

CALIFORNIA STORMWATER AWARENESS WEEK

The Pathway Toward Enhanced Street Sweeping

Tuesday, September 22, 2026 12:00 PM Eastern / 9:00 AM Pacific



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Introducing the Clean Streets = Cleaner Water Initiative

Led by the National Municipal Stormwater Alliance

Seth Brown, PE, PhD / Greg McPartlin

with 1-800-SWEEPER, NAPSA, and manufacturing partners Elgin Sweeper, Schwarze Industries, Stewart-Amos and TYMCO. Guided by a steering committee of researchers, municipal and agency staff, consultants and industry leaders.



**National
Municipal
Stormwater
Alliance**



What it is working toward

- A consistent crediting landscape for sweeping across the country
- Clear, practical metrics for the pollutants a sweeper actually captures
- Credible third-party verification of sweeper performance
- Technologies that optimize sweeping for water quality, not just tidiness
- A curated body of research and operational data
- Better messaging on cost-effectiveness

Learn more about the CS=CW Initiative

www.ms4nmsa.org/cs-cw



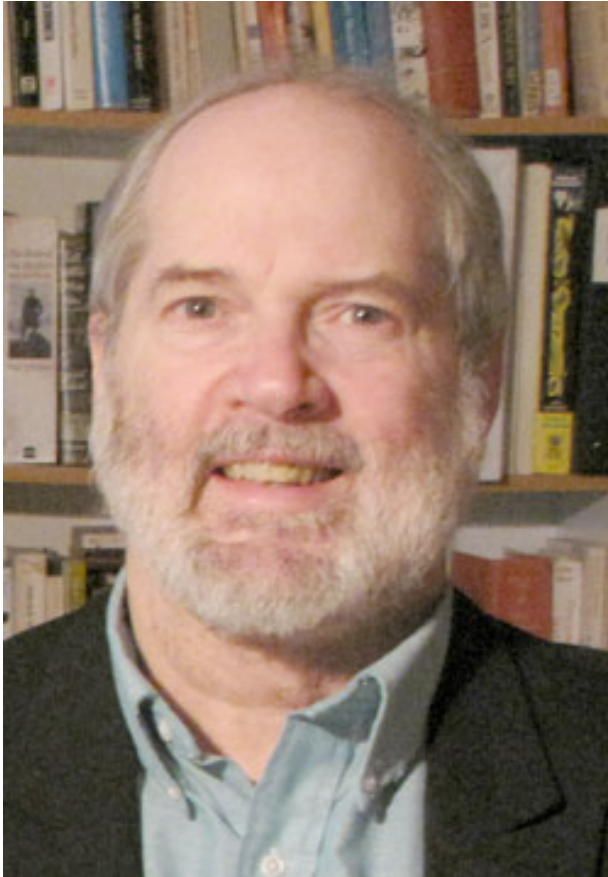
**Initiative webinar tomorrow,
September 23rd, @ 2:00pm EDT**



PRESENTER

Ranger Kidwell-Ross

Founder and Owner, WorldSweeper.com and the World Sweeping Association



- **Over thirty years at the center of the industry**

Founded WorldSweeper.com and the World Sweeping Association, and established *American Sweeper* magazine, the first U.S. power sweeping publication.

- **International reach**

Has contributed to sweeping operations in more than a dozen countries.

- **Environmental testing and pollution control**

Co-designed the national sweeper test for a \$1.2M Sea Grant/NOAA project on removing microplastics from street pavement.

- **Technology and community engagement**

A long-standing advocate for systems that improve sweeping efficiency and citizen participation.

- **Industry recognition**

The first power sweeping professional inducted into the U.S. Pavement Hall of Fame.

Enhanced Street Sweeping

How to build a maximum-value sweeping program for pollutant removal and stormwater compliance

Presented by Ranger Kidwell-Ross, M.A.

Principal and Editor, WorldSweeper.com · Director, World Sweeping Association



WHY ENHANCED SWEEPING

The Cheapest Pound of Pollutant You'll Ever Remove

A 2007–2019 study across 14 Florida MS4 locations compared the cost of removing nitrogen (TN), phosphorus (TP), and particulate matter (PM) using different stormwater BMPs. Street cleaning was, by far, the least expensive method for every pollutant measured.

Cost per pound removed (TN / TP / PM), 2020 CPI-adjusted

BMP Treatment Train	TN \$1,068	TP \$37,243	PM \$29.70
FL Statewide BMP Database	TN \$2,171	TP \$11,995	PM \$46.84
Screened Hydrodynamic Separator	TN \$4,261	TP \$10,521	PM \$4.60
Baffled Hydrodynamic Separator	TN \$3,450	TP \$8,511	PM \$3.43
Catch Basin Cleaning	TN \$1,016	TP \$1,656	PM \$0.70
Street Cleaning (lowest cost)	TN \$189	TP \$294	PM \$0.11

2X

A 2024 controlled pickup performance test for the City of LA found a regenerative-air sweeper removed pollutants more than twice as efficiently as a mechanical broom sweeper.

Air sweepers are now widely seen as the most cost-effective remedy for pavement-based pollutant removal.

Sweeper Type is Extremely Important

Regenerative air sweepers have been documented picking up 90–95% of material on pavement — including the small-micron particles that carry the most pollution.

LIMITED USE



Mechanical Broom

- No vacuum component — debris is tossed onto a conveyor belt
- Reserve for freeways/no-curb areas and heavy post-storm accumulation or as a tandem sweeper followed by air

SITUATIONAL



Vacuum

- One type of air machine; strong on porous surfaces
- Continually exhausts used air — can affect local air quality
- Competitive to regenerative air

RECOMMENDED



Regenerative Air

- Recirculates its air supply internally
- Best overall pickup of fine, heavily-polluted particles

Vehicle Removal is of Paramount Importance

The only way to maximize pickup of pavement-based pollutants is to move vehicles out of the sweeper's path.

30–60%

increase in particulate pickup
when vehicles are mandatorily
removed vs. swept around

*1 parked car blocks 3 curb lengths.
2 spaced cars can block 6.*

Parking-fine revenue can offset the
cost of a removal program while
significantly improving pickup.



