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Materials will be available at:
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Shifting Gears: Policies for a More Sustainable Highway System

The Next Era of Transportation and Infrastructure

Friday, June 13. 2025

About EESI

EESI
Environmental and Energy Study Institute

Nonpartisan Educational Resources for Policymakers

A bipartisan Congressional caucus founded EESI in 1984 to provide nonpartisan information on environmental, energy, and climate policies

Direct Assistance for Equitable and Inclusive Financing Program

In addition to a full portfolio of federal policy work, EESI provides direct assistance to utilities to develop “on-bill financing” programs

Commitment to Diversity, Equity, Inclusion, and Justice

We recognize that systemic barriers impede fair environmental, energy, and climate policies and limit the full participation of Black, Indigenous, people of color, and legacy and frontline communities in decision-making

Sustainable Solutions

Our mission is to advance science-based solutions for climate change, energy, and environmental challenges in order to achieve ***our vision of a sustainable, resilient, and equitable world***

Policymaker Education

Briefings and Webcasts

Live, in-person and online public briefings, archived recordings, and written summaries

Climate Change Solutions

Bi-weekly newsletter with everything policymakers and concerned citizens need to know, including a legislation and hearings tracker

Fact Sheets and Issue Briefs

Timely, objective coverage of environmental, clean energy, and climate change topics

Social Media (@EESIonline)

Active engagement on Bluesky, Facebook, LinkedIn, X, and YouTube

Upcoming Briefings

EESI
Environmental and Energy Study Institute

The Next Era of Transportation and Infrastructure

Available Online
The Process and Path Forward for a Bipartisan Surface Transportation Bill
Towards Healthier Outcomes in Surface Transportation
Next Stop: Sustainable Public Transit and Mobility
Like Trains? Then Choo-Choose to Learn About Federal Rail Policy

Rapid Readout: The Latest on Budget Reconciliation
Recording Available Online

Shifting Gears: Policies for a More Sustainable Highway System
Today!

Beating the Heat: A 2025 Heat Policy Agenda
Tuesday, June 17, 2:00 pm - 3:00 pm

2025 Congressional Renewable Energy and Energy Efficiency EXPO and Policy Forum
Thursday, July 24, 9:00 am - 7:00 pm

Sign up for our *Climate Change Solutions* newsletter here: eesi.org/signup

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What did you think of the briefing?

Please take 2 minutes to let us know at:
www.eesi.org/survey

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***Post about the briefing*:**
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Friday, June 13. 2025

Move Minnesota

MOVE MINNESOTA ACTION

Minnesota's 2023-24 Legislative Wins for Transit & What's Ahead

EESI Online Briefing

Agenda

- Who We Are
- Regional Transportation Sales and Use Tax - Active Transportation
- Driving Down Emissions - Transportation Greenhouse Gas Emissions Impact Assessment
- Redefining Highway Purposes & Shifting Funding

Move Minnesota

Move Minnesota leads the movement for an equitable and sustainable transportation system that puts people first.

We are passionate about connecting communities, ending the climate crisis, expanding access to jobs and resources, and improving daily life for Minnesotans of all ages, races, incomes, and abilities.

move MINNESOTA

Move Minnesota Action

Move Minnesota Action is committed to building the grassroots and political power necessary to transform transit.

Launched in 2021 by Move Minnesota, we are growing our movement through **effective organizing, issue education**, and **electoral advocacy** in Minnesota.

MOVE MINNESOTA ACTION

OUR WINS: Transformative Transit Funding

Long-term, dedicated transit funding to improve transit across the Twin Cities metro

A new 0.75-cent metro sales tax will provide over $440 million for public transit and $24 million for active transportation per year.

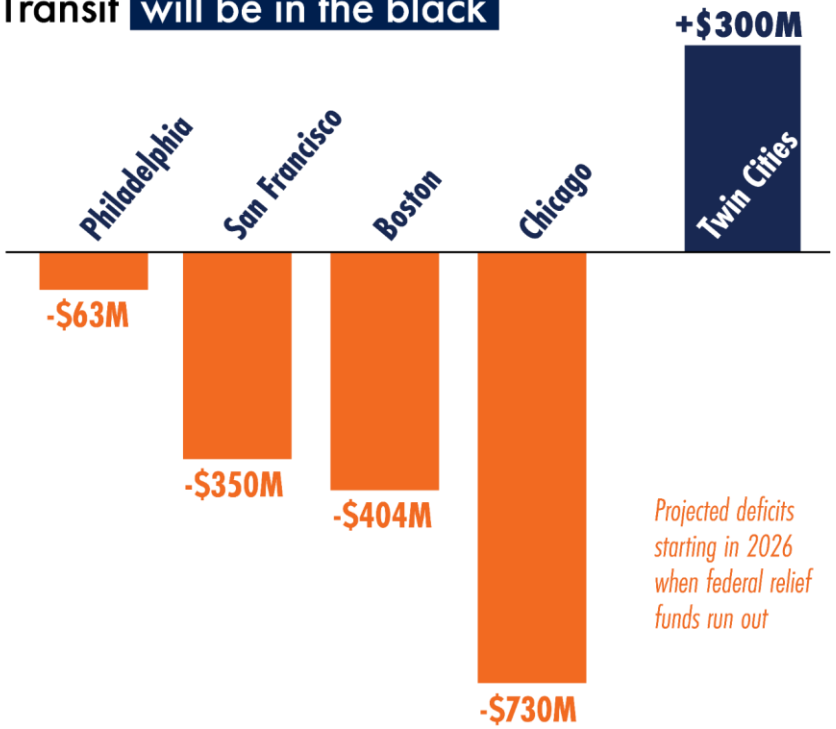
MOVE MINNESOTA

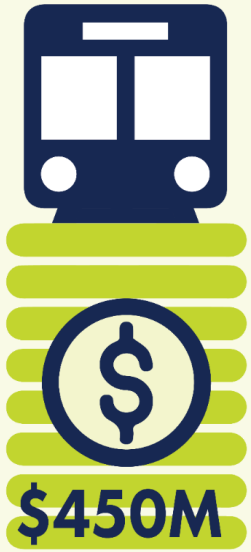
MOVE MINNESOTA ACTION

IMPACT

MOVE MINNESOTA ACTION

Other cities are facing massive deficits in coming years, but Metro Transit will be in the black





$450M

in new, ongoing funding can close the budget gap and provide...

5-minute headways:
$43 million annually for 5-minute headways at peak, 10 minutes off-peak, on 20 lines

50 miles of red bus lanes:
$30 million annually to maintain dedicated bus lanes

Fully electric fleet:
$93 million annually to electrify the full Metro Transit bus fleet in 12 years

Green lights for buses:
$4 million in one time costs, $750,000 annually to provide signal priority for core-route buses

Complete BRT network:
$130 million to build out 2 bus rapid transit lines to serve core & suburban communities per year

Great transit can lead to quality of life benefits like...

781,000 hours saved

per year across all rides and riders, replacing time spent on the bus with time on chosen activities

move

ACTIVE TRANSPORTATION

MOVE MINNESOTA ACTION

Initial fund distribution: 2024 Regional Solicitation

The Met Council directed the first allocation of these funds to those who applied for the 2024 Regional Solicitation in the following categories:

- **Multiuse Trail & Bicycle Facilities**
- **Pedestrian Facilities**
- **Safe Routes to School**

OUR WINS: Nation-leading Climate Policy

MOVE MINNESOTA ACTION

Cutting-edge policy to curb climate pollution from new transportation projects.

Move Minnesota and our partners successfully pushed for new state policies that require MnDOT and the Metropolitan Council to turn climate goals into action.

Move Minnesota

Move Minnesota Action

Setting the course

MOVE MINNESOTA ACTION

- **Work with transportation partners to identify and advance statewide strategies for reducing per capita vehicle miles traveled (VMT) 20% by 2050.** Opportunities to reduce vehicle miles traveled vary by geography, community and context. Work with partners to determine

216H.02 Greenhouse gas emissions control

Subdivision 1. Greenhouse gas emissions-reduction goal

(a) It is the goal of the state to reduce statewide greenhouse gas emissions across all sectors producing greenhouse gas emissions by at least the following amounts, compared with the level of emissions in 2005:

- (1) 15 percent by 2015;
- (2) 30 percent by 2025;
- (3) 50 percent by 2030; and
- (4) to net zero by 2050.

