



Natural Resources and Conservation

PROGRAMS INCLUDED

- 1 Clean Water Infrastructure
- 2 Urban Greening
- 3 Aquatic Ecosystem Restoration
- 4 Sustainable Agriculture

DESCRIPTION

Natural Resources and Conservation investments upgrade and replace water infrastructure, restore and expand vital ecosystems, expand green spaces, and promote sustainable agriculture in Massachusetts. These investments reduce energy consumption, land deterioration, and waste.

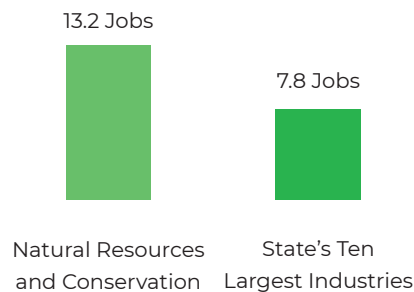
BENEFITS

Protecting natural resources and advancing sustainable agriculture practices in the Commonwealth creates work opportunities in landscaping, construction, and office positions, while reducing agricultural energy use supports a significant number of jobs in the broader economy long-term. These investments also provide significant benefits to the public through cleaner air and water, flood prevention, energy savings.

RESULTS

Each dollar invested supports **70 percent more jobs per dollar than the state's ten largest industries**. Additionally, these investments create \$924,300 in cost savings, improved public health, and climate benefits per million dollars invested.

JOBS PER MILLION INVESTED



INVESTMENT SCALE

Low \$ \$ \$

DEPLOYMENT SPEED

Fast

BENEFITS PER MILLION INVESTED



Energy Cost Savings
\$543,400

Costs avoided by reducing energy use



Climate Benefits
\$349,600

Avoided future damages of climate change from greenhouse gas pollution



Air Pollution Health Benefits
\$31,400

Saved lives and avoided illnesses from improved air quality

Total
\$924,300





Clean Water Infrastructure



Deer Island Waste Water Treatment Plant, Photo: Paul VanDerWerf

INVESTMENT SCALE

High \$\$\$

DEPLOYMENT SPEED

Moderate to Fast

DESCRIPTION

Clean Water Infrastructure provides financial and technical assistance to municipal governments to upgrade or replace drinking water systems, water supply infrastructure, and stormwater management infrastructure. Water Infrastructure helps municipalities comply with federal and state water quality standards, improve local water management and distribution, and deliver public health benefits.

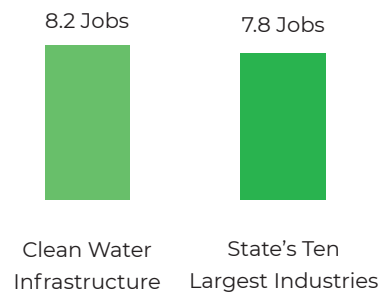
BENEFITS

Access to potable water, and efficient, reliable water systems is an essential need for all households in Massachusetts. Investments in Clean Water Infrastructure can work to meet these needs, while also reducing energy use and operation and maintenance costs for local governments. Maintenance, repairs, and upgrades to water infrastructure will support jobs in construction, engineering, and water systems. These investments also provide health and safety benefits from cleaner drinking water supply and cleaner air.

RESULTS

Supports 8.2 jobs per million dollars invested, compared to 7.8 jobs per million dollars invested in the state's ten largest industries. The program's measurable fuel savings, public health benefits, and climate benefits are beyond the scope of this report.

JOBS PER MILLION INVESTED



TOP OCCUPATIONS

- 1 Construction Laborers
- 2 Water Treatment Plant and System Operators
- 3 Carpenters
- 4 General and Operations Managers
- 5 First-Line Construction Supervisors

ADDITIONAL BENEFITS

Clean Water Infrastructure would improve

- Public health
- Water quality
- Stormwater management
- System reliability

While reducing

- Flooding
- Operation and maintenance costs



Urban Greening



Community park in Fitchburg. Photo: Massachusetts Office Of Travel & Tourism

INVESTMENT SCALE

Low \$ \$ \$

DEPLOYMENT SPEED

Fast

DESCRIPTION

Urban Greening improves and expands community green spaces. This includes establishing neighborhood parks and gardens, expanding urban forestry and agriculture, reclaiming and restoring abandoned land, and building green infrastructure.

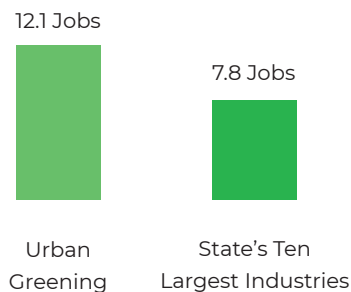
BENEFITS

Revitalizing and building new urban green spaces has the potential to create substantial social and economic benefits in Massachusetts. Investments in Urban Greening will support workforce development opportunities in the landscaping, forestry, and construction fields, while encouraging healthy and active lifestyles, increasing social interactions in communities, and reducing the severe health effects from urban heat islands.