Sample the street dirt

Test dirt in the current watershed to calculate the pollutant load being left on the road because vehicles weren't moved.



Test before you invest

Have the operator use a counter to log how many car-lengths are missed when removal is voluntary — quantify what's really being left behind.



Notify, don't just enforce

Phone/computer apps alert residents that a sweeper is coming — and again once it has passed — so cars can be moved and re-parked quickly.



Streamline enforcement

Camera-based ticketing on the sweeper itself transmits directly to the ticketing agency, cutting the cost of enforcement while still funding the program.

Getting the Basics Right

1 Speed

3–6 mph for heavy accumulation. But 8–10 mph only cuts pickup 10–15% — often worth it to cover more curb-miles per day.

2 Frequency

Match to land use: weekly, twice monthly, or monthly. Daily/twice-weekly downtown sweeping is often wasteful for a goal of pollutant removal.

3 Pavement Condition

Poor/fair pavement traps dirt in cracks and depressions. Seal cracks, support repaving, and prioritize curbed streets — that's where dirt accumulates.

4 Maintenance

Well-maintained air machines outperform neglected ones. Replace worn gutter brooms, keep engines and moving parts in good order.

5 Tandem Sweeping

In very heavy debris, run an air sweeper behind a mechanical broom to recover the fine, toxic particulates the broom leaves behind. Best overall results.

6 Data & Modeling

Use tools like SIMPTM or SWPT to model removal and allocate resources by data — not by habit.

A PRACTICAL FRAMEWORK

Maximizing Your Sweeping Program

Four steps to move from a routine schedule to a data-driven pollutant-removal program: sample; quantify; model; and, match your equipment to the model.

Find Out What's Really on the Street

Before changing anything, establish this baseline: How much of your target pollutant is actually in the street dirt along a given route?

1 Sample the route

Collect street-dirt samples from several representative spots along a sweeping route — vary land use, traffic, and canopy cover.

2 Test for target pollutants

Lab-analyze the samples for the pollutants you care about most (e.g., phosphorus, nitrogen, zinc, copper, microplastics and emerging contaminants). Lab analyze for particle size distribution and the pollutants you care about most.

3 Weigh what the sweeper picks up

Record how much material (by weight) the sweeper actually collects on that same route.

4 Calculate pounds removed

Multiply the pollutant concentration in the dirt by the total weight picked up to get pounds of that pollutant removed per sweep.

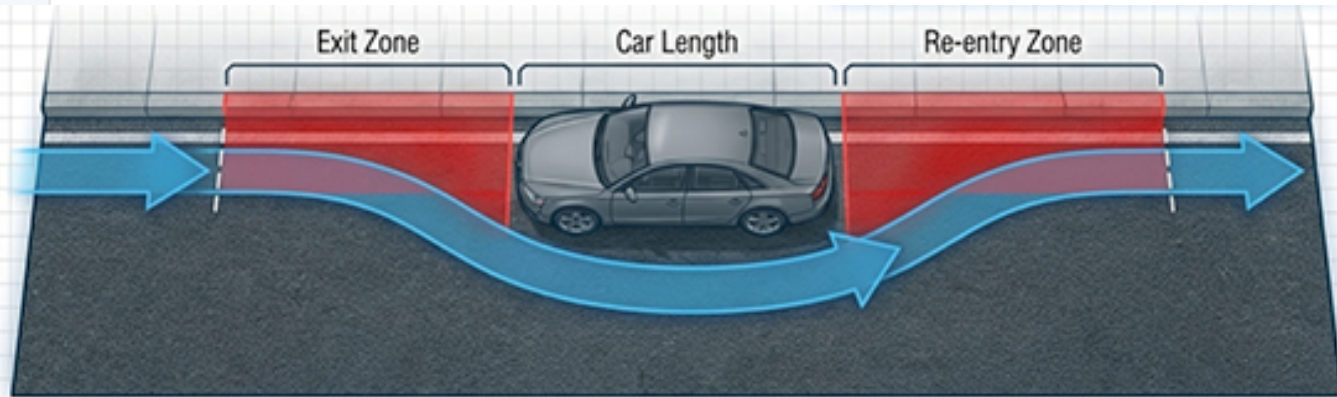
Result: a defensible, site-specific number for pounds of pollutant removed per sweep — the foundation for every calculation that follows, including future credit applications.

Quantify the Cost of Parked Cars

A simple clicker turns a familiar operational headache into hard data on pollutant removal you're leaving behind.

3 sweeping spots missed

(the exit zone, the car's own length, and the re-entry zone)



1 parked car blocks 3 full curb lengths. 2 spaced cars can block 6.

The Method

- Give the operator a hand counter for one representative route.
- Click once for every solitary parked car encountered — each one costs ~3 curb-length “spots” not swept.
- Multiply car count $\times$ 3 to get total curb-spots missed on an average day.

The Math

Pounds picked up on an average day $\div$ curb-spots actually swept = pounds per spot.
Multiply by spots missed to parked cars = pollutant left on the street because of parking.

Model When and Where to Sweep

Pollutant-transport models like SIMPTM and SWPT simulate accumulation, rain wash-off, and sweeper removal — so scheduling can follow the weather, not the calendar.

Fixed Biweekly Schedule (every two weeks)

Sweeps every two weeks regardless of rain. Often sweeps after the biggest pollutant load has already washed off — or misses a storm entirely.

~50% reduction in stormwater pollution
vs. no sweeping

Rain-Forecast-Based Schedule

Sweeps as close as possible ahead of a forecast rain event, removing material before it can wash off into receiving waters.

~15-20% increase over the fixed schedule
sweeping — often using half the
sweeping (or less)

The models also answer “where to sweep”

Layer in GIS data — land use, tree canopy, traffic volume — to prioritize routes. Nutrient concerns (phosphorus, nitrogen) point to canopy-covered and residential streets; heavy-metal concerns point to high-traffic commercial and industrial corridors. High-priority routes get swept ahead of storms; lower-priority routes stay on a routine schedule. Sweeping every two weeks in Lavonia, MI, resulted in a 30% reduction in nutrient runoff and up to 70% less heavy metal.

