of all drinking water infrastructure funding should be dedicated to water efficiency capital projects such as installing low-flow toilets and water efficient fixtures and appliances.

Restoration Projects – The economic stimulus should include at least $250 million for NOAA's Fisheries Habitat Restoration Program, including the Open Rivers Initiative and $250 million for Fish and Wildlife Service's Partners for Fish and Wildlife Program.

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Creating Jobs through Green Infrastructure

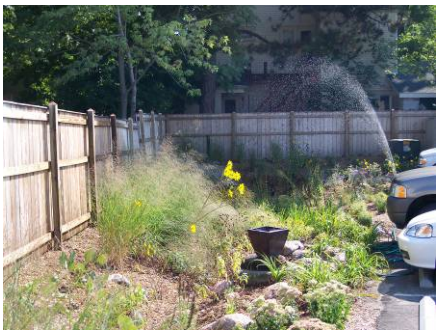
American Rivers
Thriving By Nature

Investing in sustainable green infrastructure will stimulate the economy, create good American jobs, protect communities from the droughts and floods accompanying climate change, and secure our clean water resources for future generations.

Congress should dedicate at least 15% of all clean water infrastructure funding in the economic stimulus package for green water infrastructure.

Green Infrastructure Will Stimulate the Economy

Green infrastructure creates jobs across diverse sectors including plumbing, landscaping, building, and design, and also supports supply chains and the jobs connected with manufacturing of materials including roof membranes, rain barrels, and permeable pavement. Several examples highlight the job creation potential in this area:



- PlaNYC, New York City's broad sustainability plan, will create over 268,000 years of employment in water infrastructure construction and nearly 4,000 permanent jobs related to operations and maintenance of those projects. Green infrastructure projects will create 14,000 years of employment for construction and over 3,600 permanent jobs;
- Washington, DC estimates that fully implementing the Green Roof Study would create 1,769 full time jobs;
- American Rivers' research has found that if 600 American cities over 50,000 in population covered 5% of their larger roofs (>10,000 sf) with green roofs, it would stimulate $48.5 billion in labor and materials investments, and create 95,000 jobs for 10 years.

American Rivers and our partners have identified **over 200 green infrastructure water projects in 25 states and the District of Columbia with a total cost of $1.1 billion that are ready to begin within 6-9 months.** Many cities are already incorporating sustainable green infrastructure into their water management strategies and this surge in interest has been enhanced by the Environmental Protection Agency's (EPA) Green Infrastructure Initiative and formal recognition of the validity of using green infrastructure techniques to meet regulatory requirements.

Green Infrastructure: The 21st Century Tool for Clean Water

There is an immediate need to significantly reinvest in America's traditional water infrastructure, however, the economic stimulus package should encourage smart, innovative approaches that protect the water our communities rely on for the future. Green infrastructure approaches such as restoration of wetlands, streamside buffers, rain gardens and green roofs have far-reaching benefits. These modern approaches to managing wet weather reduce stormwater runoff and sewage overflows, increase water infiltration to recharge drinking water supplies, and create valuable greenspace. Green infrastructure costs less than traditional hard infrastructure projects, and reduces the amount of water flowing to treatment plants which reduces energy costs and greenhouse gas emissions associated with water treatment and prolongs the life of existing hard infrastructure.

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Creating Jobs through Water Efficiency

American Rivers
Thriving By Nature

Population growth, increased demand for water, and global warming impacts are stressing our nation's water supplies. Congress must address these issues by investing in modern water efficiency technology in the economic recovery package.

Congress should dedicate at least 20% of total funding for EPA's Drinking Water State Revolving Fund in the economic stimulus package to grants and loans for water efficiency modernization.

Water Efficiency Will Stimulate the Economy

Water efficiency programs are cost-effective, long-term, sustainable investments that create good American jobs while providing solutions to our water supply needs. They are ready-to-go in most cities or water utility districts within 90 days.

- Investment of $10 billion in water/energy efficiency programs would boost U.S. GDP by $13 to $15 billion and employment by 150,000 to 220,000 jobs.
- Replacing 50% of the nation's roughly 100 million older (pre-1993) model toilets with low-flow toilets would create 50,000 jobs, including $2 billion in plumber wages, and $5.8 billion in revenues for toilet manufacturers. It would also save as much as 360 billion gallons of water annually and 1.9 billion kWh of electricity per year in reduced energy for water treatment.
- Case Study: In DeKalb County, GA, county investment in water efficiency will generate between $74 million and $148 million worth of skilled, well-paying new jobs in the plumbing industry.

