

Street Sweeping Municipal Survey Results

10/2/202

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Charlotte-Mecklenburg Storm Water Services

Background



- Research shows sweeping to be a cost-effective surface water quality BMP
- City of Charlotte pilot study confirmed cost-effectiveness of practice
- How does Charlotte's program compare to other municipalities?
- Should we be doing more?

Municipal Survey



Municipalities were selected that satisfied at least one of the following criteria

- Phase I communities in NC
- Cities of comparable population nationwide
- Cities nationwide with well regarded sweeping programs

1. Charlotte
2. Washington, DC
3. Fort Worth
4. Minneapolis
5. Durham
6. Greensboro
7. Raleigh
8. Austin
9. El Paso
10. Seattle
11. Norfolk
12. Columbus
13. San Antonio
14. Nashville

Questions asked



1. # sweepers?
2. Types of sweepers?
3. Annual Operating Costs?
4. Total cost/yr with equipment?
5. Sweeping frequency?
6. Parking rules?
7. Fall sweeping?
8. State roads swept?
9. Miles swept/yr?
10. Curb miles maintained?
11. How often municipal lots swept?
12. Do municipal depts help pay?
13. Why do you sweep?
14. Funding source?
15. SOPs for decanting water?
16. How did you get Council support?
17. What data is collected?

Responses



2. **Types of Sweepers:** Lots of variability – broom, vacuum, regenerative
4. **Total cost/yr with equipment** - low # of responses, high variability (depended on how many sweepers purchased in given year)
5. **Sweeping frequency:** Highly variable depending on subarea
6. **Parking rules:** Only 3 responded that they have “no parking” signs in certain areas and enforce
7. **Fall sweeping**
 - DC reassigns all sweepers to do leaf duty in the fall and winter
 - Greensboro assigns most sweepers to loose leaf program
 - Seattle and Norfolk mention higher debris in general in the fall, resulting in more overtime, more operators, or reduced frequency
 - Several do not modify collection in the fall

8. State roads swept

- State takes care of it (5): Charlotte, DC, El Paso, Fort Worth, Austin
- Municipality sweeps some state roads (6): Minneapolis, Durham, Greensboro, Raleigh, Seattle, Norfolk

9. Miles swept/yr – “miles maintained” seemed better metric

11. How often municipal lots swept?

- Minneapolis & Raleigh do not sweep municipal lots
- Others sweep some or by request

12. Do other municipal departments help pay – none answered “yes”

13. Why do you sweep – majority (at least 9 or 69%) mentioned water quality, NPDES permit, TMDLs, etc. (3 didn’t answer)

14. Funding - 9 of 13 (69%) use Storm Water funds (CLT not included)

- Other funding sources
 - General fund
 - Garbage collection fee
 - Separate Environmental fee or Clean Community fee
 - Combination of sources

15. SOPs for decanting water

- 3 said sweepers are washed or leachate discharged to sanitary sewers
- Most said sweeping is done in dry conditions and not an issue