Match Sweeper Technology to the Model

This will allow factoring in which sweeper technology is assigned to a route — because mechanical broom, regenerative air, and vacuum machines differ sharply in their ability to capture the smallest, most-polluted particles.

only 25%

of material on a street may be
250 microns or smaller —

but can be 60%

of the pollutant load. That fine
fraction is also the most likely to
wash off or go airborne.



Track by particle size & pollutant

Model outputs by particle-size range and, within those, specific pollutants — phosphorus, zinc, copper — rather than one blended number.



Quantify annual reductions

Convert that into pounds reduced per year, in a form that can plug directly into a crediting framework where one exists (or is being developed).



Assign the right machine to the right route

A high-nutrient residential route may call for a regenerative-air sweeper; a heavy-debris corridor may still need a mechanical broom pass first.

Turning Data Into Regulatory Credit

Where credits are moving

- Over 70% of state MS4 permitting agencies do not require or provide a nutrient or sediment reduction credit for street sweeping, regardless of whether there is an applicable TMDL.
- The Clean Streets = Cleaner Water initiative (led by NMSA's Seth Brown and Greg McPartlin) is working toward guidance for a nationwide crediting framework.
- Current credit amounts by most MS4s are not realistic

up to 700%

more effective at removing phosphorus and nitrogen from the runoff stream than the next best BMP (catch-basin cleaning), per recent street-sweeping data — a strong basis for enacting permit-credit regulations.

Over 1,000 U.S. cities are currently out of compliance with runoff programs — better data, easier access, and stronger decision tools can help close that gap.

Policy Changes That Could Accelerate This Work

1 Regulatory credits

More nuanced credit systems that differentiate sweeper type, frequency, and program elements.

2 Standardized testing

Adopted testing procedures — e.g., through ASTM or NMSA's STEPP program — for reliable, comparable data.

3 Performance-based rules

Moving from simple checkbox compliance toward outcomes that reward what actually removes pollutants.

4 Funding alignment

Recognizing sweeping as an effective BMP opens doors to funding such as the Clean Water State Revolving Fund.

5 Technology-specific guidance

Guidelines that distinguish mechanical broom from regenerative air and vacuum equipment.

6 Pollutant-specific guidance

Policies targeting microplastics and tire-wear particles specifically, driving innovation in sweeping practice.

Microplastics: The Clean Streets, Clean Seas Project

City of Santa Barbara, USC Sea Grant, and UC Santa Barbara — funded by a \$1.26M NOAA grant — are testing how well sweeping removes microplastics before they reach creeks and oceans.

Regardless of sweeper type, water use, or speed, microplastics and tire-wear particles are picked up at equal or greater rates than ordinary street dirt.

Tire wear is the hard part

Tire-wear particles — a major share of microplastic pollution — are removed at a lower rate than other microplastics, and overall efficiency drops as particle size shrinks.

The operator matters most

Operator skill has a greater impact on removal performance than which machine is used.

6PPD-quinone

A tire-preservative byproduct now linked to acute toxicity in coho salmon, even at very low concentrations — raising the stakes for tire-wear capture.

Sweeping may outperform assumptions

SCCWRP's new rainfall-simulator test method suggests street sweeping may reduce runoff contamination **significantly** more than the traditionally assumed 5–10%.

Why Educating Citizens Pays Off



Improved compliance

Informed residents move cars for sweep days more reliably.



Cleaner streets

Full curb access means the sweeper actually cleans the entire curb line.



Environmental buy-in

Understanding the pollution link builds a sense of shared responsibility.



Public safety

Clean streets reduce slip/fall hazards and improve driver visibility.



Community pride

A well-informed community takes more pride in how its streets look.



Fewer fines & tows

Clear schedules and reminders reduce enforcement friction.



Cost savings

Preventing debris buildup avoids costlier repairs downstream.



Efficient resourcing

Predictable compliance reduces the need for repeat sweeps.

PRESENTER

Andrew Sheerin

Principal Engineer, Fathom Solutions



- **Doctorate built on this exact question**

PhD in Civil and Environmental Engineering, University of Rhode Island. His dissertation developed a data-driven approach to reducing stormwater pollution through enhanced street sweeping.

- **Built the Storm Water Pollution Tracker**

A GIS and modeling platform that prioritizes street segments, simulates pollutant transport, and optimizes sweeper routing for any state or municipality.

- **Involved in the national conversation**

Chairs the CS=CW steering committee.

- **Focus on purpose-built, data-driven decision support tools**

Has built modeling and analysis tools across stormwater, groundwater, air quality, and carbon accounting, turning technical data into answers people can actually act on.

- **Founded Fathom Solutions**

To put these tools in the hands of the municipal programs that have to report results.

How to feasibly implement Enhanced Street Sweeping

What I'll cover

- 1 Regulation and technology have to advance together**
and how much credit those states actually give
- 2 Three ways to measure what a sweeping program removes**
and why the strongest one should earn the most credit
- 3 What the data says about the drivers of urban street pollution**
and how it answers where to sweep
- 4 Using models to simulate pollutant transport**
and how they answer when to sweep