RESULTS

Each dollar invested **supports 60 percent more jobs than a dollar invested in the state's ten largest industries**. Expanded green spaces capture and store carbon dioxide, resulting in \$250,000 in climate benefits per million dollars invested.

JOBS PER MILLION INVESTED



TOP OCCUPATIONS

- 1 Landscaping and Groundskeeping Workers
- 2 General and Operations Managers
- 3 Office Administrators
- 4 First-Line Landscaping Supervisors
- 5 Recreation Workers

BENEFITS PER MILLION INVESTED



Climate Benefits
\$245,200

Avoided future damages of climate change from greenhouse gas pollution

ADDITIONAL BENEFITS

Urban Greening would increase

- Health and safety
- Social interactions
- Property value

While reducing

- Water pollution
- Urban heat island effects



Aquatic Ecosystem Restoration



Marsh and Egrets near Boston's South Shore. Photo: Eugene Kim

INVESTMENT SCALE

Low \$ \$ \$

DEPLOYMENT SPEED

Moderate to Fast

DESCRIPTION

Aquatic Ecosystem Restoration replaces or removes harmful water management infrastructure, such as dams and culverts, to restore tidal flows and revitalize aquatic ecosystems. The program also improves stormwater management and flood control near these bodies of water.

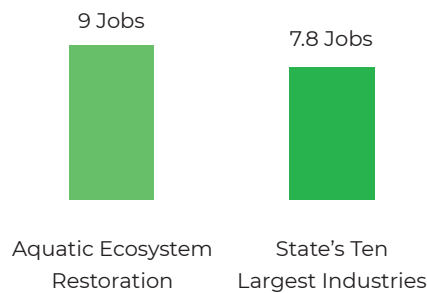
BENEFITS

Protecting and restoring vital ecosystems in the Commonwealth delivers major employment opportunities and social benefits to the public. Investing in *Aquatic Ecosystem Restoration* creates jobs in architecture, engineering, construction, and landscaping, and long-term savings for the state by avoiding costly flood management and infrastructure repairs. Recreation, physical activity, and safety benefits have the potential to unlock significant improvements in public health.

RESULTS

Supports 9.0 jobs per million dollars invested, compared to 7.8 jobs per million dollars invested in the state's ten largest industries. Additionally, healthy wetlands and vegetation capture and store carbon dioxide, creating around \$110,000 in climate benefits per million dollars invested.

JOBS PER MILLION INVESTED



TOP OCCUPATIONS

- 1 Landscaping Workers
- 2 Construction Laborers
- 3 General and Operations Managers
- 4 Retail Salespersons
- 5 Carpenters

BENEFITS PER MILLION INVESTED



Climate Benefits

\$113,600

Avoided future damages of climate change from greenhouse gas pollution

ADDITIONAL BENEFITS

Aquatic Ecosystem Restoration would increase

- Public health and safety benefits
- Recreation and tourism
- Property value

While decreasing

- Storm and flood damages
- Infrastructure maintenance costs



Sustainable Agriculture



Organic farm on Cape Cod. Photo: Massachusetts Office Of Travel & Tourism

INVESTMENT SCALE

Low \$ \$ \$

DEPLOYMENT SPEED

Fast

DESCRIPTION

Sustainable Agriculture provides grants to install more efficient irrigation systems that reduce water usage and greenhouse gas emissions. The program also supports projects that reduce methane emissions from agricultural waste and provides grants to enhance the efficiency and economic viability of anaerobic digester technology.

BENEFITS

Investing in low-carbon agriculture has the potential to unlock major new employment opportunities and savings for the Commonwealth. Spending on efficient irrigation systems and agricultural technology supports new workforce opportunities in construction, engineering, and manufacturing, but creates an even greater number of jobs in the broader economy by reducing energy costs for agricultural businesses. The transition away from energy-intensive agriculture and trapping methane emissions also reduces outdoor air pollution.

RESULTS

Each dollar invested supports three times as many jobs as a dollar invested in the state's ten largest industries. Additionally, every dollar invested saves the Commonwealth \$3.34 in energy cost savings, improved public health, and climate benefits.

JOBS PER MILLION INVESTED

23.4 Jobs



Sustainable
Agriculture

7.8 Jobs



State's Ten
Largest Industries

TOP OCCUPATIONS

- 1 Electrical, Electronic, and Electromechanical Assemblers
- 2 Miscellaneous Assemblers and Fabricators
- 3 General and Operations Managers
- 4 Semiconductor Processing Technicians
- 5 Retail Salespersons

BENEFITS PER MILLION INVESTED



Energy Cost Savings
\$2,173,400

Energy costs avoided by reducing energy use



Climate Benefits
\$1,039,600

Avoided future damages of climate change from greenhouse gas pollution



Air Pollution Health Benefits
\$125,500

Saved lives and avoided illnesses from improved air quality

Total
\$3,338,400