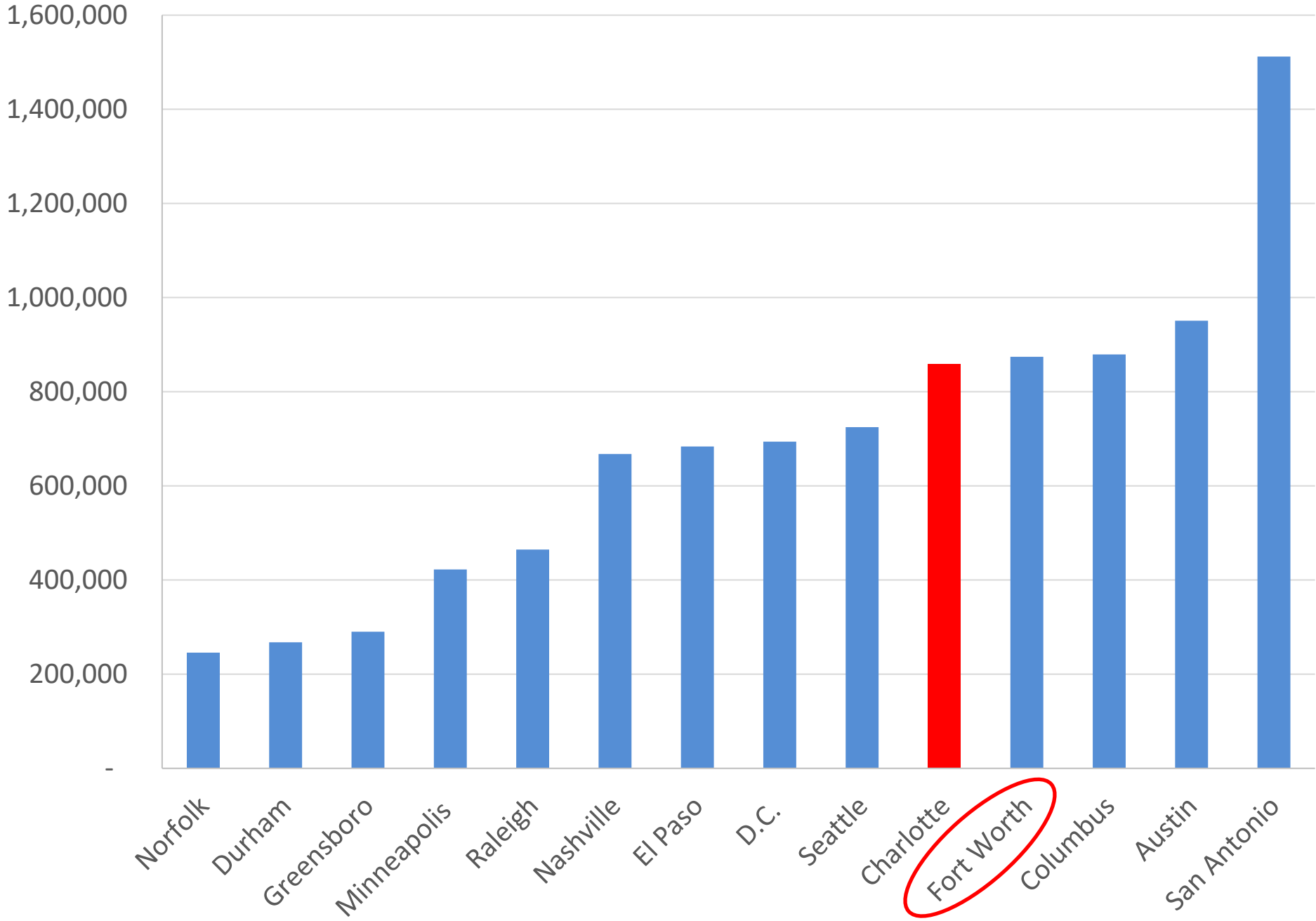
16. How did you get Council support

- Most said sweeping was in place before they began working there
- Seattle: Showing that sweeping provides the highest value for the money (data on copper removal)