Regulation and technology have to move together

REGULATION

What a permit will accept

Permit language that names sweeping

An adopted crediting method

Reporting and verification rules



TECHNOLOGY

What we can actually measure

Data on what is on each street

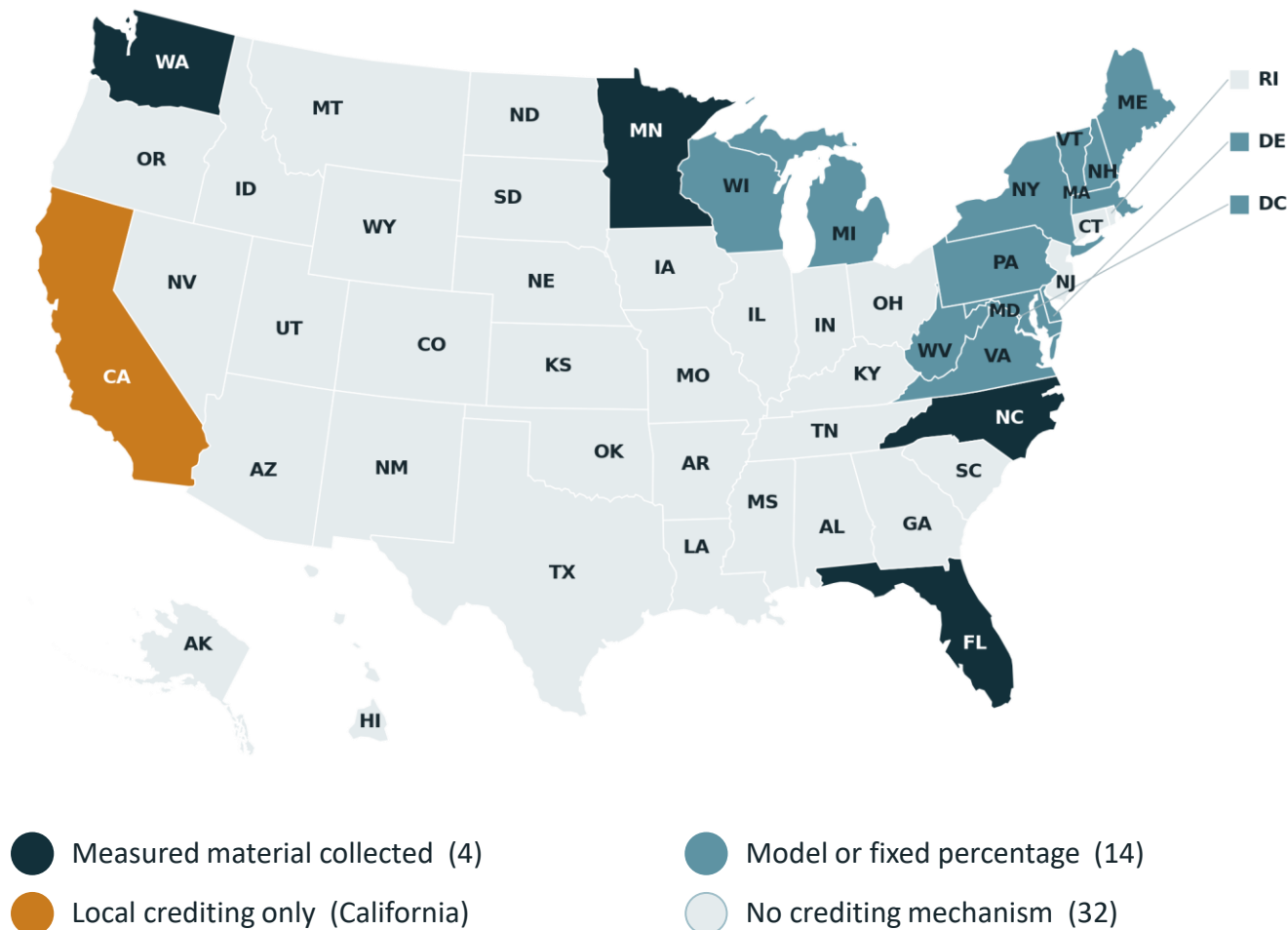
Models simulate and optimize sweeping activities

Equipment and sampling that measure recovery



Neither track gets there alone. A crediting method with no way to produce a local number goes unused. Better local numbers with no method willing to accept them never reach a permit. The gap closes only when both sides move at the same time.

Where sweeping earns credit — and how much



42% of state MS4 general permits **say nothing** about street sweeping.

32% of states credit it.

Model or fixed-percentage credit

Chesapeake Bay: advanced sweepers earn 2–21% TSS, 1–10% TP and 0–4% TN by technology and frequency; mechanical brooms earn essentially nothing. EPA Region 1 (NH, MA): factors of 0.01–0.10 on the impervious nutrient load. Wisconsin: vacuum only, 5–15%.

Measured-mass credit

Florida converts weighed sweepings at 563 mg/kg TN and 361 mg/kg TP, using each permit group's own sampled moisture and bulk density. Minnesota calculates phosphorus credit from measured swept mass. **No percentage ceiling. You are credited for what came off the street.**

What a crediting method has to produce

1

Standardized

The same method in two neighboring cities, so their numbers mean the same thing.

2

Defensible

Every assumption traceable to a source a reviewer can open and check.

3

Site-specific

Built for the region it is used in. Pollutants of concern and rainfall patterns differ across the country, and the method has to follow them.

4

Repeatable

A permit is a yearly reporting obligation, not a one-time study.

All four depend on one thing: how is sweeping performance measured?

Standardization, defensibility, regional fit and repeatability all follow from what a program actually counts. So the first question is not how much credit sweeping should earn. It is what we are measuring in the first place.

Three ways to measure sweeping performance

TIER 1

Mass of pollutant recovered

Sweep, then sample the recovered material and analyze it. Concentration averaged over random samples.

To make it routine

Needs a written protocol: how many sub-samples, which constituents, how often. Chesapeake requires one route sample a year — a start, not a protocol.

TIER 2

Mass of material collected

Dry mass, with moisture content and particle size distribution characterized periodically.

To make it routine

Needs onboard or scale-house weighing, and one agreed moisture and particle-size method, so dry mass is comparable between cities.

TIER 3

Curb-miles swept

An activity record. It carries meaning only alongside what kind of network was swept.

