

Water utility sector supports local and national economy

National Economic and Labor Impacts of the Water Utility Sector: Executive and Technical Reports (SIWM6C14a and b)

The Central Issue

As the national economy recovers from the “Great Recession,” utilities struggle for adequate budgets to update and maintain infrastructure – yet, local and national policymakers continue to focus on job creation and retention as part of overall policymaking. Investment into the nation’s water infrastructure system is known to improve public health and provide protection for the environment. The ability of that same investment to create a diversity of long-term, stable jobs is often overlooked or not quantified at all.

Context and Background

The environmental and public health benefits of investments in water infrastructure through Capital Investment Plans (CIP) and continuous, reliable operation of water utility systems are well documented and generally accepted. Economic impacts include job creation and employment associated with the CIP and utility system operation. To calculate these economic impacts, the 10-year operating and capital budgets of 30 utility systems across the United States were analyzed. The results were aggregated to determine the national impact. The analysis focused on quantifiable economic impacts of labor analysis using the IMPLAN financial model which is a widely used and accepted economic model in the United States.

Findings and Conclusions

- The 30 utilities surveyed in this study act as economic engines in their local, regional, and national economy. They directly employ 36,500 workers and provide access to quality jobs that offer competitive pay and career training for both public and private employees.

$$\begin{array}{ccccccc}
 \$1\text{M} & = & 5 & \text{Jobs} & + & 11 & \text{Jobs} & = & 16 & \text{Jobs} \\
 \text{Investment} & & \text{Direct Impact} & & & \text{Indirect \& Induced Impact} & & & \text{Total}
 \end{array}$$



Ripple effect of water investment – Every \$1 million in direct spending by water utilities supports 16 jobs nationwide.

- The 30 participating water, wastewater, and stormwater utilities will contribute \$524 billion to the economy over the next decade, supporting 289,000 permanent jobs.
- On average, every \$1 million in direct spending by utilities in this study supports 16 jobs throughout all sectors of the economy. When compared to other economic impact studies, investments by the participating utilities generate similar job impacts as investments in clean energy, transportation, and health care.
- Many of these utilities support small and disadvantaged business owners, as well as supporting local companies.
- The participating utilities create a diversity of jobs from entry level field jobs to those requiring advanced degrees.

Management and Policy Implications

Water utilities can serve as leaders within their communities in creating public and private sector jobs that are stable (long-term) in nature and require a wide diversity of skills and talents. The water utility sector supports the local and national economy by providing jobs, building reliable infrastructure, and supporting technological advancement. Moreover, job creation and subsequent economic impacts can be a powerful community benefit to utility programs. They should be considered as part of a triple bottom line analysis of the various options for infrastructure investments.

To gain increased support for grant programs and/or needed rate increases, utilities can demonstrate that a water infrastructure is also an investment in the local and national economy through the creation of good, stable jobs.

Jobs Per \$1 Million of Investment in the Water Sector Compared to Other Sectors

Investment	Jobs per \$1 Million	Expenditure Type	Source
Water, Wastewater, and Stormwater	16	Capital and Operating	AECOM, 2014
Transportation	13-20	Capital	Heintz et al., 2009, 2011 and U.S. DOT, 2013
Clean Energy	13-16	Capital	Heintz et al., 2009, 2011
Healthcare	16	Operating	Heintz et al., 2011
Personal Income Tax Cuts	14	Personal Spending	Heintz et al., 2011
Retail Spending on General Merchandise	13	Personal Spending	AECOM, 2014
Military Spending	11	Capital and Operating	Heintz et al., 2011

All values expressed in constant 2014 dollars, adjusted to 2014 using IMPLAN inflation factors.

Related WERF Research

Project Title	Research Focus
SIMPLE: Sustainable Infrastructure Management Program Learning Environment (03CTS14)	Online knowledge base enhances the ability to train personnel and provide guidance and tools to utilities of all types, sizes, and levels of practice in asset management. It contains tools, best practices, case studies, research reports, training aids, and an extensive body of knowledge to help set up an asset management program, take a program to the next level, and increase knowledge.
A Practitioner's Guide to Economic Decision Making in Asset Management (SAM1R06b1/b2)	Builds on earlier published work that reviewed the concept of remaining asset life (SAM1R06d). Because of the different sizes and levels of asset management in the wastewater sector, decision support based on economic principles was considered the most appropriate to use.
Leading Practices for Strategic Asset Management (SAM1R06h)	Identifies, documents, and validates leading practices through site visits and a research forum held in 2010. Leading practices are presented in an easy-to-follow format that cites and explains the practice and provides examples. The research is intended to assist utility managers in the practice areas of Organization and People, Strategic Asset Planning, Business Risk, Maintenance, Secondary Data and Knowledge, and Accounting and Costing.
Comparison of Alternative Economic Methodologies for Biogas Use Evaluations: Technical Memorandum (OSWO11C10b)	Because utility infrastructure assets typically have functional service lives that are measured in decades, not months, the utility industry is one where investments should be made with the long-term financial sustainability of the utility and community in mind. This research argues that financial and economic analysis methodologies that take into account the long-term business case of investments are needed.
Utilities of the Future Energy Findings (ENER6C13)	One of several in the WERF energy portfolio, this report estimates the energy embedded in wastewater, characterizes it, and estimates costs and savings associated with moving WRRFs to becoming energy neutral or even energy positive.
End of Asset Life Reinvestment Decision Making Process Tool (INFR2R11)	The End of Asset Life Reinvestment Tool (aka, EoAL Tool) provides step-by-step process guidance for making cyclical transitional decisions with a particular focus on the transition to capital reinvestment.

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