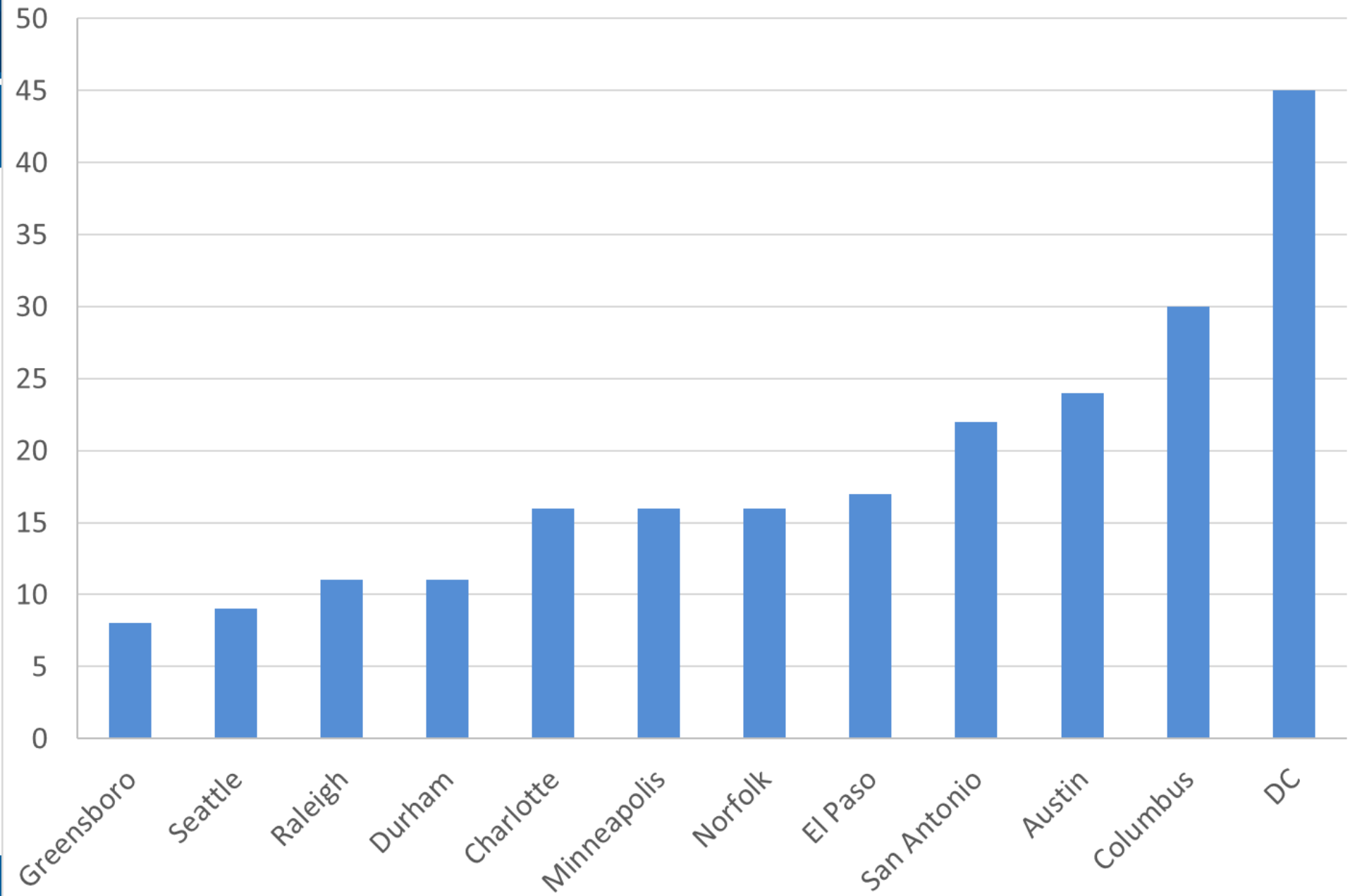
17. What data is collected

- Most collect basic data on tons of debris removed, miles swept, miles driven, etc.
- Seattle: sweepers equipped with automatic vehicle location and onboard scales, samples collected and analyzed every 2 wks

