

Ontario Sewer and Watermain Construction Association



**OSWCA Response to *Infrastructure for Jobs and Prosperity Act, 2015:*
Potential Municipal Asset Management Planning Regulation**

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Municipal Infrastructure Policy – Inter-governmental Policy Branch
Ministry of Infrastructure
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**Re: OSWCA Response to *Infrastructure for Jobs and Prosperity Act, 2015:*
Potential Municipal Asset Management Planning Regulation**

On behalf of our members, the Ontario Sewer and Watermain Construction Association (OSWCA) would like to provide the following comments in response to the Ministry of Infrastructure's (MOI) consultation around a potential Municipal Asset Management Planning Regulation.

Overview Comments

The OSWCA appreciates the direction that the Government of Ontario is moving with its asset management planning requirements for municipalities. As the cost of constructing and rehabilitating infrastructure increases, it is necessary to plan and prioritize spending in such a way that funding is directed to projects focussed on the delivery of core government services and demonstrate the greatest need. While the current requirements for municipal asset management plans were an important first step, there is a need to enhance the reporting requirements further to ensure provincial infrastructure funding is being targeted to the areas (both geographically and infrastructure asset wise) of greatest need.

In order to accomplish this, a framework for standardized classification, assessment, or measurement of infrastructure assets needs to be mandated. For example, despite the fact that municipalities are asked to include a detailed analysis of the characteristics and conditions of the asset classes in their plans, the current guidelines do not identify a measurable minimum threshold for how to assess the current asset conditions. Instead, they recommend applying standard engineering practices to categorize asset status into general ratings of 'good', 'fair' and 'poor'. This approach does not provide an accurate description of the true asset status, especially when it is being used to inform the provincial decision making process for prioritizing infrastructure projects. A much more detailed and standardized asset evaluation system is necessary across the province.

Asset management should be strongly linked to planning and system operations at all stages of the asset's life, beginning at the strategic planning stage. This requires the setting of levels of service (LoS) baselines by each municipality for every one of their infrastructure assets. The performance of an asset when it is brand new should form the



LoS performance standard and each municipality should judge the asset on a set schedule to ensure that performance of the asset is still within the acceptable LoS range. Asset management is best achieved when it is attached to strategic goals and outcomes, and is part of a larger management plan. This process helps to achieve this.

The current approach to asset management and resource allocation and investment analysis is tactical, rather than strategic. Moving forward, target performance objectives are necessary to establish in order to measure the level of achievement and performance of an asset.

1. How could the regulation best support the long-term sustainability of municipal assets and services?

The regulation should mandate the use of a standardized assessment process for infrastructure assets to support long-term sustainability. This does *not* mean setting a provincial life-cycle standard and requiring all municipalities to follow it, as environmental factors will affect similar infrastructure in different areas in a different manner (e.g. soil acidity changes the life-cycle of underground infrastructure in different areas of the province). What should instead be considered, is a requirement that all municipalities set individual benchmarks for the level of service (LoS) that they are seeking to provide with each infrastructure asset, as a baseline to grade their assets in the future. This LoS baseline could then be used to determine when an infrastructure asset is in need of rehabilitation or replacement.

Requiring that municipalities set a LoS benchmark as part of their municipal asset management plan will allow for greater efficiencies around planning for rehabilitation and replacement. Presently, many municipalities base investment priorities on the age of the asset rather than its performance, which has the potential to unduly limit its life-cycle. Determining investment priorities based on the performance of the asset according to a benchmarked LoS would instead allow for use beyond projected lifecycle if the asset continues to perform within an acceptable range of the baseline.

What the performance assessment indicators are for each asset would have to be determined. There are a number of existing assessment tools for infrastructure assets that are being used across North America and Europe that can be consulted for best practices (examples included in Appendix). If helping municipalities achieve asset sustainability is the true goal, the focus should be placed on achieving full-life cycle use out of the asset. Benchmarking LoS is an important first step towards achieving this goal.



2. What role could the regulation play in promoting an ongoing commitment to asset management planning and continuous improvement?