Setting the course

Minnesotans — and people across the nation[5] — are ready for a different approach. For instance, community engagement around the Minnesota Department of Transportation's draft Statewide Multi-modal Transportation Plan found that **"60% [of Minnesotans] support some type of vehicle miles traveled (VMT) reduction target."**[6]

Setting the course

MOVE MINNESOTA ACTION

HIGHWAYS

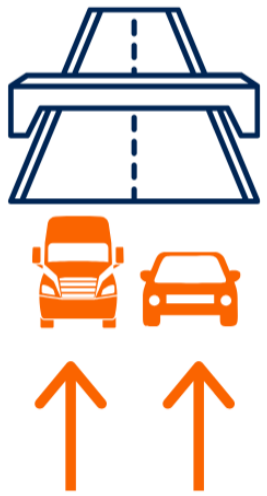
MOVE MINNESOTA ACTION

PROJECTS MUST MEET 2050 TARGETS TO

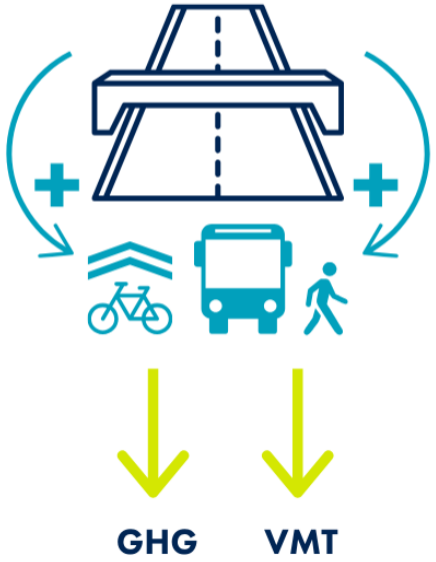
reduce per capita vehicle miles traveled (VMT) by 20%

reduce greenhouse gas emissions (GHG) by 100%

If it doesn't meet VMT and GHG targets, MnDOT must cancel or adjust the project...



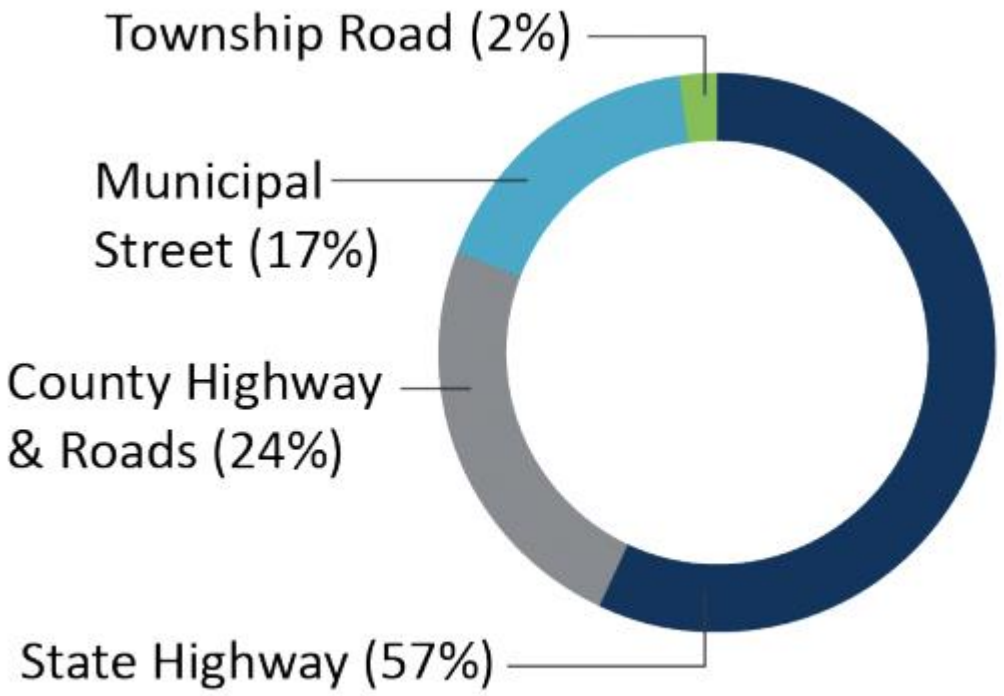
or offset the increased GHG and VMT by adding sustainable options, like bike lanes and/or new transit lines