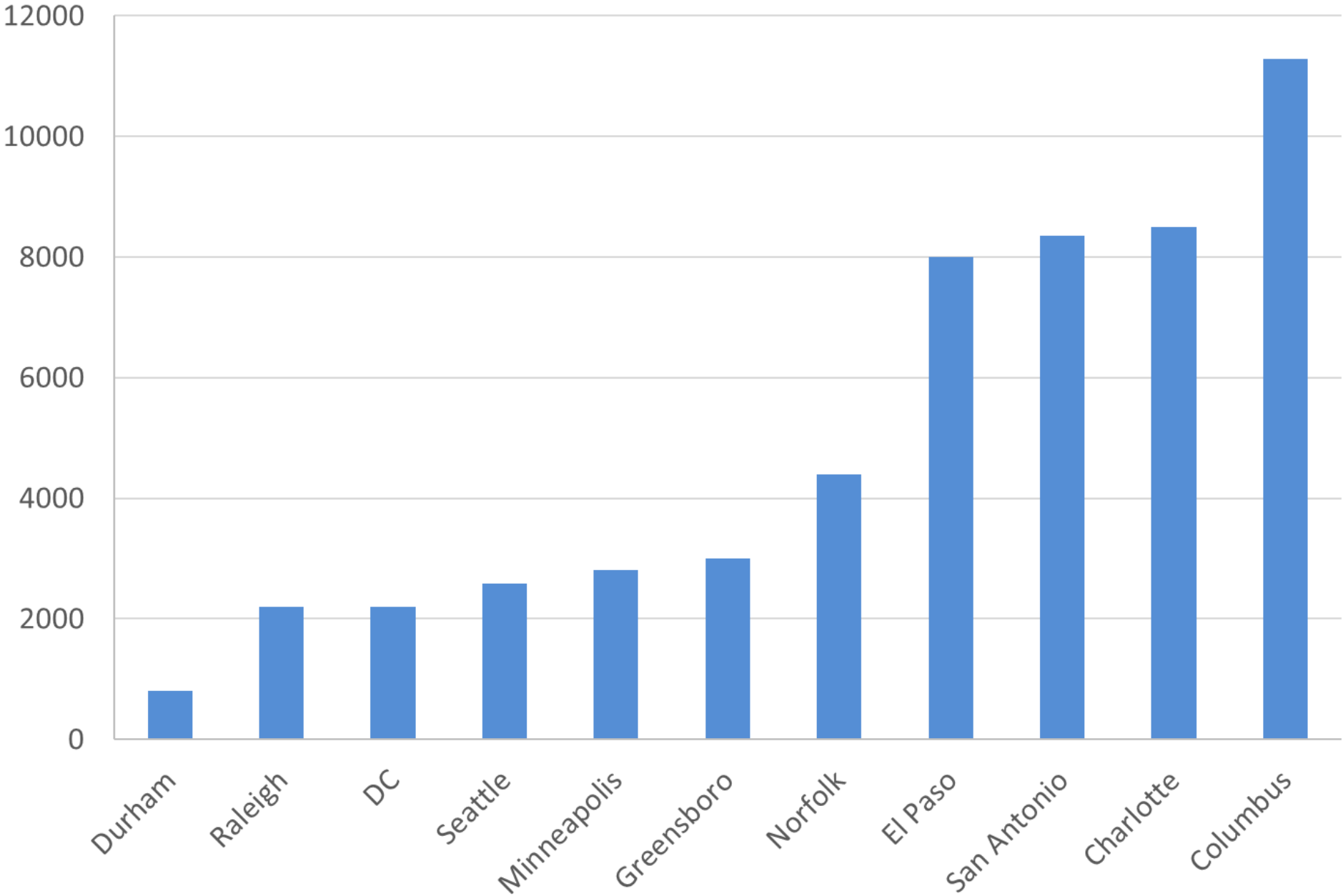
Population comparisons



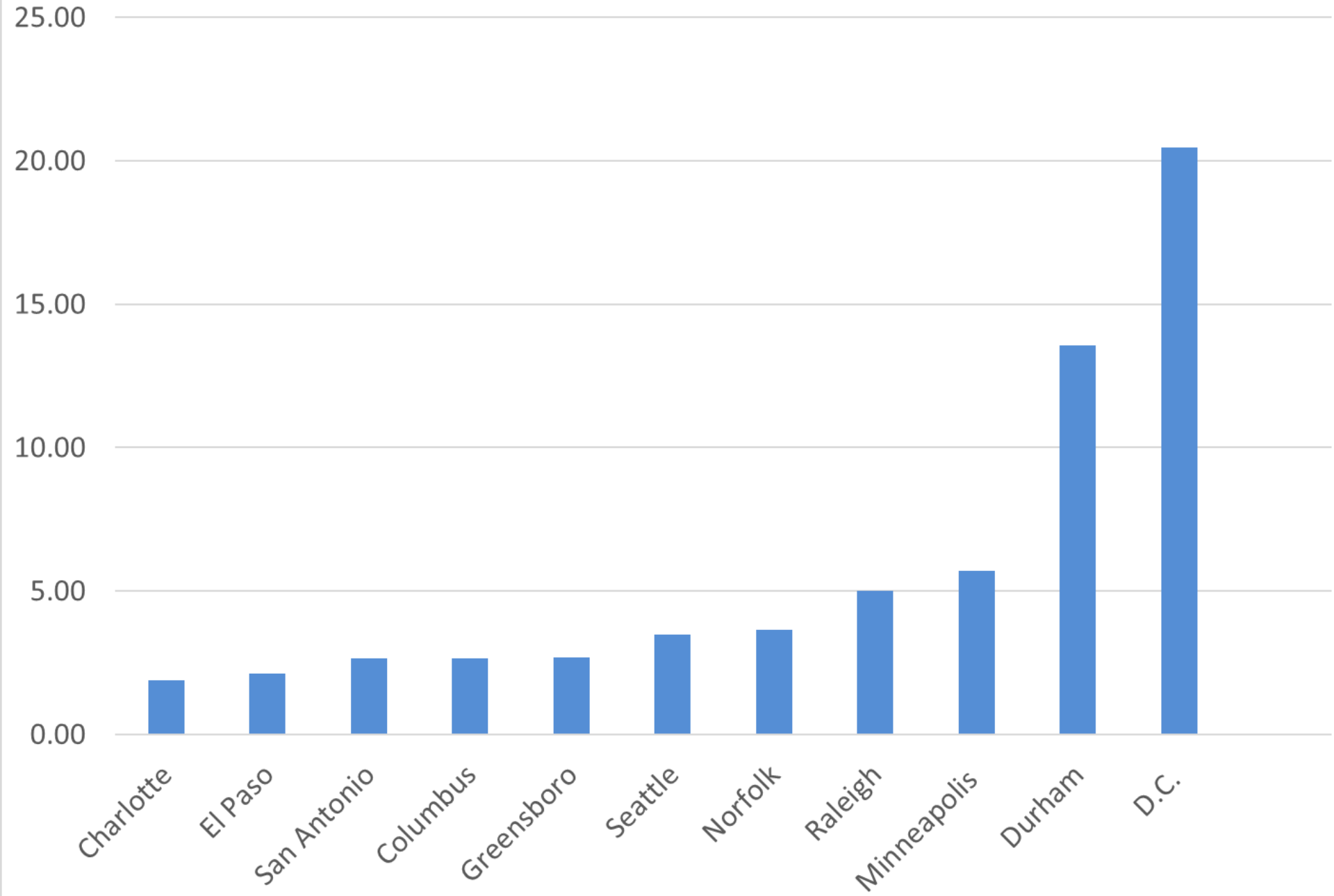
