

# Planning for Possible Development of a Pavement Management System (PMS)

March 15, 2012

Seth Asante and Efi Pagitsas

Boston Region Metropolitan Planning Organization



# What is a pavement management system (PMS)?

---

- A PMS is a set of tools, methods, and processes for managing pavement maintenance for a roadway network.
- The information generated by a PMS helps decision makers find cost-effective strategies for funding TIP and LRTP projects.

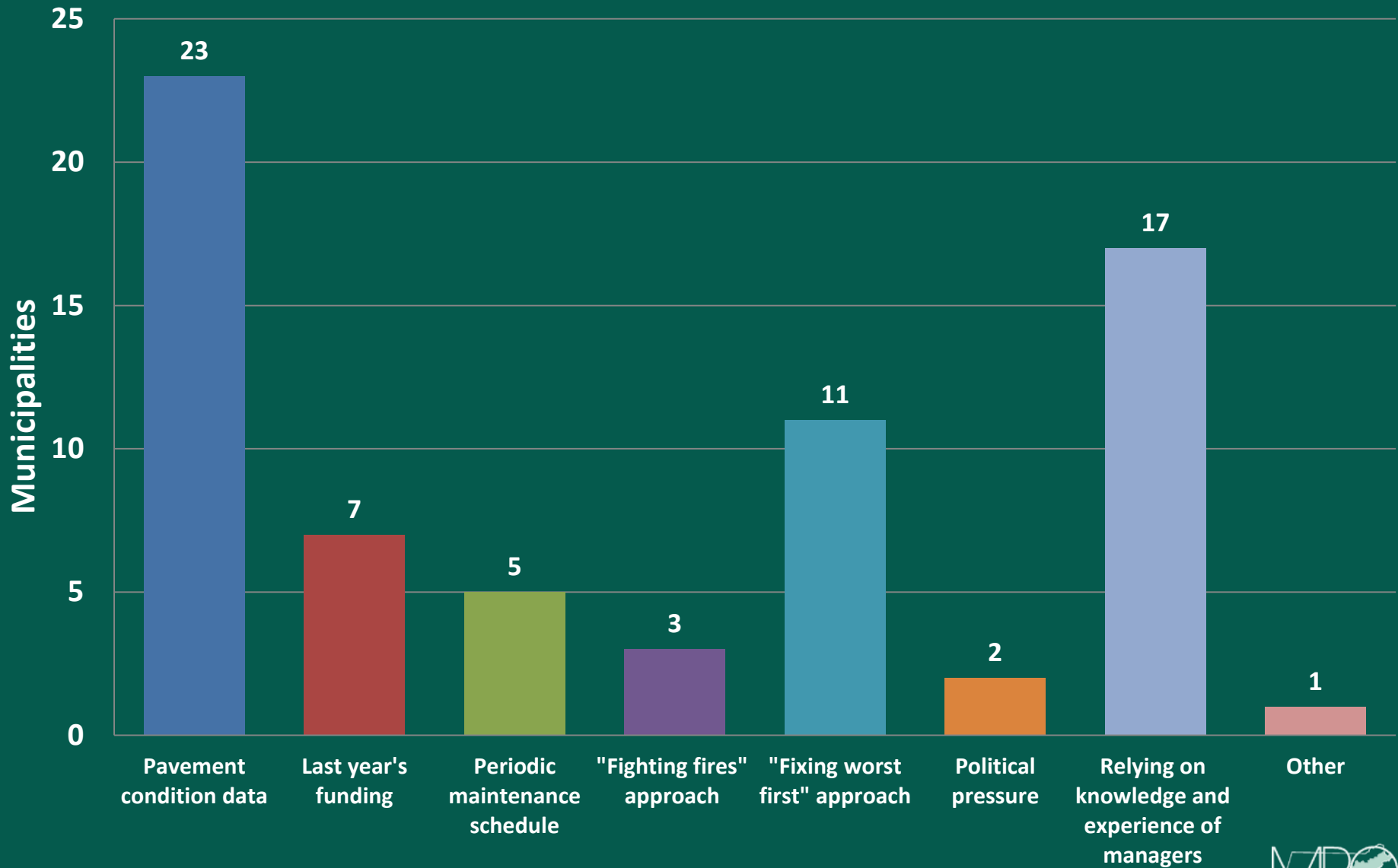
# Study Purpose

---

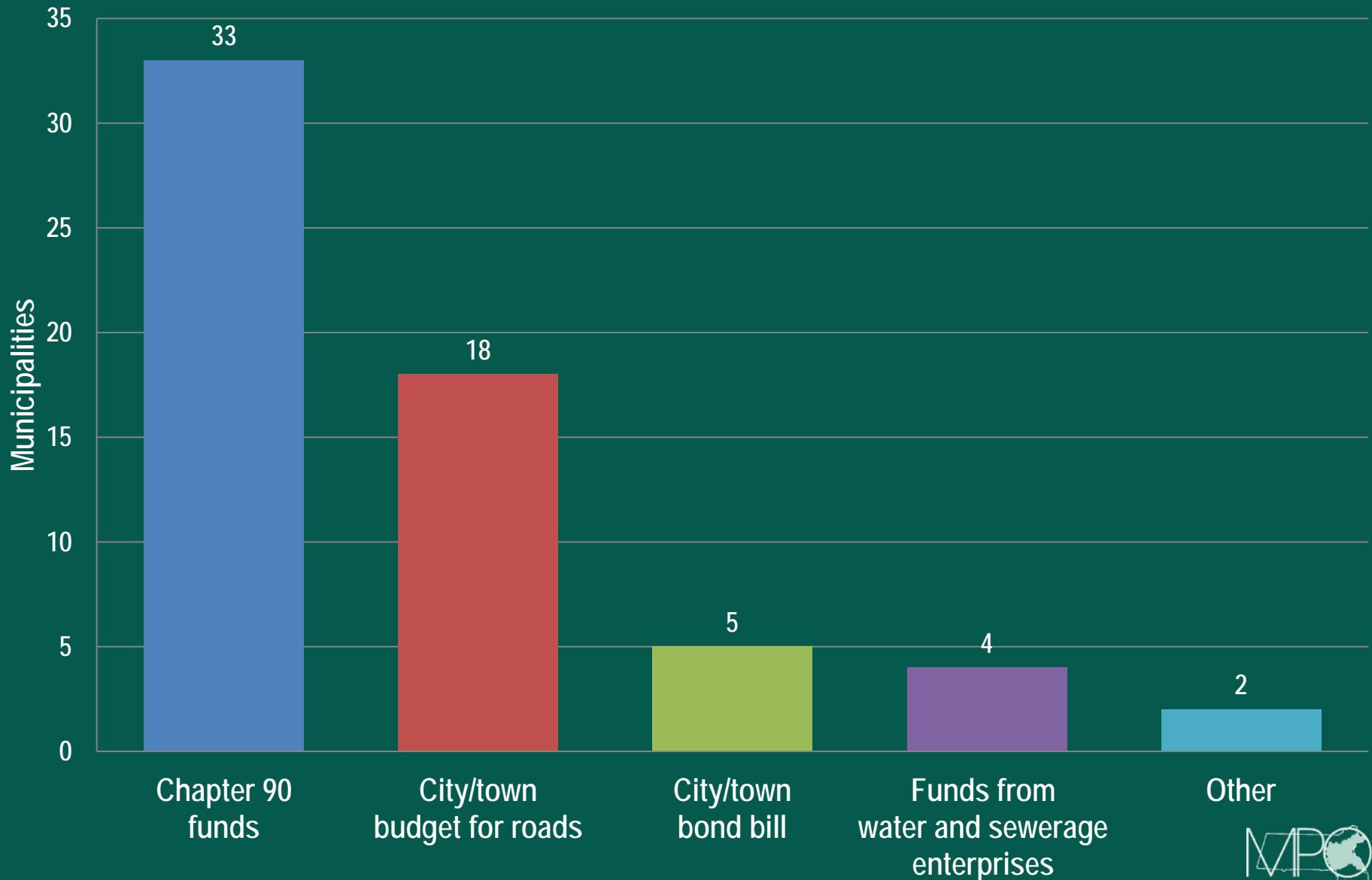
- To answer MPO questions regarding planning for a possible PMS
  - How do the municipalities make pavement-management decisions?
  - How would an MPO PMS relate to pavement-management activities of the municipalities?
  - What tools are available for a PMS?
  - What would be the cost of implementing a PMS?



# What process/input does your municipality use in developing its annual road-paving program?



# What kind(s) of funding does your municipality use in developing & implementing its road-paving program?



# PMS Practices of Four RPAs

Feature	CMRPC	MRPC	OCPC	SRPEDD
Software	CarteGraph	RSMS	Road Manager	RSMS
Centerline miles	1,200	600	608	780
Update cycle	4 years	2 years	4 years	3 years
Roadways included	Federal-aid	Federal-aid	Federal-aid	Federal-aid
Data collection	RPA	RPA	RPA	RPA
2012 UPWP allocation	\$45,000	\$30,000	\$15,000	\$35,000