HIGHWAYS

MOVE MINNESOTA ACTION

Percent of VMT by roadway system



12,000 miles of highways

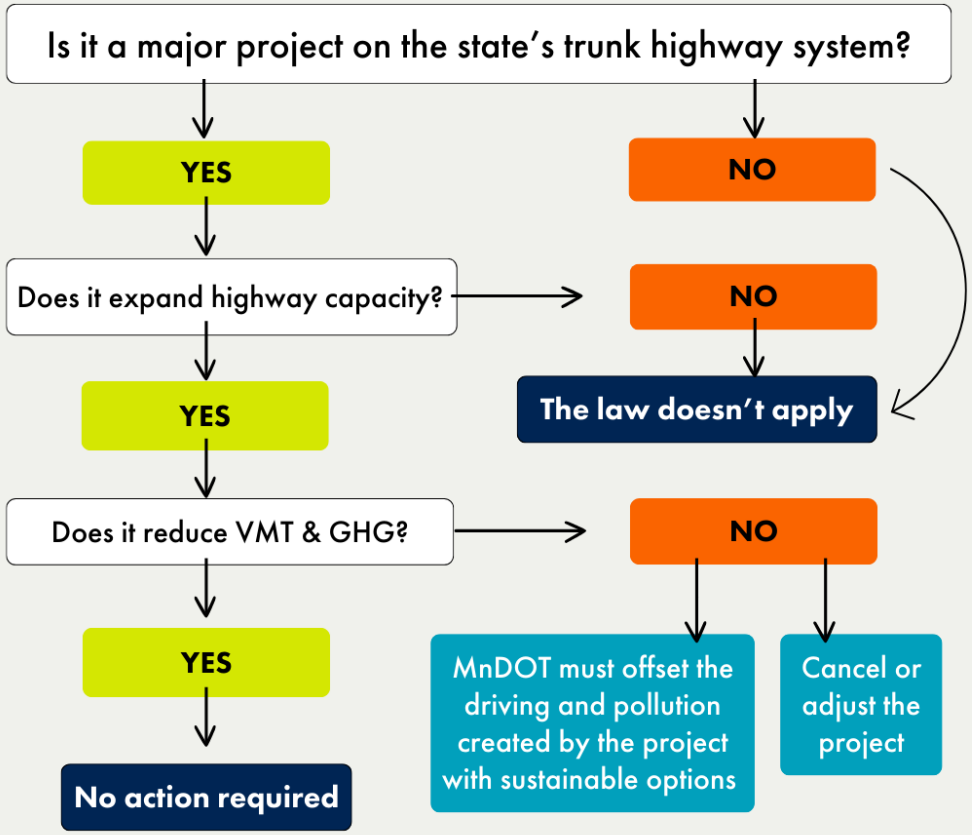
8% of all roadways but…

57% of VMT

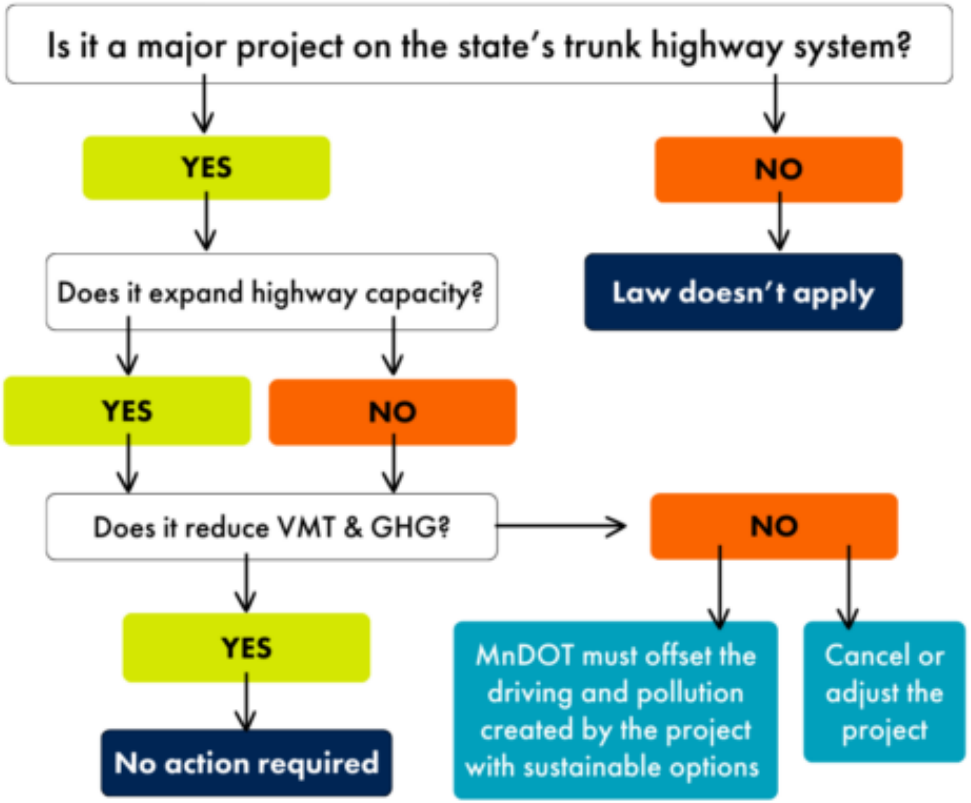
HIGHWAYS

MOVE MINNESOTA ACTION

2023 LAW



2024 LAW



HIGHWAYS

MOVE MINNESOTA ACTION

2023-2024 Report on

Transportation Greenhouse Gas Emissions Impact Mitigation Working Group

February 2024

Working Group

- Assessing impact of single project on VMT is challenging with existing models
- Assessing projects together in portfolio approach would allow more accurate analyses
- Local and regional governance bodies need technical assistance implementing this law
- Technical advisory committee would provide accountability and flexibility as implemented

IMPACT

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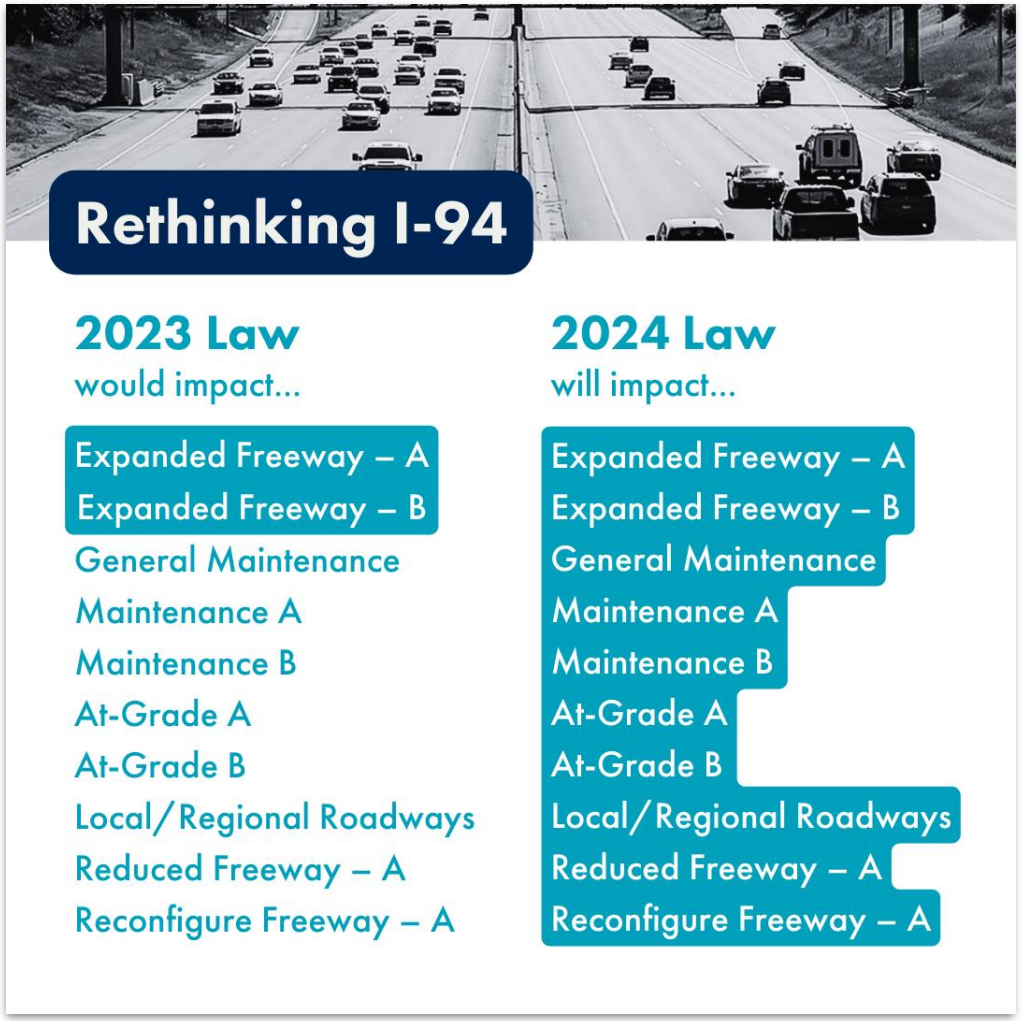


Project Example

- Expansion option would add 40,000 car trips per day
- At its pre-pandemic peak in 2019, the METRO Green Line light rail train carried 44,000 trips each day
- Expansion might require an offset on the scale of a new urban train line