A 21st Century Water Supply Strategy

Water efficiency is the most cost-effective source of clean, reliable water supply. Water efficiency costs as little as $0.46 per 1,000 gallons saved, while dams can cost $4,000 per 1,000 gallons of capacity. Outdated appliances and fixtures waste a great deal of water. If all U.S. households upgraded their water fixtures and appliances, water supply would be increased by more than 8.2 billion gallons per day.

Water efficiency has added energy savings benefits as well. According to the EPA, water supply and treatment facilities consume 56 billion kilowatt-hours per year. Saving water saves energy, reducing energy costs for utilities and less greenhouse gas production. The long-term strategic, economic, social, and environmental benefits of water efficiency programs also make them strong investments in the nation's future.

Building more dams and reservoirs does not address the root problem- water is finite and we are not using the water we have wisely. Per gallon, dams cost up to 8,500 times more than water efficiency investments. Dams can also lose tremendous amounts of water through evaporation. **Congress should invest in efficiency first.**

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Creating Jobs through River Restoration

American Rivers
Thriving By Nature

Our communities are burdened by outdated dams that pose public safety hazards and financial liabilities. By 2020 more than 85% of our nation's dams will be older than 50 years of age, their average life expectancy. Dam removals serve many purposes including improving water quality, eliminating public safety hazards, promoting sustainable economic and community development, and opening up fish habitat.

Congress should dedicate $500 million in the economic stimulus package for river restoration through the National Oceanic & Atmospheric Administration's Fisheries Habitat Restoration Center, and U.S. Fish and Wildlife Services' Partners for Fish & Wildlife Program.

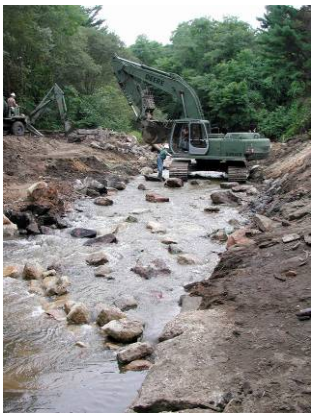
River Restoration Will Stimulate the Economy

Ecological restoration is a high-growth sector that employs such positions as design engineers, hydrologists, architects and heavy equipment operators. The same laborers that design, build and repair dams can be employed in removing unsafe dams. On average, $1 million in restoration activities creates 20 jobs (i.e., a $500 million investment could create or sustain 10,000 jobs).

Local suppliers provide materials (e.g., quarries) and heavy equipment is purchased or leased from local businesses, providing an immediate infusion in local economies. On average, 80% of documented restoration grant expenditures stay within the local counties, and 96% of the funds are expended in-state.

American Rivers and other conservation organizations have generated a list of over 140 projects in 23 states with an estimated funding need of more than $700 million that could be funded through NOAA's Fisheries Habitat Restoration Center. In Maine and Massachusetts alone, 39 dam removal projects costing over $40 million could begin construction within three years. FWS's Partners for Fish and Wildlife Program recently outlined a 5-year plan that would restore 1 million acres of wetlands, 6000+ miles of riparian and/or instream habitat, and remove 192 structures from streams. With increased investment of $250 million, these projects could be implemented using local laborers within 1-2 years.

21st Century Restoration Solutions



NOAA and FWS remove dams and restore rivers with the goal of improving habitat. Through NOAA's Community-based Restoration Program (authorized under the Magnuson-Stevens Act) and the Open Rivers Initiative (authorized under the Fish and Wildlife Coordination Act) communities work with governments, NGOs, businesses, and industries to restore river habitats and remove dams that are social and environmental liabilities. FWS's Partners for Fish and Wildlife Program (authorized in 2006 by the Partners for Fish and Wildlife Act) assists private landowners in using public-private partnerships to restore degraded habitats.

In addition to the ecological benefits provided by these programs, removing outdated infrastructure prevents loss of life and serious damage to homes and critical infrastructure. Dam removal is a one-time cost and a long-term solution to our aging infrastructure problems that removes the un-ending infrastructure maintenance costs that communities may be unable to afford over the long-term.

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