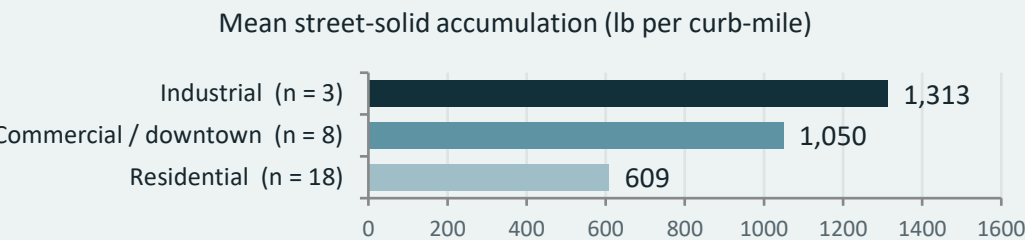
To make it routine

Needs route attributes attached to every record: sweeper class, speed, number of passes, parking condition, land use, canopy, days since rain.

The Drivers of Urban Street Pollution

Land use

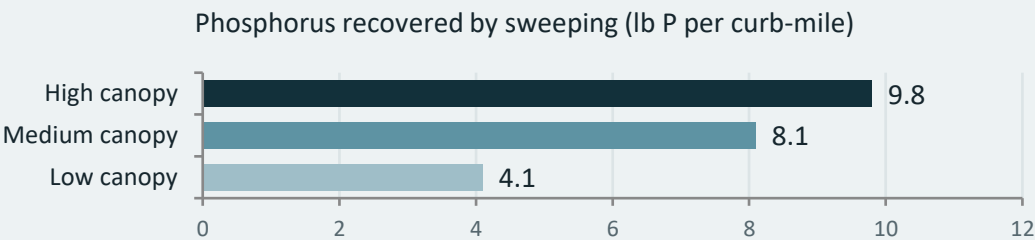
Indicates the total load and pollutant matrix on the street.



29 curb-mile records, full range 130–4,788. Sartor & Boyd (1972); Pitt (1979); Selbig & Bannerman (2007); Sorenson (2012).

Tree canopy

Indicates the organic and nutrient load, seasonally.



Route-level sweeping records, Minneapolis–St. Paul, 2011–2013. Kalinosky et al. (2014).

Traffic

Sets the vehicle-derived load, and it scales with vehicle-miles.

10× more tire-wear particles and microplastics on high-traffic streets (>30,000 ADT)

5.6–14.5 mg of tire-wear PM₁₀ per vehicle-mile, light-duty vehicles. Brake wear adds 3.2–14.2 mg more

Mierzyńska et al. (2024), paired high- and low-traffic streets; Ntziachristos et al. (2014), PM₁₀ emission factors.

Season

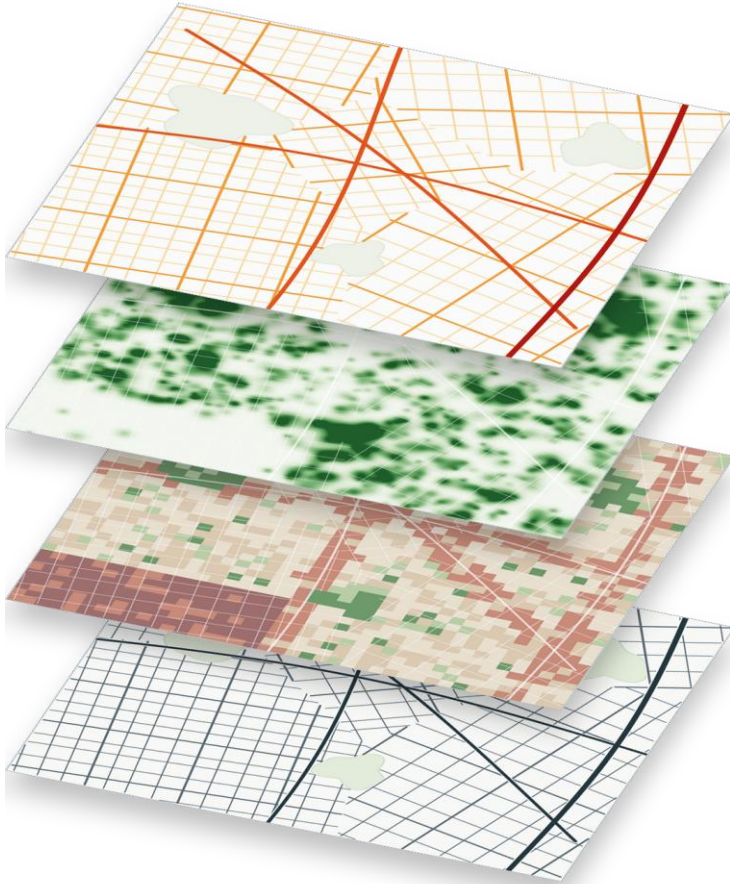
Recovered mass peaks in spring; nutrient load peaks in autumn.

0.19 → 3.5 lb of nitrogen recovered per curb-mile per month, from a low-canopy August route to a high-canopy October route

125–500 lb of sand and grit applied per lane-mile per winter treatment

Kalinosky et al. (2014), monthly route sampling; NHDES & UNH T2 (2022); Hobbie et al. (2023), 3 years of route-level nutrient sampling.