HIGHWAYS

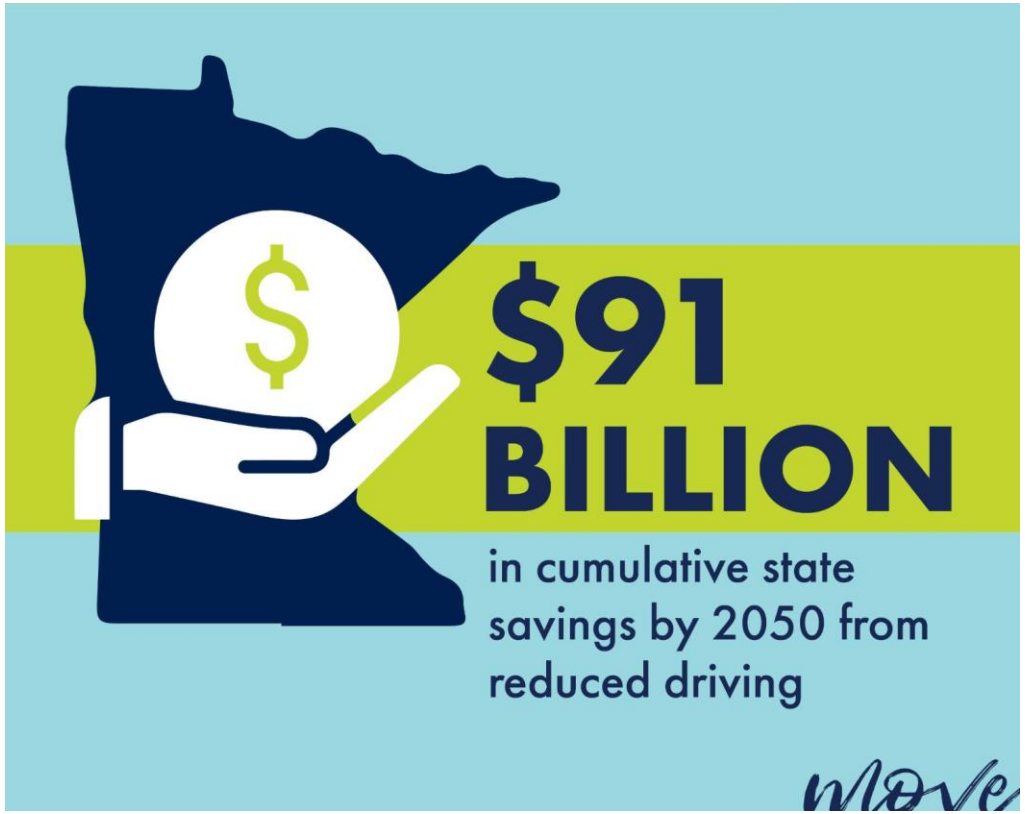
MOVE MINNESOTA ACTION

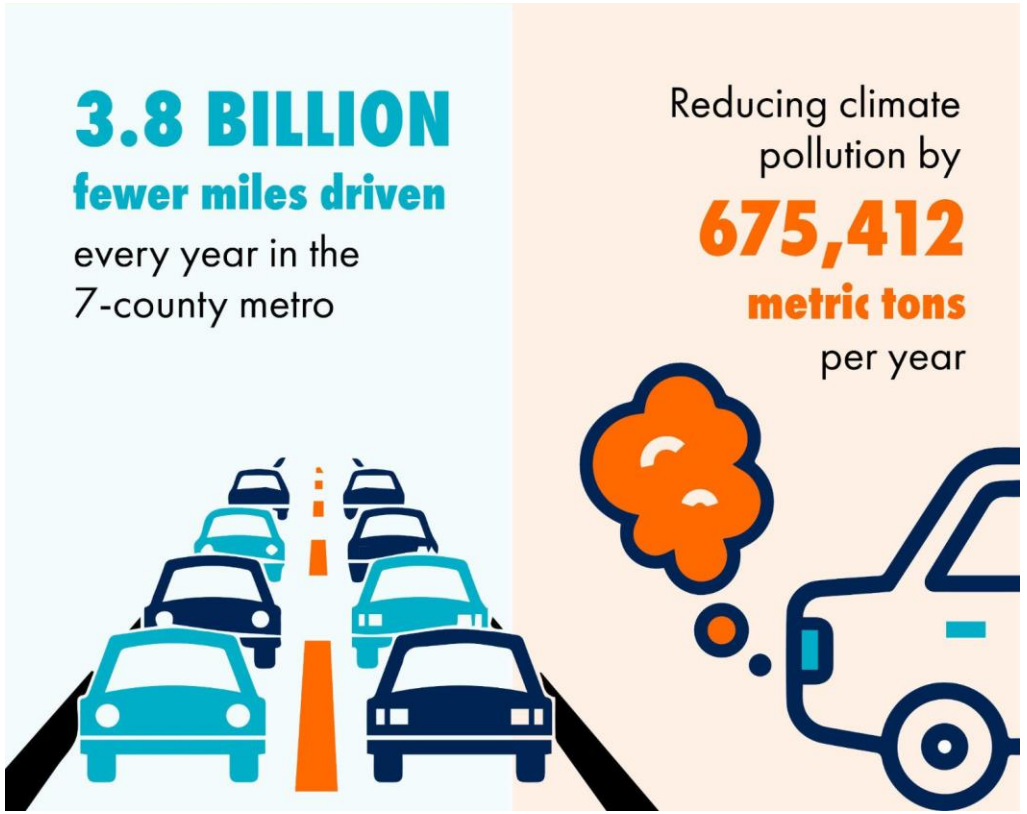
2024 law also

Allows the Minnesota Department of Transportation to collect greenhouse gas and vehicle miles traveled **data from cities and counties across the state**—a major first that will enable Minnesota to expand this law to *all roads in the state* in the future

MEETING VMT GOALS =

MOVE MINNESOTA ACTION





TIMELINE

Now until 2027:

MnDOT will **develop a model** to measure and predict vehicle miles traveled impacts of new highway projects—this model will be able to measure the ripple effects of highway projects on road systems throughout the state

February 1, 2025:

Assessment and mitigation requirements for trunk highway capacity **expansion** projects take effect

August 1, 2027:

Assessment and mitigation requirements for the full **portfolio** of Minnesota trunk highway projects take effect

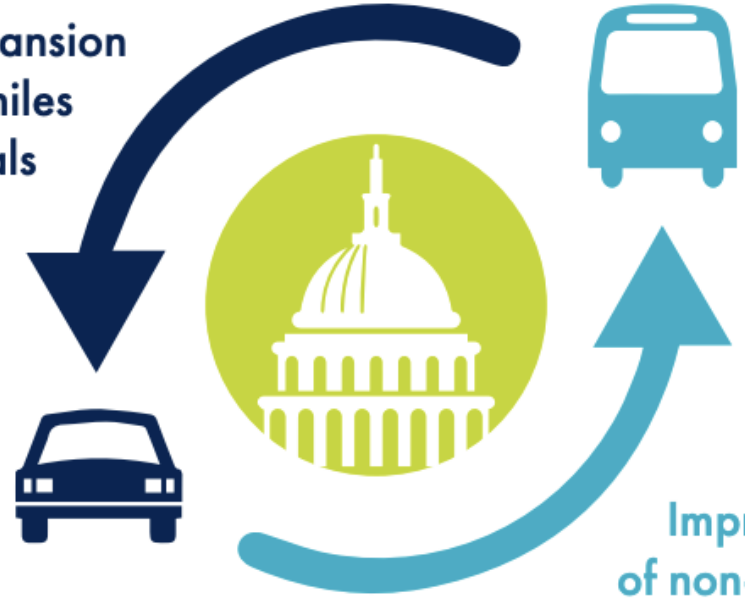
How it all works together

MOVE MINNESOTA ACTION

Requirement that any highway expansion project meet climate and vehicle miles traveled (VMT) reduction goals

New regional development guidelines to ensure metro cities' policies and projects meet climate and VMT goals

Additional funding and incentives to increase biking and walking



Significant, ongoing funding to grow and maintain complete transit network

Faster travel times from signal priority giving buses the green light

Increased safety through Transit Rider Investment Program

Improved access through decriminalization of non-payment of fares and free fares pilot

REDEFINING HIGHWAY PURPOSES & SHIFTING FUNDING

66% of respondents would support a bill to "improve transportation options in Minnesota using funding from the state and federal government which would otherwise go to highway expansion," illustrating public will to make different choices about how current funding is allocated.

> **Statutorily define "Highway Purposes" as inclusive of transit, biking, and walking investments in highway rights of way.**

SHIFT STATE FUNDING from highway expansion to statewide transit investments by splitting the motor vehicle sales tax evenly between transit and highway projects.

Thank you!

Contact:

MJ Carpio

mjc@movemn.org

Learn more at:

www.movemn.org

BRIDGING I-95: CONNECTING THE COMMUNITY

CAP FEASIBILITY STUDY | Final Report | June 2025

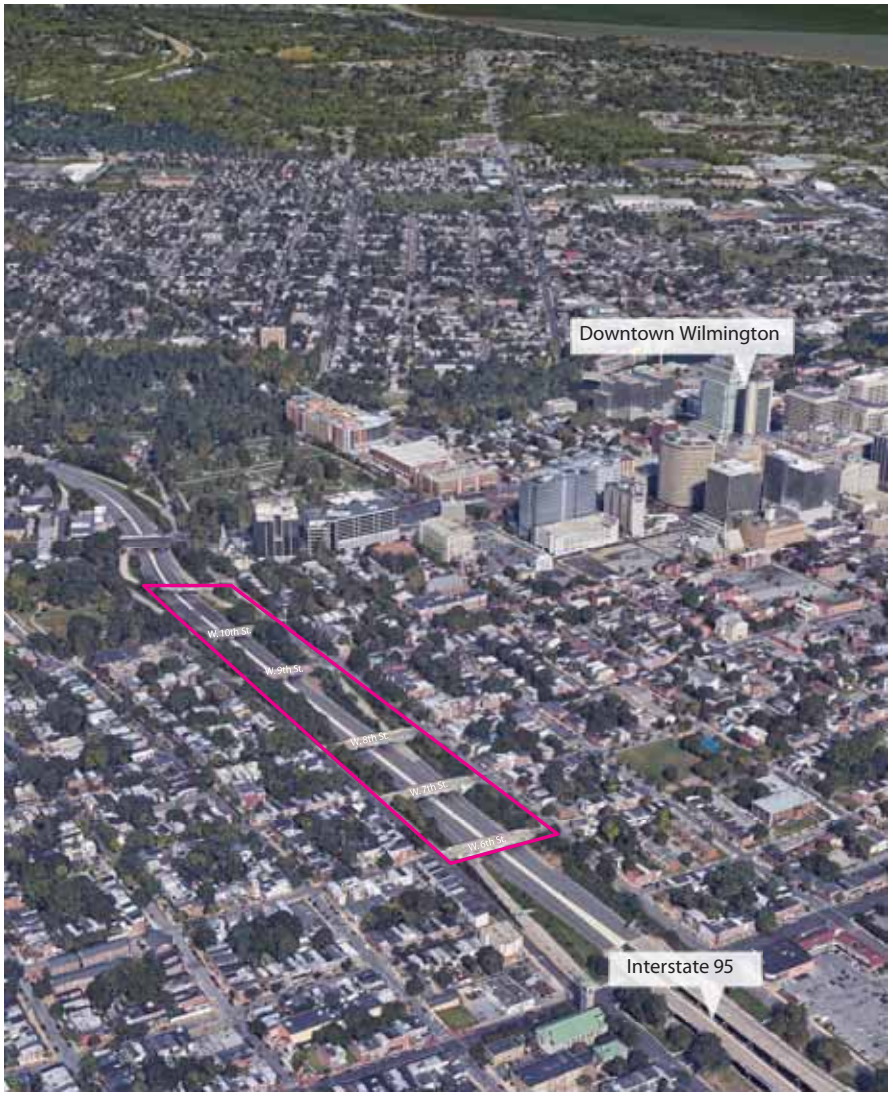
Feasibility Study Goals

Reconnect the neighborhoods divided by the construction of I-95 within the Jackson-Adams Corridor between the Delaware Avenue Bridge and the 6th Street Bridge.