sweepers



miles maintained

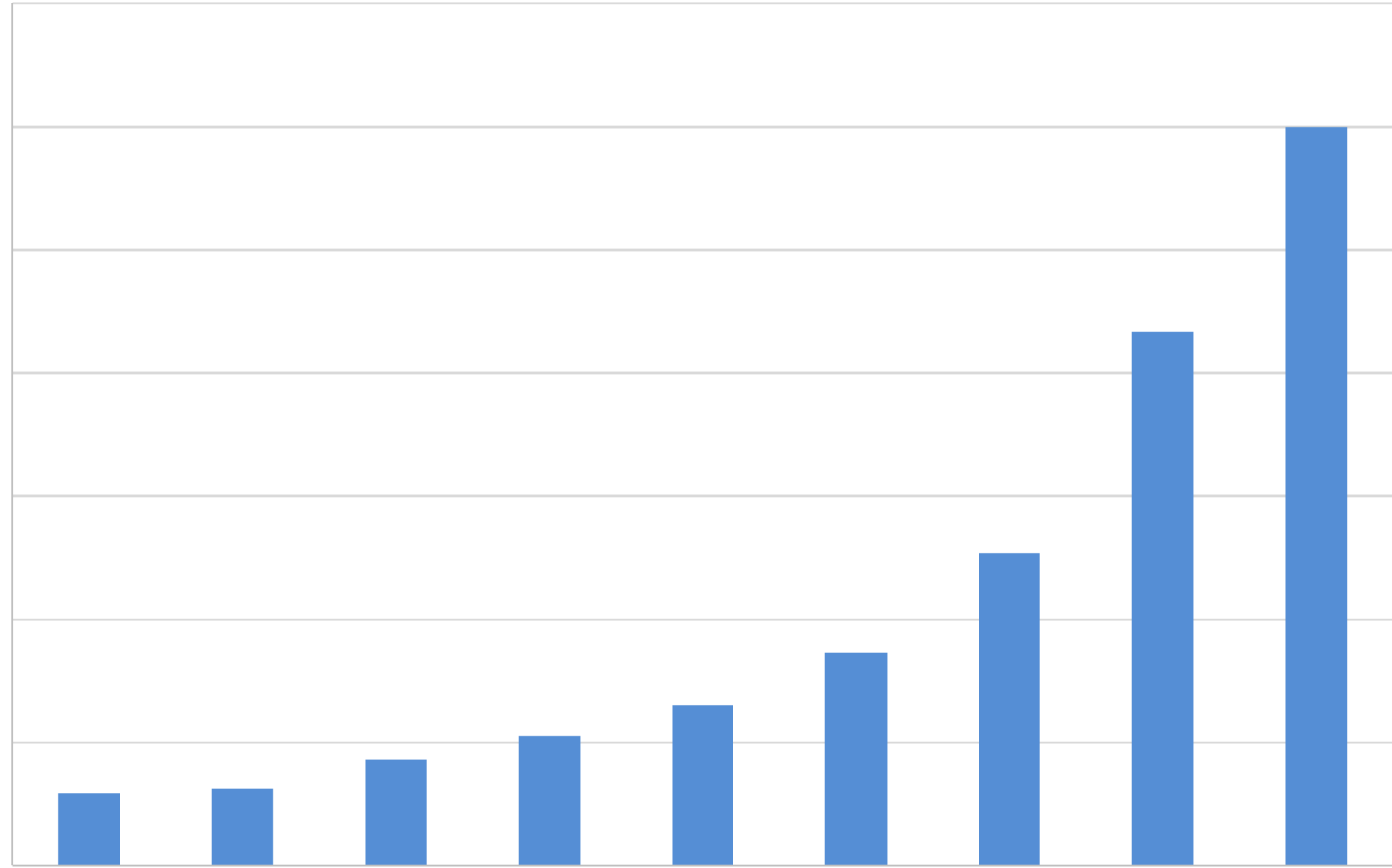


sweepers/1,000 curb miles maintained



Annual Operating Costs

\$7,000,000
\$6,000,000
\$5,000,000
\$4,000,000
\$3,000,000
\$2,000,000
\$1,000,000
\$0