GIS Data Serves as a Proxy for the Drivers



Traffic

HPMS annual average daily traffic

Tree canopy

1 m canopy height model

Land use and cover

NLCD, 30 m raster

Road network

OpenStreetMap centerline, split into 200 ft segments

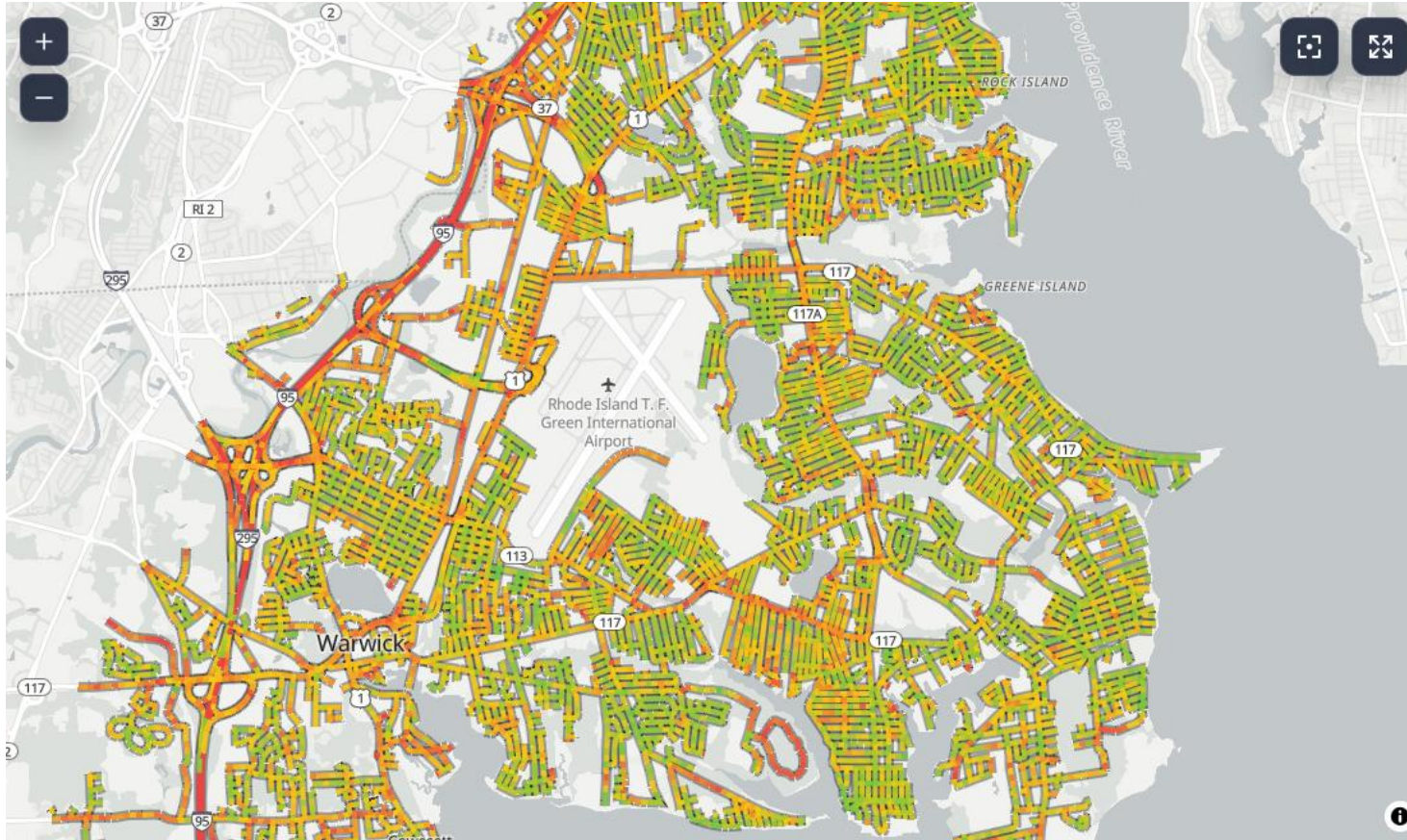
What these layers are

Indicators of what is likely on the pavement — **proxies for the drivers**. They help identify which streets probably carry the heaviest load. They are available nationwide, at no cost.

Limitations

HPMS traffic on local streets is scarce, so we need to extrapolate. NLCD at 30 m cannot see inside a block. **Local data enrichment** is needed to turn this baseline into something defensible.

Which streets to sweep with the budget you have



Turning a ranking into a route

- **Score every 200 ft segment** on land use, canopy and traffic
- **Prioritize the whole network** on one consistent scale
- **Sweep the highest-priority segments first**, ahead of large storms, as resources allow
- **Re-prioritize for the season** and the pollutant you're targeting

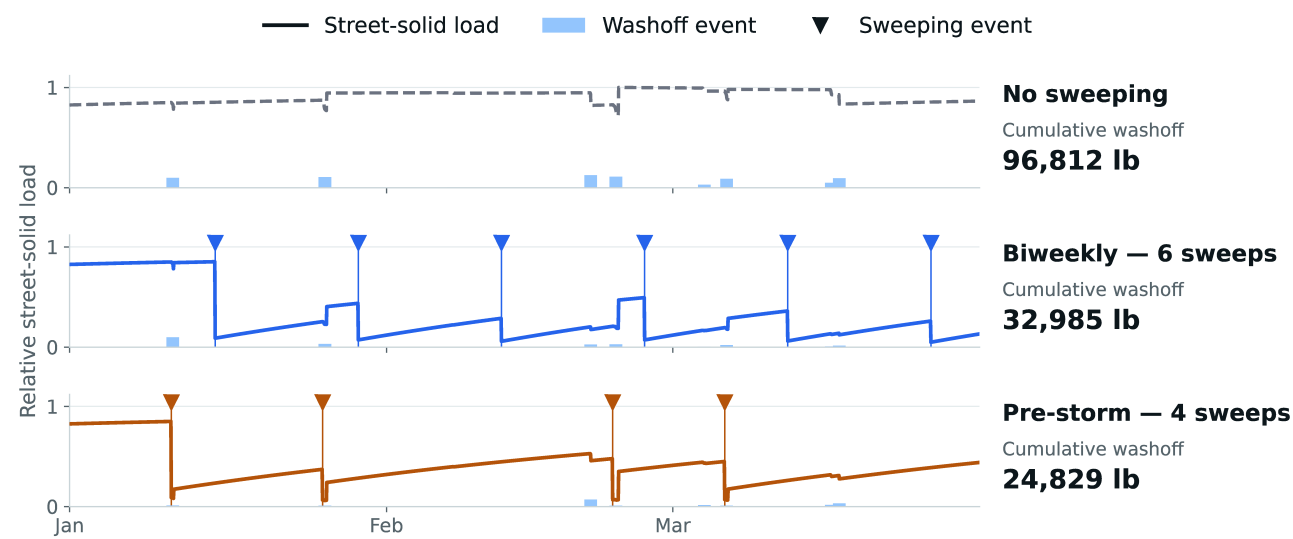
- Prioritization helps decide **where to sweep**
- Next, we will discuss **when to sweep**

Warwick, RI road network scored for a **heavy-metal focus**: industrial/commercial land use and traffic both weighted **higher** than canopy coverage. Priority is a within-network relative rank, not a pollutant mass.