Support neighborhood character, cohesion, and pride.

Provide equitable, safe, and connected access for pedestrians and people riding bicycles and using all modes of transportation.

Create inclusive, welcoming, vibrant public urban outdoor experiences through public realm & landscape amenities for residents of the adjacent neighborhoods.



Givens

- **No commercial or residential relocations.**
- **Maintain an acceptable level of traffic flow through the project area balanced with a safe pedestrian oriented environment.**
- **No significant reconfiguration of I-95.**

ADVISORY COMMITTEE

- Includes community leaders, civic organizations, churches, agency partners and local, state and national elected officials
- 2 Virtual meetings
- 3 In-person meetings, all held in the project area

COMMUNITY OUTREACH

- 1 Virtual workshop
- 4 In-person workshops, all held in the project area
- Presented at: United Neighbors, West Center City Civic group, Hedgeville Neighborhood Group, Westminster Presbyterian Church, Wilmington Rotary Club
- Attended community events: William “Hicks” Anderson CC, United Neighbors Bridge Mural Painting events

Public Process

The vision for the future cap was drafted in collaboration with the community

Let's make a vision for the future of I-95

When picturing the future of this place, the community envisions ***a place for everyone*** *that is* ***safe, walkable****, and* ***colorful.*** *This includes* ***well- lit, well-maintained programmed areas*** *that prioritize* ***sustainability, native plantings****, places for families and community members to* ***play*** *and* ***exercise*** *comfortably, and that* ***celebrates the history of the neighborhoods.***

A vision for the future, collaboratively drafted at Workshop 01 and 01B

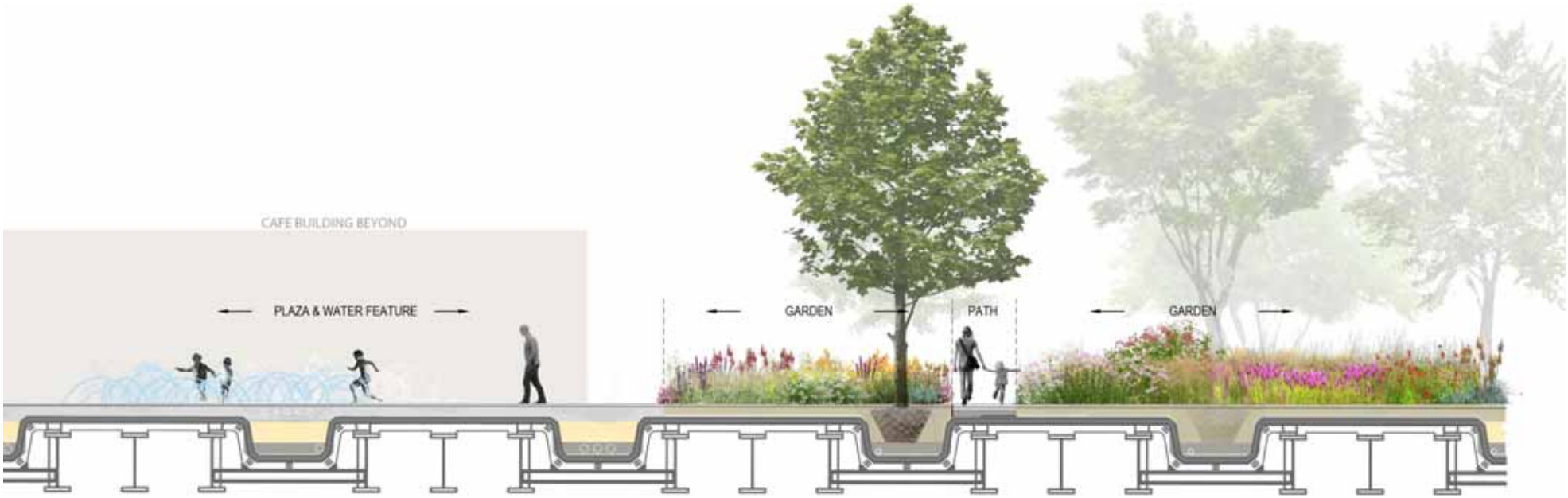
Community-Selected Programs in the Draft Final Concept

Programs selected by the community in the proposed plan

Design Concept: Phase 1

The southern-most portion of the proposed cap park features meandering, accessible public paths through a loose woodland tree canopy. Views to downtown can be seen from both the public green and the community amphitheater, which is suitable for small group gatherings and afternoon performances. The nature play is situated near the stage and restroom of the amphitheater, while enhanced traffic calming measures and street parking on Adams slows traffic and makes safer pedestrian connection between the neighborhoods and the park.

Cap Structural Considerations

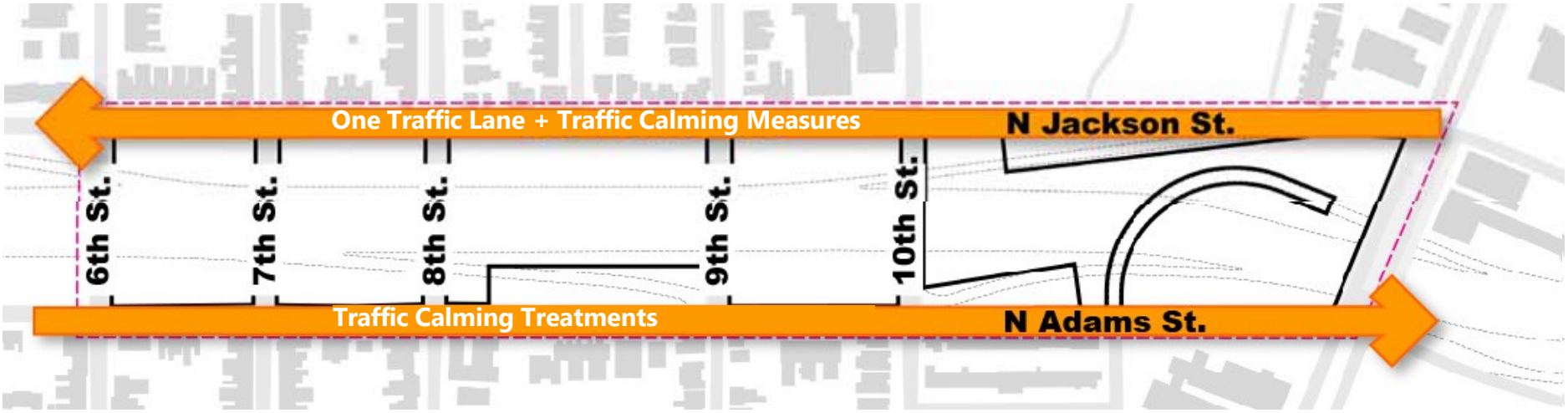


Conceptual cap structure design. Deeper trenches allow for larger plantings, such as trees, over the structure.

September 2022 Traffic Analysis: Street Closure Feasibility

Closing two bridges over I-95 within the project site and adding traffic calming measures will not have adverse impacts on traffic flow

Traffic analysis found minimal impact to Level of Service if N. Jackson Street were reduced to one drive lane. Reducing N Jackson to one lane and adding traffic calming measures reduces speed of south-bound traffic near Cool Spring Park, William Lewis Elementary, adjacent residences, and the proposed cap. The study proposes similar traffic calming treatments on N Adams St. Based on preliminary analysis, with minimal impacts to Level of Service with the addition of traffic calming measures, however a more detailed analysis is still necessary. Traffic analysis confirmed that minor signal timing modifications would mitigate any impact to level of service if any two bridges were closed (W 7th St. and W 9th St. shown below). Wilmington emergency response services participated in this planning and does not anticipate a negative impact on response times if two bridges in the project area are closed to vehicular traffic.



Magnitude of Cost

This feasibility study is the first in a series of increasingly detailed technical studies and design documentation phases to bring greater clarity, features, and implementation into focus. Referencing similar deck parks over federal and state highways points the way toward identifying a likely range for projecting a magnitude of cost.

