



## POLICYMAKER PRIMER:

# PUBLIC WORKS AND ASSET MANAGEMENT

## THE ROLE OF PUBLIC WORKS

### CARETAKERS OF AMERICA'S INFRASTRUCTURE

Public Works Professionals (PWP) plan, design, implement, operate, and maintain all types of infrastructure worth trillions. Transportation, water supply and treatment, flood control, solid waste, fleets and facilities, and communication infrastructure are the underpinnings of our quality of life, our national security, and our global economic competitiveness.

### LEADERS IN DEVELOPING SUSTAINABLE, RESILIENT SOLUTIONS

People and private businesses depend on PWP to provide clean water, efficient transportation networks, flood prevention, and other key infrastructure services. For APWA, leveraging innovation and research to inform best practices is paramount to extending the life and usefulness of the nation's critical infrastructure. APWA's policy priorities support designing, constructing, operating, and maintaining infrastructure in accordance with asset management practices, and APWA's credentialing recognizes PWP for incorporating asset management principles and practices into planning, delivering, and evaluating services.

### ASSET MANAGEMENT IS THE PUBLIC WORKS TOOL TO BEST MANAGE INFRASTRUCTURE DECISIONS

A primary function of government is providing the core infrastructure for community services, economic well-being, and commerce. Asset Management is about sustainability; establishing objectives for the quality of service balancing cost, affordability, safety, environmental impact, and the risk of not meeting those objectives.

Asset management, according to the [International Organization for Standardization \(ISO\)](#), is the coordinated activity of an organization to maximize value from assets. Asset management practices maximize service while minimizing total life-cycle costs from focused and anticipated resource use when acquiring, operating, maintaining, and renewing assets including infrastructure.

Asset management provides the best value for communities and taxpayers. Just like an individual may take care of a vehicle as prescribed by the manufacturer, public works does the same for fleet vehicles based on best practices and experiences. Like fleet management, PWP strive to apply this principle to treatment plants, pipes, roads, bridges, buildings, lighting, dams, sidewalks, parks and open space, urban forests and more.

### MAXIMIZING TAXPAYER RESOURCES, AFFORDABILITY, SAFETY

- When asset management is applied during the planning process, it benefits infrastructure where their complexity requires varied maintenance or equipment replacement to maximize overall performance and life cycle. Asset Management benefits can improve management, risk awareness, understanding of sustainability, customer confidence, and processes.

Preventive measures go further to protect assets and provide the greatest return on investment. The return on infrastructure investment is nearly twice the initial spending because it is frequently less expensive to maintain existing infrastructure than it is to perform corrective repairs or replace it.

On average, every \$1 spent on nonresidential construction has an economic impact of \$1.92. For transportation and power investment, \$1 returns \$4.24, while \$1 spent on water and sewer assets returns \$2.03 in revenue.<sup>1</sup> The more asset management is applied, the more investments are protected and the useful life of equipment is extended, which allows for improved long-term budgeting.

It is for these reasons asset management has been adopted across the globe and by international organizations with whom APWA partners, such as [the Institute of Public Works Engineering Australasia \(IPWEA\)](#). These partnerships supplement APWA's education, training, and inform the work of the APWA Asset Management Committee.

<sup>1</sup>[THE ECONOMIC IMPACT AND FINANCING OF INFRASTRUCTURE SPENDING](#)

## CHALLENGES: BUILDING FOR RESILIENCY

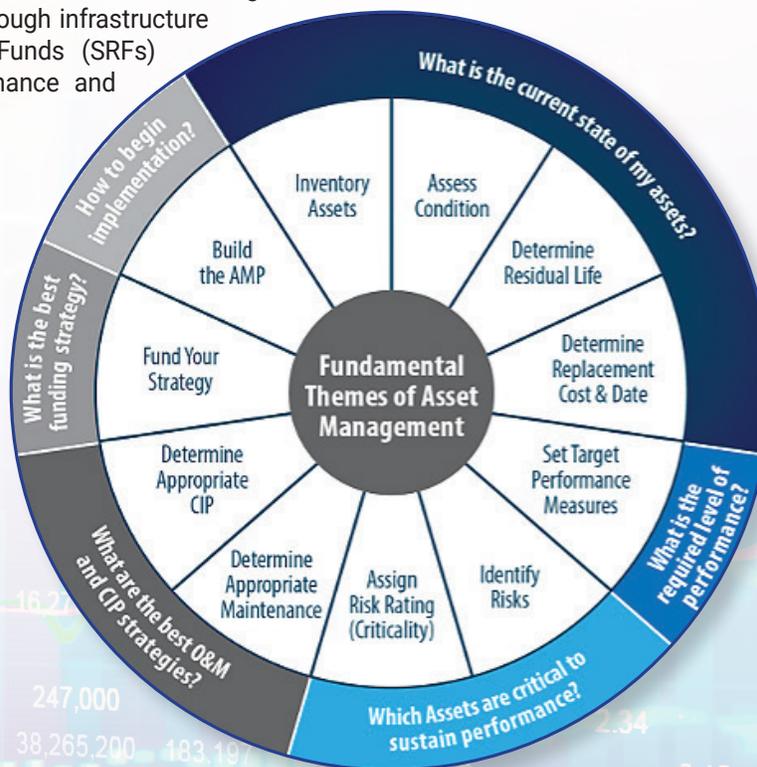
PWPs consider problems and solutions holistically – evaluating economic viability, environmental impacts, and life cycle costs. ***It is important for solutions to address current challenges and advance the quality of life for all, including for future generations.*** It is important to have an infrastructure planning, delivery and evaluation framework to ensure funding is applied in the most sustainable and cost-effective manner. Appropriate metrics for conducting inventory and measuring criticality to inform decision making must also be included, such as:

- Does an infrastructure plan meet the need or capacity?
- How and who is served?
  - The Federal Highway Administration’s pavement management system can serve as a model for asset management plans in other federal funding streams.

Asset management adoption and capacity building in other countries, like Canada, happen with incentives as a condition of infrastructure investment. U.S. federal dollars could also be made eligible for asset management efforts through infrastructure programs like State Revolving Funds (SRFs) and the Water Infrastructure Finance and Innovation Act (WIFIA).

Some infrastructure have maintenance plans, which may simply need to be refined with Asset Management principles:

- Incorporate cost and recommendations from the builder about replacement times for different components.
- Update computer hardware, like GIS, to better track assets and maintenance, particularly for communities with fewer resources and minimal investments.
- Adopt different calculations for new technologies.
- Conduct inventory, which is the biggest cost for older legacy infrastructure, and determine replacement value for aging components.
- Address inequities and standardize so communities can better collaborate.
  - Transparency in how infrastructure investments are prioritized and align with national, state and local regulations, policies, and needs.



(Source: Minnesota Department of Transportation)

\*\* Policymaker Primers supplement APWA's official Public Policy Priorities, providing additional information and context for issues tangential to emergency management, transportation, and water resiliency.

The American Public Works Association (APWA) represents over 32,000 public works professionals across North America, dedicated to providing essential, high-quality equitable and sustainable services to millions of people in rural and urban communities, both small and large.

APWA members serve in the public and private sectors, providing expertise to the local, state, and federal government levels. Working in the public interest, our members plan, design, build, operate, and maintain, and oversee our vast infrastructure networks essential to our economy, environment, safety, and way of life.

APWA collaborates with all levels of government and supports federal investment in our shared infrastructure. APWA is opposed to unfunded mandates and any effort to impede the appropriate use of public right-of-way, and strongly encourages industry to partner with public works, and all state and local government entities.

**APWA Government Affairs  
Policymaker Primer**

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