Timing is the crucial factor: sweep before the storm

What a model does: simulate material accumulating between storms, then compare a sweeping schedule against a no-sweeping baseline. It is a scheduling tool — it answers when and where to sweep, not how much a permit should credit.

SWPT/SIMPTM buildup–washoff simulation, Warwick, RI road network (434 road-miles), Jan 1 – Mar 31, 2026, observed rainfall (8.7 in, 9 storms)



Fixed Interval Sweeping

50-60% washoff reduction

washoff reduction from a twice-monthly schedule, against a no-sweeping baseline

Pre-Storm Sweeping

~15% relative increase

washoff reduction when the sweep is timed ahead of an intense rain event

Cost Efficiency

~40% cheaper per pound removed

when implementing pre-storm sweeping with 33% fewer sweeps (only 4 sweeps instead of 6)

Why timing is essential: if the goal is reducing stormwater pollution, street material has to be removed with respect to storm events, not on a fixed calendar. A sweep that misses the storm buys nothing downstream.

Models do not replace measurement

WHAT THE MODEL ASSUMES

- How fast material rebuilds after a sweep
- How much of it a storm can actually mobilize
- How much the sweeper picks up, by particle size
- How much pollutant each size fraction carries



WHAT SAMPLING MEASURES

- Street dirt loading on your own routes
- Particle size distribution of that material
- Pollutant concentration on that distribution
- Mass collected per sweep

Calibrated parameters are not stable

Urban loading is heterogeneous. Buildup and washoff coefficients shift with land use, geography and season, and the same catchment has produced coefficients differing by factors of several between calibration windows.

The real world is hard to replicate

Parked cars close off the curb line. Pavement condition changes what a sweeper can lift. Rain forecasts are wrong often enough to matter. Every one of them erodes the performance a model assumes.

Models and measurement go together

A model drifts unless measurement pulls it back. A continuous stream of field data — mass recovered, particle size, curb access — is what keeps it grounded, and that is where the technology is headed.

What comes next: instrumenting the sweep

● Equipment

Choosing the right equipment for the job. Regenerative-air and vacuum machines recover the fine material that brooms leave behind. Running a broom pass and an air pass in **tandem** is the most promising configuration.

● Curb access sensing

Detecting parked cars and obstructions, so the record shows what the sweeper could actually reach. Curbside parking is estimated to cost 30–60% of removal.

● Onboard telemetry

Vehicle speed, broom-down state, and hopper fill as continuous data streams, so a route record becomes a performance record automatically.

● Verification

Standardized performance testing on the equipment side and field sampling on the measurement side. Together they are what turns a model output into something a permit can accept.

What to take away

- 1 Credit exists, but there are gaps**

About a third of states credit sweeping. Most cap it at a modeled percentage near 10%. The states that credit measured mass do not cap it at all.
- 2 Credit should follow measurement**

Three tiers: pollutant mass recovered, material mass recovered, curb-miles. Better measurement, more credit.
- 3 The load is predictable before you measure it**

Land use, canopy, traffic and season decide it, and all four open-source. That gets any location a pollutant proxy baseline.
- 4 Timing is where the reduction is**

Sweeping ahead of the storm is what produces measured load reductions — and it is the cheapest pound in the program.
- 5 Models and sampling go together**

A model schedules the sweep and helps with decision-making. Sampling makes the number defensible. Neither is a substitute for the other.

Roger's Enhanced Street Sweeping bucket list

A lot needs to happen before enhanced street sweeping is implemented across the nation.



Integrate SIMPTM with the Storm Water Pollution Tracker

Put a calibrated, physically based simulation engine underneath the prioritization and crediting tools.



Create a free, citizen-friendly mobile notification application

Get vehicles off the curb line by making compliance easier than a ticket.



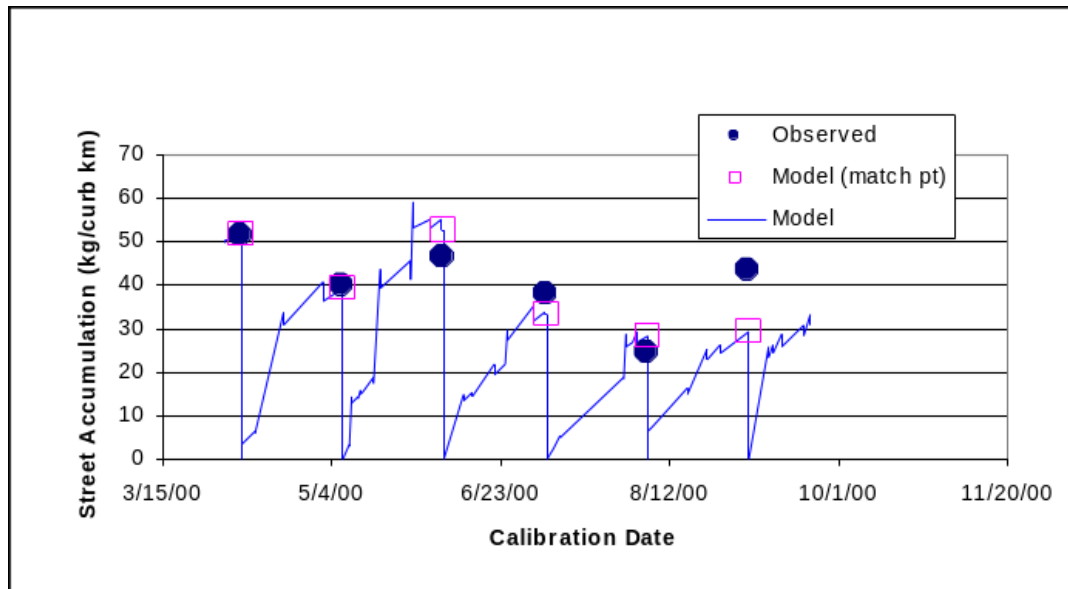
Standardize pollution credits for MS4 and TMDL compliance

Replace unrealistically low credits with numbers that match what sweeping actually removes.