PROJECT NAME	CITY, STATE	HIGHWAY	ACREAGE	COST (Design and Construction) (2022 Dollars)	COST/ACREAGE	YEAR	NOTES
Klyde Warren Park	Dallas, TX	TX 366	5.2	$182M	$35M/ac	2012	One of the best known deck parks, includes an 11,000sf restaurant and upscale bar
Klyde Warren Park Phase 2.0	Dallas, TX	TX 366	1.7	$57M	$33M/ac	2024	Second phase includes a 24,000sf reception and event space on two levels, and an additional 37,000sf lawn, all on two adjacent blocks west of the phase 1.
Southern Gateway Park	Dallas, TX	I-35	5	$172M	$34M/ac	2024	First phase well under construction; Aimed at community healing of an underserved community
Park at Penn's Landing	Philadelphia, PA	I-95	12	$350M	$29M/ac	2025	A phased project with 5.2-acres over the interstate and the balance over substantial waterfront fill, including a skating rink, cafe, and restaurant
Wilmington, DE I-95 Park Phase 01	**Wilmington, DE**	**I-95**	**4.6**	**$93M-$105M**	**+$21.9 to 24.7M/ac**	**2027**	**Phase 01: between W. 6th Street and W. 8th Street**
Wilmington, DE I-95 Park Phase 02	**Wilmington, DE**	**I-95**	**5.7**	**$117M-$132M**	**+$20.5 to 23.1M/ac**		**Phase 02: between W. 8th Street and W. 10th Street**
Wilmington, DE I-95 Park Phase 03	**Wilmington, DE**	**I-95**	**5.2**	**$140M-$158M**	**+$26.8 to 30.3M/ac**		**Phase 03: between W. 10th Street and Delaware Ave**

Proposed phasing for the project

Conclusion

Guided by the community's vision, the proposed cap park unites the neighborhoods divided by the construction of I-95. The future park is a place to celebrate history, while looking to Wilmington's future

The cap over I-95 will become a world class, civic park while establishing a community-oriented space for life in the surrounding neighborhoods. The park, spanning approximately 15 acre, provides a wide range of programs from festival and small performance space, to small group gathering, cafe amenities, play, gardens, and pop up market space.

Guided by the public's vision, the park will stitch together the communities divided by the construction of I-95 and provide new life to an area that is dominated by cars. The cap park will utilize the existing elevation change between North Jackson and North Adams streets to showcase views of Downtown Wilmington while forming distinct destinations within the park.

A vision for the future that creates an amenity for the neighborhoods. A place to gather, to celebrate, and to connect in an active, year-round hub that will serve generations of residents and visitors

Learn more about this work to date:

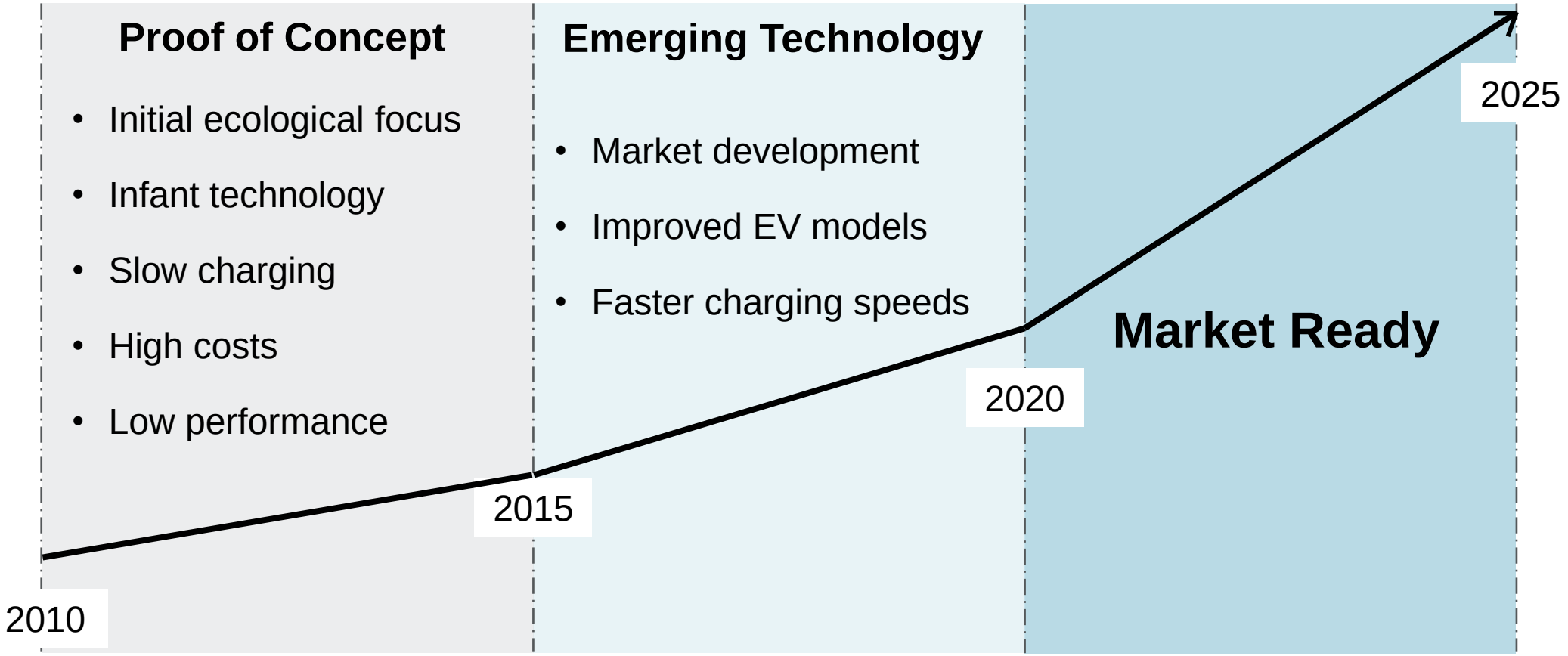
http://www.wilmapco.org/i95cap/

Questions or Comments? Dave Gula dgula@wilmapco.org

Electric Mobility

June 13, 2025

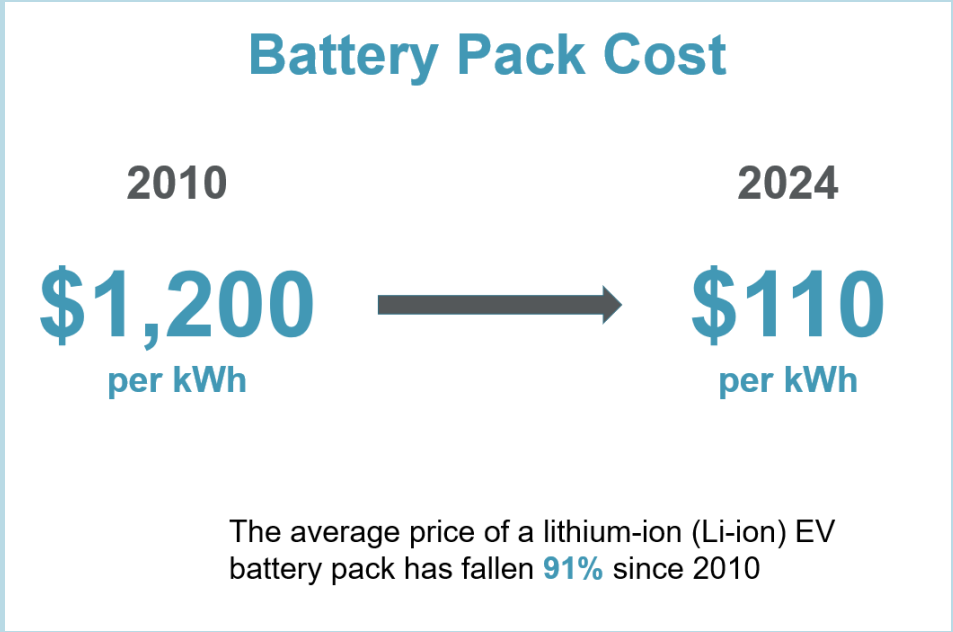
EV Evolution



Takeaway: EVs begin to fit more diversified use cases

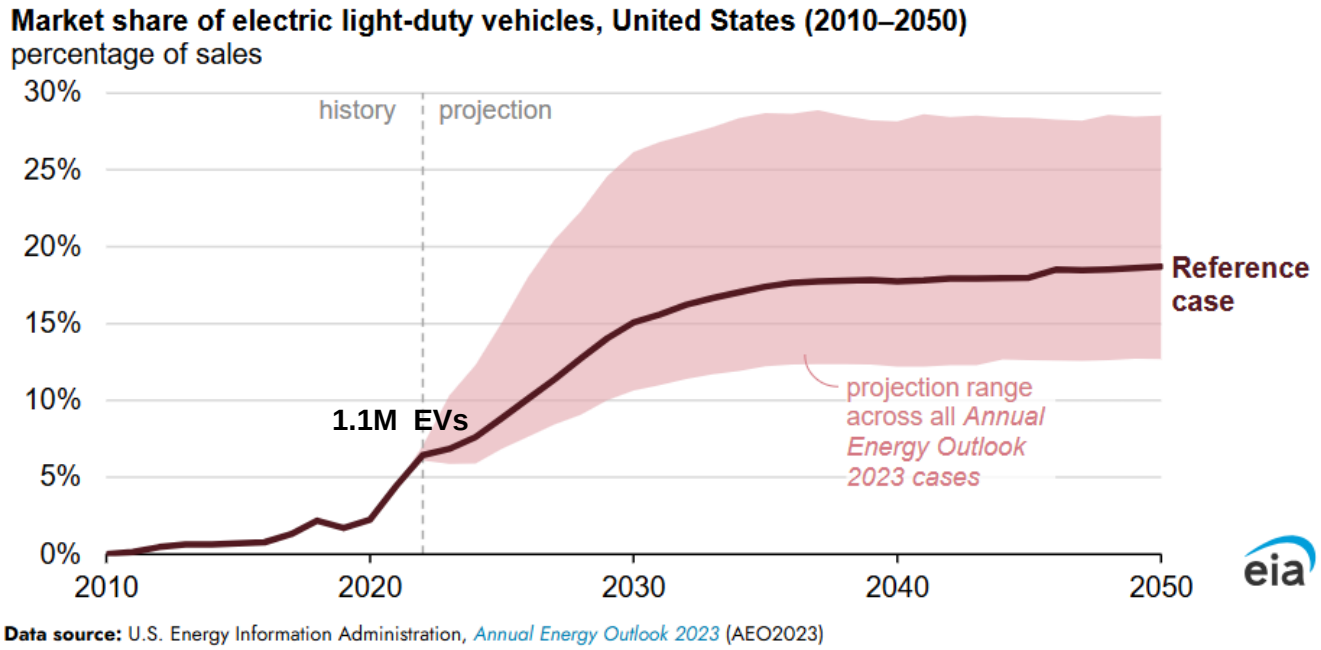
Market Ready Technology

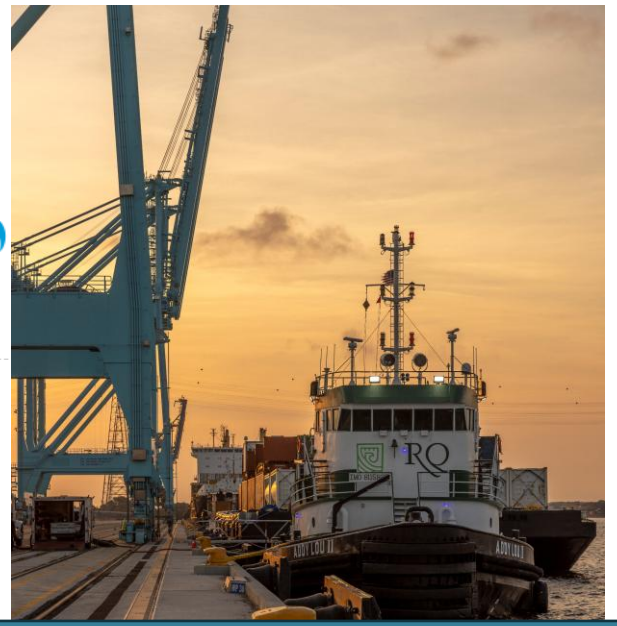
- Increase in vehicle make and models
- Improved reliability
- Lower battery costs
- Reduced energy costs
- Higher range
- Improved charging times