Seattle

El Paso

Durham

Greensboro

Charlotte

Norfolk

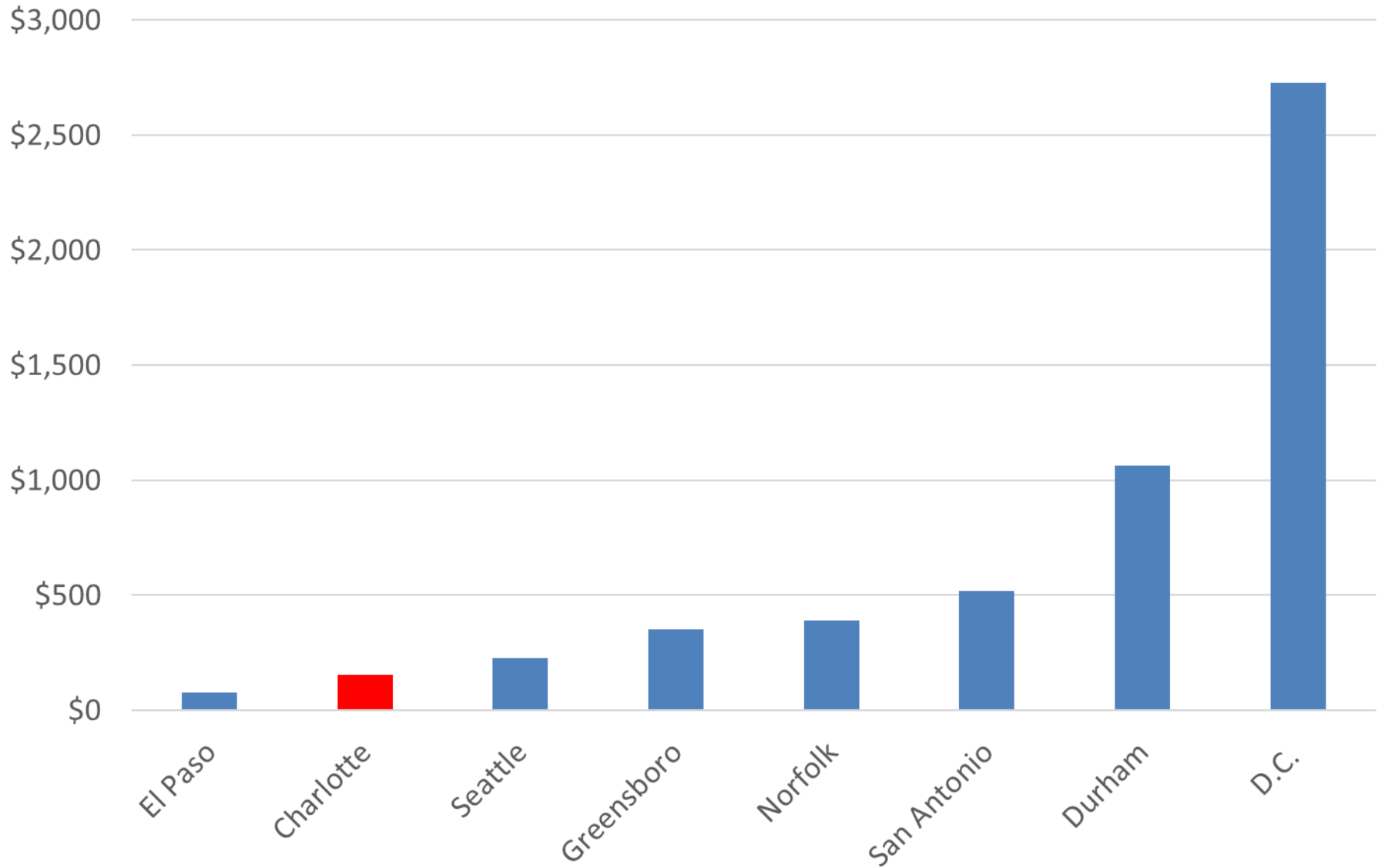
Austin

San Antonio

DC

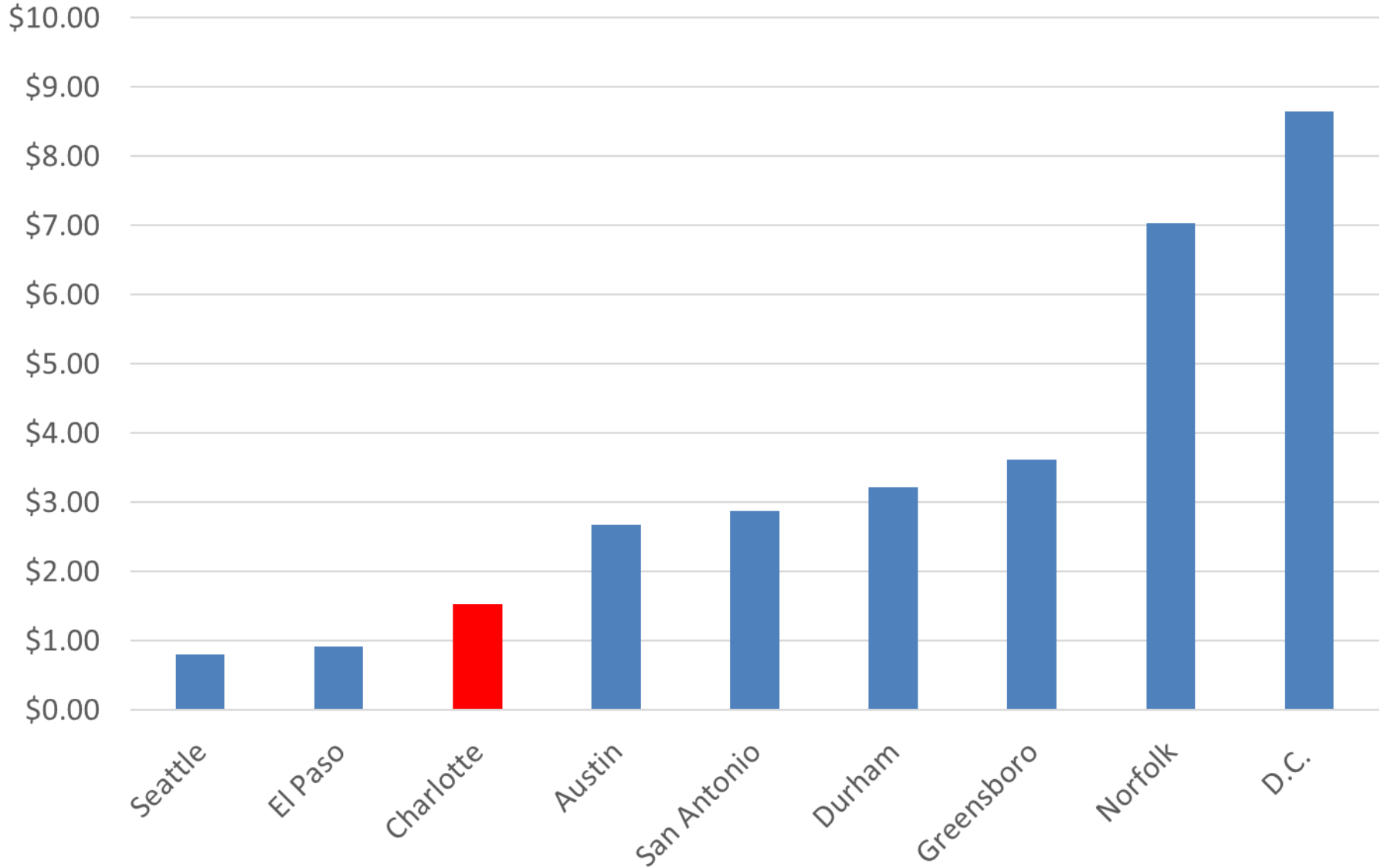
Current Funding

Operational cost/yr/mile maintained



	El Paso	Charlotte	Seattle	Greensboro	Norfolk	San Antonio	Durham	D.C.
Annual Operating Costs	\$625,562	\$1,308,751	\$585,000	\$1,050,000	\$1,721,499	\$4,339,838	\$861,025	\$6,000,000
# curb miles responsible for	8,000	8,500	2,580	3,000	4,400	8,350	811	2,200

Current Funding Operational cost/yr/capita



	Seattle	El Paso	Charlotte	Austin	San Antonio	Durham	Greensboro	Norfolk	DC
Annual Operating Costs	\$585,000	\$625,562	\$1,308,751	\$2,535,000	\$4,339,838	\$861,025	\$1,050,000	\$1,721,499	\$6,000,000
Population size	724,745	683,577	859,035	950,715	1,512,000	267,743	290,222	244,703	693,972

Next Steps?



- Charlotte developing proposal for increased sweeping for water quality

Questions?



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