Integrate SIMPTM with the Storm Water Pollution Tracker

SIMPTM becomes the simulation engine for SWPT

- Simulates the continuous accumulation and washoff of particulate matter and its associated pollutants
- Simulates pollutant reductions from specific enhanced sweeping operations, by mass and by concentration



WHY SIMPTM

Physically-based washoff

Sediment transport equations for overland and gutter flow, with shallow-flow hydraulics. SWMM, WinSLAMM and P8 do not work this way.

Wet weather washon

Intense storms carry sediment off impervious areas and onto the street. Only SIMPTM and SWPT account for it.

So the others run low

Without washon, a model misses street dirt that is genuinely available to wash off — and understates what sweeping removes.

WHAT THE INTEGRATION UNLOCKS

- Repaving credited as a water-quality practice
- Regional differences in sweeping effectiveness
- Realistic crediting tools for MS4 and TMDL compliance

A free, citizen-friendly notification app

Everything existing apps do, plus two alerts that change behavior at the curb.

- **Scheduled, and cancelled**

Reminds residents when sweeping is coming, and tells them when it has been called off, so nobody moves a vehicle for nothing.

- **A mile out**

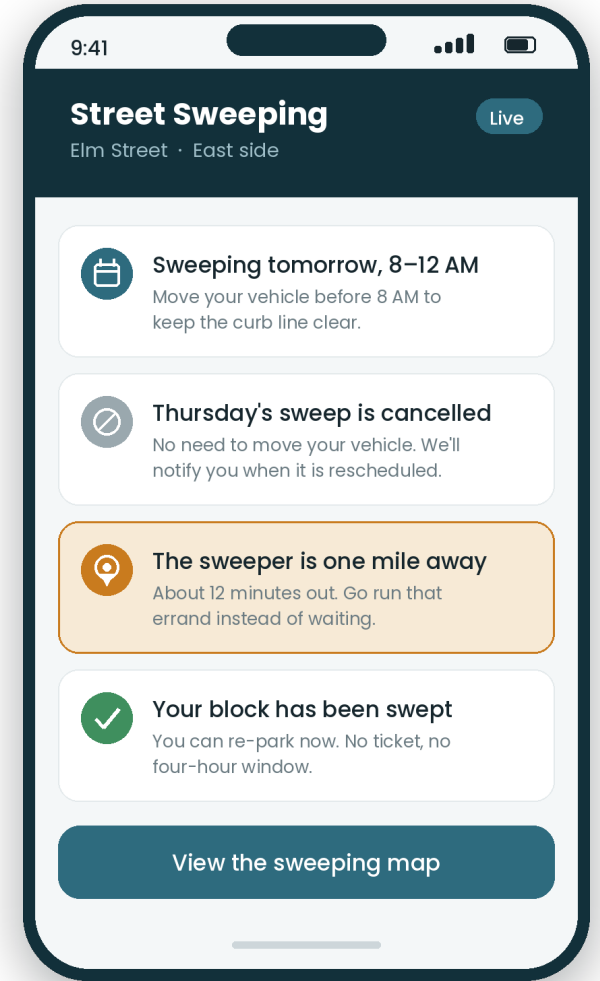
Alerts you when the sweeper is a mile away, so you can run an errand instead of holding a four-hour parking window.

- **And once it has passed**

Tells you the moment your block has been swept, so you can re-park straight away.

It only works paired with enforcement. Cameras on the sweeper identify the vehicles that actually blocked its path, so residents are not ticketed simply for being parked inside the window — and the program funds itself.

The ask: Southern California municipalities that already require mandatory vehicle removal and want to join a grant-funded project to build and test this app.



Standardize pollution credits for MS4 and TMDL compliance

Andrew's review identified every state that offers any pollutant-reduction credit for sweeping. **Outside the handful that credit measured mass, those credits are unrealistically low.**

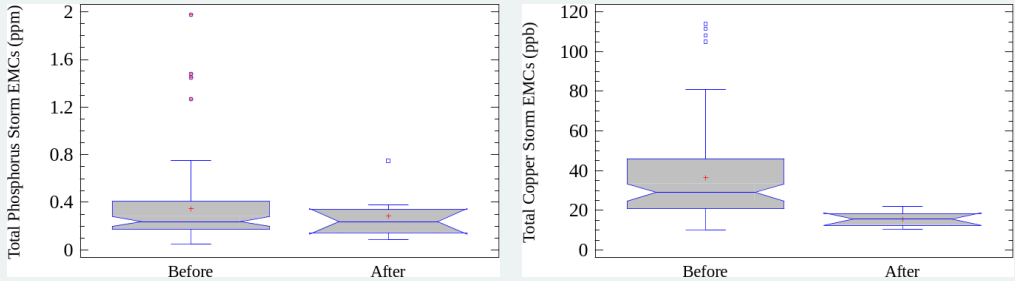
What enhanced sweeping actually removes

Mass load reductions, defensible from field studies

Twice-a-month enhanced sweeping	50–60% TSS
Storm-driven enhanced sweeping	60–70% TSS
Nutrients	30–40%
Heavy metals	50–70%+

Event mean concentration reductions for TSS are smaller than these mass reductions, but still well above what is credited today.

Measured, not modeled



Storm event mean concentrations before and after an enhanced sweeping program. Total phosphorus, left; total copper, right.

Field monitoring keeps landing well above the credits on the books.

Standardizing the credit is how that gap finally closes.

SAVE THE DATE

The Sweeper Summit



SWEeper SUMMIT
— 2026 —

**ONE SUMMIT.
TWO INDUSTRIES.
ONE NATIONAL DISCUSSION.**

★

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MEETS **WATER QUALITY**

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CLEAN
STREETS
STRONGER
COMMUNITIES

Questions? Get in Touch!

Be guided by the knowledge that “street sweeping is the first line of defense for pavement-based pollutant removal.”

Want help applying enhanced street sweeping to your program? Reach out to any of us for assistance.



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