From a provincial funding standpoint, the current requirement under Phase II of the Municipal Infrastructure Investment Initiative (MII) that “any municipality seeking provincial infrastructure funding must demonstrate how its proposed project fits within a detailed asset management plan,” is a very important step, but it is not a complete one. It requires municipalities to participate in the asset management process, but it does not yet ensure that investments are being targeted to the areas of greatest need. In order to promote an ongoing commitment to asset management planning and continuous improvement, the regulation needs to continue to enhance requirements for municipalities seeking provincial funding. It can do this by requiring municipalities to grade each infrastructure asset as part of their asset management plan, which should include a standardized risk assessment score.

Each municipality should evaluate infrastructure assets based on a provincially standardized “total score” model of assessment. A set of criteria would have to be developed that measures the level of risk associated with each potential asset failure, coupled with how the asset is performing based on the LoS baseline set by the municipality, in order to target investments to where they are most needed rather than wanted. The risk analysis should be based on likelihood and consequence (economic, operational, social, environmental, public health and safety) of asset failure (i.e. Risk = Probability of Failure x Consequence of Failure). There are a number of examples of existing infrastructure asset evaluation tools (e.g. Facility Condition Index; Asset Management Condition Grading Standards; etc.) that could be considered for best practices. Ultimately, a set of criteria would need to be created with different weighted scores applying to different categories of risk. The total asset score would be the sum of the scores for each criterion. The higher the total score, the higher the project priority.

Being required to quantify the level of risk associated with each piece of infrastructure will ensure that assets are assessed regularly and a particular LoS is maintained. As conditions and LoS worsens over time, and risk of failure increases, a municipality can track these and fund appropriately to rehabilitate or replace in a more manageable and coherent fashion, while also allowing the province to monitor how a municipality is managing its other assets to understand where funding assistance may be necessary.

Over the longer-term, as these assessment requirements become common-place, the province should consider how to move away from an entitlement program that distributes funding based on population size and move towards a standardized approach that looks at the size, condition, and risk assessment of municipal assets to determine where investments should be allocated. This will further ensure that every municipality looking to the province for funding assistance will maintain and continuously update and amend their asset management plans as required.



5. How can the regulation best improve plan and data standardization, while recognizing differences in municipal size, structure and services provided?

The LoS + risk-based assessment model of evaluation noted above in response to questions 1 & 2 are designed to allow each municipality to set their own scoring benchmarks and then evaluate their assets against these benchmarks in the future. Creating a “total score” system based on the locally-set LoS standard is a transparent and fairly equalizing approach, as it recognizes that service standards and expectations differ in different municipalities and regions. Scoring on performance would therefore be based on local expectation and standard, rather than a provincially set standard.

The risk assessment component of this scoring model would be more universal, as it would be based on likelihood and consequence of an asset failure, as noted above. A tweak may be made to the scoring component for the risk assessment, by identifying a percentage of population served by a given asset, rather than the total number served. This would mean that a trunk watermain services 50,000 people in the City of Ottawa could potentially be scored the same as a small trunk-main servicing 5,000 people in the City of Peterborough, as the percentage of population affected by this asset failure would be similar.

Additional Models Worth Considering

While OSWCA would prefer to see a regulatory model similar to what we have noted above, there are other models currently being used and explored by asset managers at the municipal level that may be worth some deeper consideration. For instance, the "project benefit factor" scoring process does offer measurable economic benefits from investments. In this scoring model, every capital project can be scored against common metrics (used for all categories) that assess the benefit of the project to the City/Town should it move forward. The benefits can be established across a triple bottom line basis (economic, social, environmental) and tie into the strategic plan of the organization.

Concluding Notes

OSWCA appreciates having the opportunity to provide input into this consultation process. Enhancing the requirements around municipal asset management planning is critical to the long-term sustainability and life-cycle costing of infrastructure assets. Moving to a standardized evaluation and assessment through a provincial regulation will help to achieve these things, and will help to direct provincial infrastructure investment to the areas with the greatest need (both geographically and infrastructure asset wise).

Please do not hesitate to contact me (905-629-8819 or patrick.mcmanus@oswca.org) if you have any questions or need information regarding OSWCA and its membership.