



MEMORANDUM

LEGISLATIVE REFERENCE BUREAU

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To: Ald. Michael J. Murphy
From: Kathleen Brengosz, Fiscal Planning Specialist, x3926
Date: March 30, 2022
Subject: Credential Requirements for Commissioners of Public Works

In response to your request for information regarding whether commissioners of public works around the country are required to have engineering degrees, the Legislative Reference Bureau is providing the following information.

The American Public Works Association (APWA) defines public works as the combination of physical assets, management practices, policies, and personnel necessary for government to provide and sustain structures and services essential to the welfare and acceptable quality of life for its citizens.

The APWA has identified nearly 150 different functions that are related to public works. These functions can be classified into 8 broad categories.

APWA Public Works Categories

Category	General Description
Transportation	This may include streets, bridges, sidewalks, bike paths, airports, seaports, and traffic control.
Sanitation	This includes collection and disposal of solid waste. It may also include the operation of solid waste landfills, compost facilities, incinerators, and recycling operations.
Utilities	This includes water, wastewater, gas and electric. It may also include storm water and flood control.
Buildings & Grounds	This includes the design, construction, maintenance and management of public buildings and facilities.
Municipal Engineering	This includes civil and environmental engineering functions, technical studies, construction inspection and surveying.
Fleet Management	This function involves the procurement and maintenance of city owned equipment and vehicles.
Management and Administration	This includes operations management and supervision, financial management and reporting, public relations, procurement of professional services, requesting and evaluating proposals, awarding bids and contract management.
Other	This can include functions such as urban forestry, parks maintenance, cemetery operation, airport services, dead animal pickup, etc.

There is no standard organizational structure for fulfilling local government public works functions. Each municipality must evaluate its circumstances to determine the optimal organization for the provision of services. Some cities, such as Madison, WI have an

Engineering Department which is responsible for project planning, design and implementation of streets, sanitary and storm sewers, and building projects. Madison's Streets and Recycling Department is responsible for garbage collection, recycling, hazardous waste and forestry services. In Milwaukee, all of those functions are handled within the Department of Public Works.

Variables that may be considered when creating a model for fulfilling public works functions include:

- Size of the municipality (population and area)
- Services provided by the municipality
- Service provision model (internally provided or contracted)
- Municipal organization structure (which department is responsible for providing services)
- Complexity of operations
- Size of the municipal workforce
- Expertise of the municipal workforce
- Department head employment type (appointment or regular hire)

The variables are somewhat interrelated. For example the size of a city's public works department, as well as the expertise of its personnel, may determine how many functions it performs as well as whether functions are provided with city personnel or with contracted staff.

Because of the wide variability in the organization of departments that provide public works services, there is a great deal of variation in the skills, education and credentials that are required to lead a public works department.

Instead of reviewing the ordinances of random cities, whose public works functions may not align with Milwaukee's, I chose 2 proxies which could give a broader view of the current public works environment in a more timely manner; current job postings and APWA award recipients.

Current Job Postings

Of 33 current job postings for "Director of Public Works" only 6 required the applicant to be a registered engineer in the applicable state. Of those 6 postings, one allowed the applicant 6 months to become registered, and one posting allowed the applicant to substitute other relevant training or experience for professional registration. An additional 9 postings listed registration as a professional engineer as "desired".

Bachelor's degrees were required for 21 of the postings. Most of the postings allowed a range of degrees including Engineering, Construction Management, Public Administration, Business Management, or degrees in closely related fields. Master's degrees were listed as preferred qualifications for 11 of the postings. Substitution or the combination of experience or training was allowed in 12 postings. Five of the postings listed no educational or credential requirements.

A list of the job postings reviewed is attached to this memo.

APWA Leadership Awards

Each year the APWA presents an award to top public works leaders. From 2017 to 2021, there have been nearly 2 dozen directors of public works that have been honored. More than half of the honorees have not been registered engineers.

The median population for municipalities in which the award recipient was a registered engineer is 69,900, compared to 58,200 for municipalities which are not led by a Professional Engineer.

It is important to note that just because an honoree is registered, doesn't mean that the municipality requires it. The Director of Public Works in Baltimore was honored in 2019. In May 2021, the City of Baltimore appointed a new director, Jason W, Mitchel, who has a doctoral degree in Organizational Leadership and a Bachelor's degree in Finance. Prior to his appointment in Baltimore, he served at the Director of Public Works in Oakland, CA.

Director of Public Works honored by the APWA			
Is NOT a registered engineer		Is a registered engineer	
Municipality	Population	Municipality	Population
Phoenix, AZ	1,630,000	*Baltimore, MD	609,032
Orlando, FL	280,832	Anaheim, CA	348,300
Santa Clarita, CA	213,411	Charleston, SC	135,257
Manchester NH	112,109	Arlington Heights, IL	75,482
City of Rock Hill, SC	73,334	Janesville, WI	64,245
Council Bluff, IA	62,000	Bristol, CN	60,218
Dubuque, IA	58,196	Lee's Summit, MO	97,275
Carson City, NV	54,773	Village of Wilmette, IL	27,247
Downers Grove, IL	49,470	City of Wilsonville, OR	24,073
Town of Franklin, MA	31,635	Keene, NH	22,953
Algonquin, IL	30,799		
Grandview, MO	25,000		
Pendelton, OR	16,733		

**The current Director of Public Works in Baltimore is not a registered engineer. He previously served as the Director of Public Works in Oakland, CA (population 425,097)*

While the review of job postings and the APWA honorees is by no means exhaustive, and many of the municipalities are not on their face "comparable" cities, it demonstrates that there is not a universal requirement that public works leaders be registered engineers.

The APWA publishes 2 informational sheets regarding the core competencies and the core responsibilities of public works professionals. Core competencies include:

- Planning for the future
- Organizational leadership

- Communication
- Relationship building
- Staff management
- Management of information, money and resources
- Understanding of infrastructure and municipal services

The APWA considers professional development to be a core responsibility of public works professionals, but it don't list specific college degrees that are necessary or preferable.

Both APWA handouts are attached to this memo.

Baltimore County, MD

Section 7-01 of the City Charter states that "In all cities of the first class, whether organized under special charter, or under the general law, there is created the office of the commissioner of Public Works", and "The commissioner shall be a qualified professional engineer registered under the laws of Wisconsin". Baltimore County has a similar provision in its charter.

The charter provision has prevented Baltimore County from permanently hiring its acting Director of Public Works, who has worked for more than a decade in managerial roles in state and local transportation and infrastructure departments, but who isn't a professional engineer.

The Baltimore County Council voted unanimously in August, 2021 to add a charter amendment to the 2022 ballot, allowing voters to decide whether to change the qualifications for the Director of Public Works. The charter amendment would add alternative qualifications so that additional applicants could be considered for the position. The next scheduled election in Baltimore is in July, 2022.

If you need additional information, please do not hesitate to contact me.

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Attachments

- APWA Core Competencies of Public Works Professional
- APWA Core Responsibilities of a Public Works Professional
- Municipalities with current DPW Director job postings