Funding programming	UPWP	UPWP	UPWP	UPWP
Local-jurisdiction PMS	Yes	Yes	Yes	Yes

# MassDOT PMS Practices

---

- Comparable but not compatible with PMSs of the RPAs
- Covers only state-owned road network
- Employs PMS for monitoring, predicting, prioritizing, and allocation of funding
- Defines target pavement values for the performance of interstate and non-interstate roads



# Aspects of a Potential Boston Region MPO PMS

Centerline miles:	2,804
Update cycle:	5 years
Roadways included:	Federal-aid (municipal-owned)
Data collection:	MPO staff
Projected annual cost:	\$67,000 - \$75,000
Funding programming:	UPWP
Local-jurisdiction PMS:	Yes
Possible software:	CarteGraph or Road Manager



# Benefits of a Boston Region MPO PMS

---

- Funding cost-effective projects
  - Pavement condition and deterioration information, and strategy analysis, would promote cost-effective decisions for funding TIP and LRTP projects

# Benefits of a Boston Region MPO PMS

---

- Supporting municipalities in maintenance of FA roads
  - Consistent and systematic pavement-condition data would help steer municipal pavement-management efforts to maintenance and preservation.
- Addressing FHWA concerns
  - FHWA has a standing interest in how much it costs to fund the maintenance of these roads.

# Conclusions

---

- Staff concluded that:
  - The benefits of establishing a PMS would outweigh the costs.
  - The MPO should consider establishing a PMS for its area.