Takeaway: 2025 EVs meet many transportation needs across the US

US EV Adoption

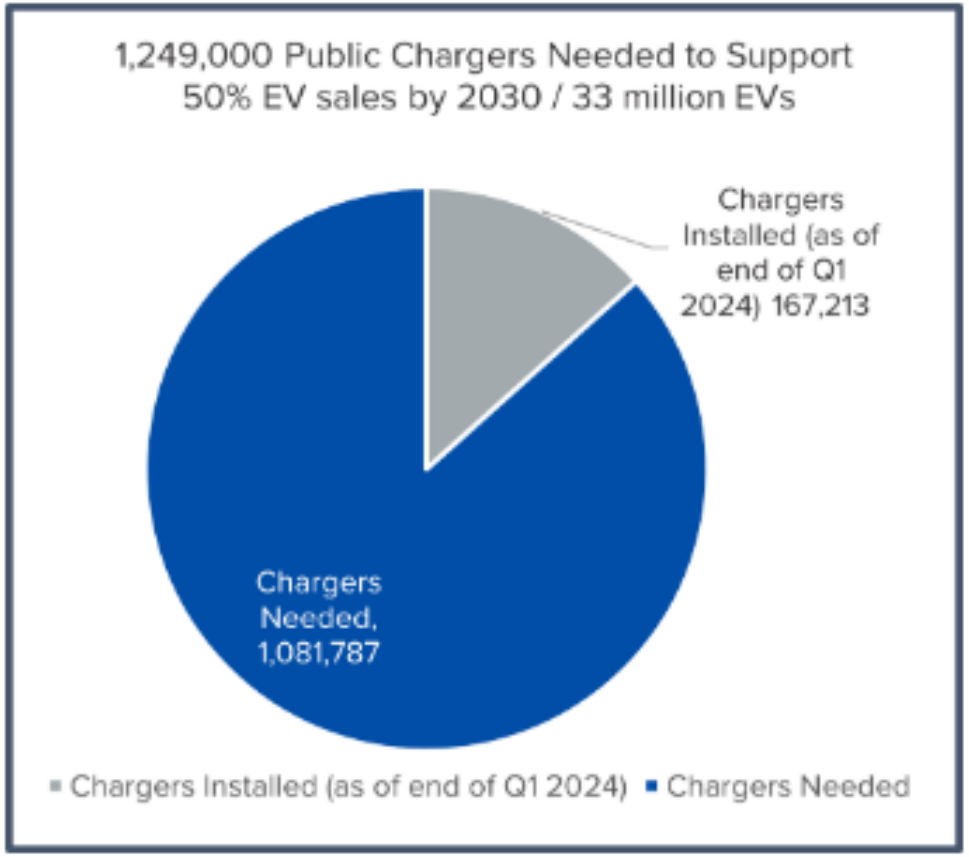




Takeaway: Personal and industrial EV adoption continues to move forward

Charging Infrastructure

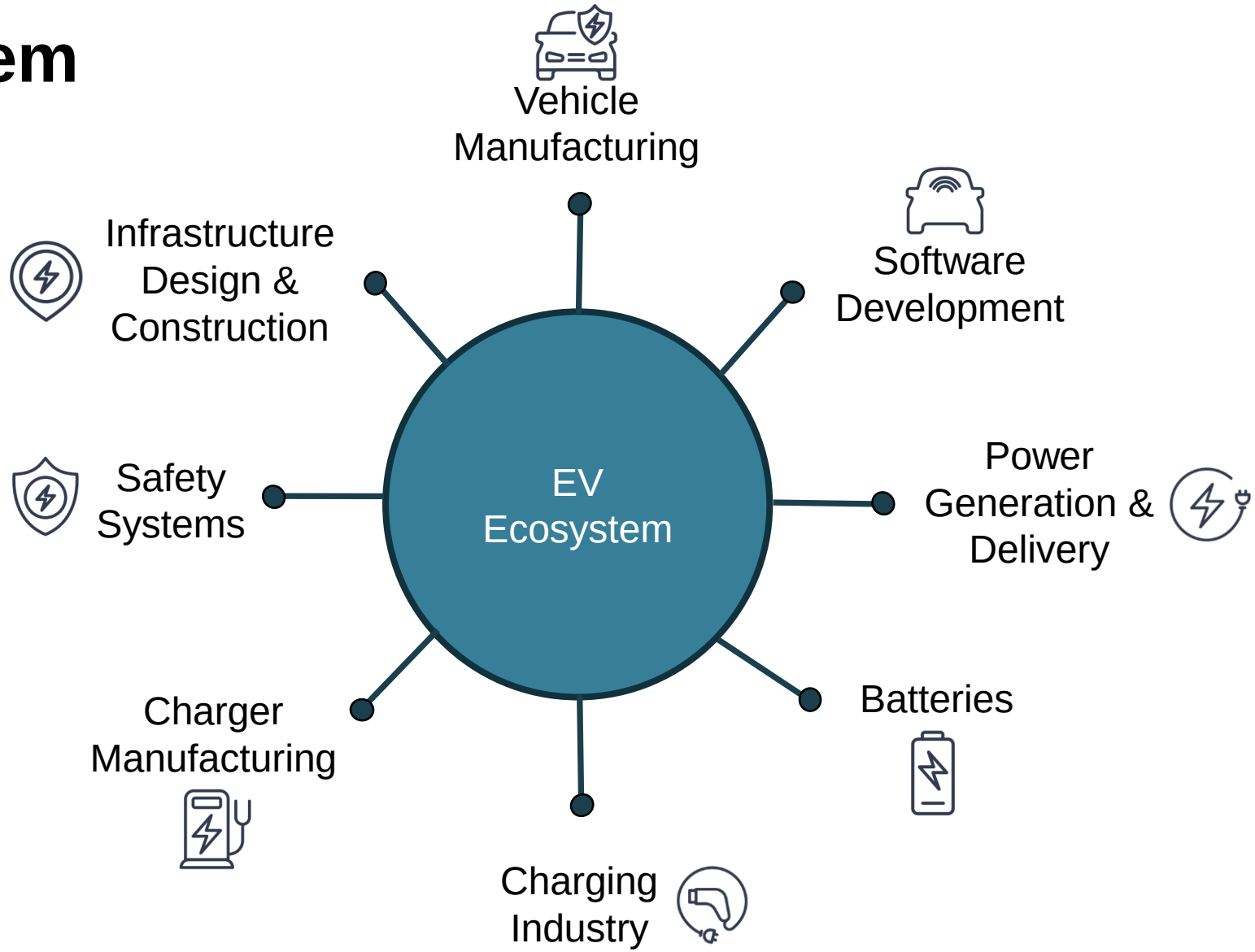
- Nationwide, 344,533 EVs were registered in Q1 2024 but only 7,247 new public chargers were added – a ratio of 48 new EVs for every new public port
- More than 1 million more public chargers required to meet the NREL's necessary infrastructure estimate for 2030
- 438 chargers will need to be installed every day – **or nearly 3 chargers every 10 minutes** – through the end of 2030



Source: Alliance for Automotive Innovation

Takeaway: Vehicle sales are outpacing public charging infrastructure

EV Ecosystem



Takeaway: The economic reach is far greater than the sale of a single vehicle or charger

Global Economy

Potential arenas of tomorrow, by 2040 revenue estimate, $ billion	Revenue 2022	CAGR, 2022-40	Profit 2040 estimate,$ billion (profit margin, %)
Electric Vehicles	450	2,500 3,200	100 320
Shared autonomous vehicles	n/a	610 2,300	20 460
Batteries	98	810 1,100	40 110
Future Air Mobility	n/a	75 340	10 70

Source: Company Annual Reports; McKinsey Value Intelligence; McKinsey Global Institute analysis

Takeaway: EV technology forecasted to be a major global growth market

History of Technology Investment

Investing to put America in a leading position

- Aviation
- Rail
- Interstates/Corridors
- Transit
- Safety Technology
- Access

Takeaway: Policy of leading technology development and production

US Investment

- Federal Investments
- State Investments
- Private investments
  - Vehicle manufacturing
  - Charging manufacturing
  - Charging networks
  - Battery manufacturing
  - Freight charging

Ford F-150 Lightning, Dearborn MI.

Blue Oval SK's EV Battery Manufacturing Facility. Stanton, TN

Charger Manufacturing Facility, Arlington TX

Takeaway: Public investment sparks larger private investment

Infrastructure Investment and Jobs Act (IIJA)

National Electric Vehicle Infrastructure (NEVI)

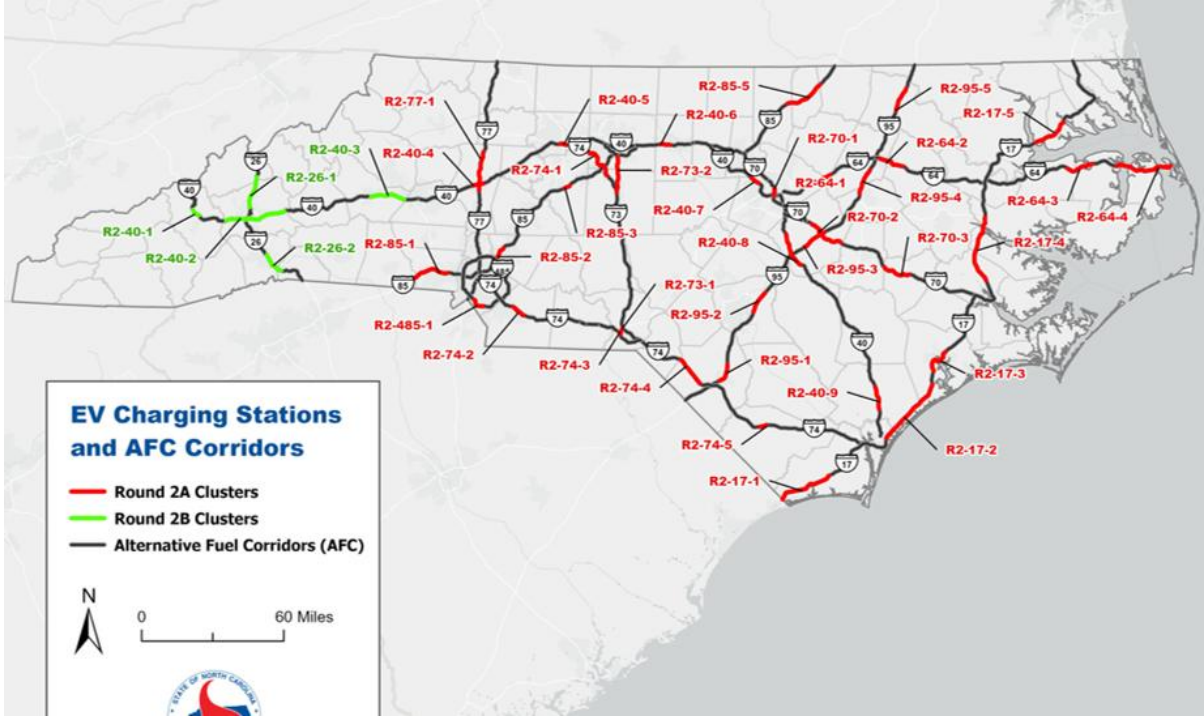
- Formula based program
- Build out a charging spine to support corridor/AFCs light duty travel

Charging and Fueling Infrastructure (CFI)

- Discretionary grant program
- Support community-based charging

Program Conditions

- Highly Regulated/Limited Flexibility
- Exposed technical & delivery challenges



Takeaway: Historic level EV infrastructure investment on the edge of implementation

Freight Challenge

- Public/Private/Energy coordination
- Higher charging power requirements
- More charging utilization
- Power impact on electrical grid
- Increased vehicle, charger and power delivery spatial demands

Takeaway: EV trucking infrastructure barriers are significant vs. light duty vehicles

Today’s MHD Electric Vehicle Technology Works

- The Rocky Mountain Institute analyzed a year's worth of trucking telematics data across 15 states
- **Finding:** 60% of medium duty and 43% of heavy duty trucks are electrifiable with today’s technology*

*RMI Analysis: With Smart Policy, Truck Electrification Is Within Reach - RMI

Takeaway: Advancements will continue to make EV adoptions operationally and financially viable

Infrastructure Provides Choice

- Personal – residence charging
- Community – shared destination charging
- Freight (local) – dedicated/shared public charging
- Corridors – shared public enterprise charging
  - Freight
  - Personal
- Transit – dedicated charging
- Maritime – dedicated charging
- Rail – dedicated charging





Takeaway: EV technology investment provides the US with personal and industrial choices

Value of Investment

- Producer vs. Consumer
- Foster US EV ecosystems
- Lead technology development globally
- Capture economic opportunities
- Access global markets
- Future proof infrastructure designs
- Provide US choices

One Energy's 30MW Station, Findlay, OH

Coalition to develop I-10 LA to Texas EV Corridor

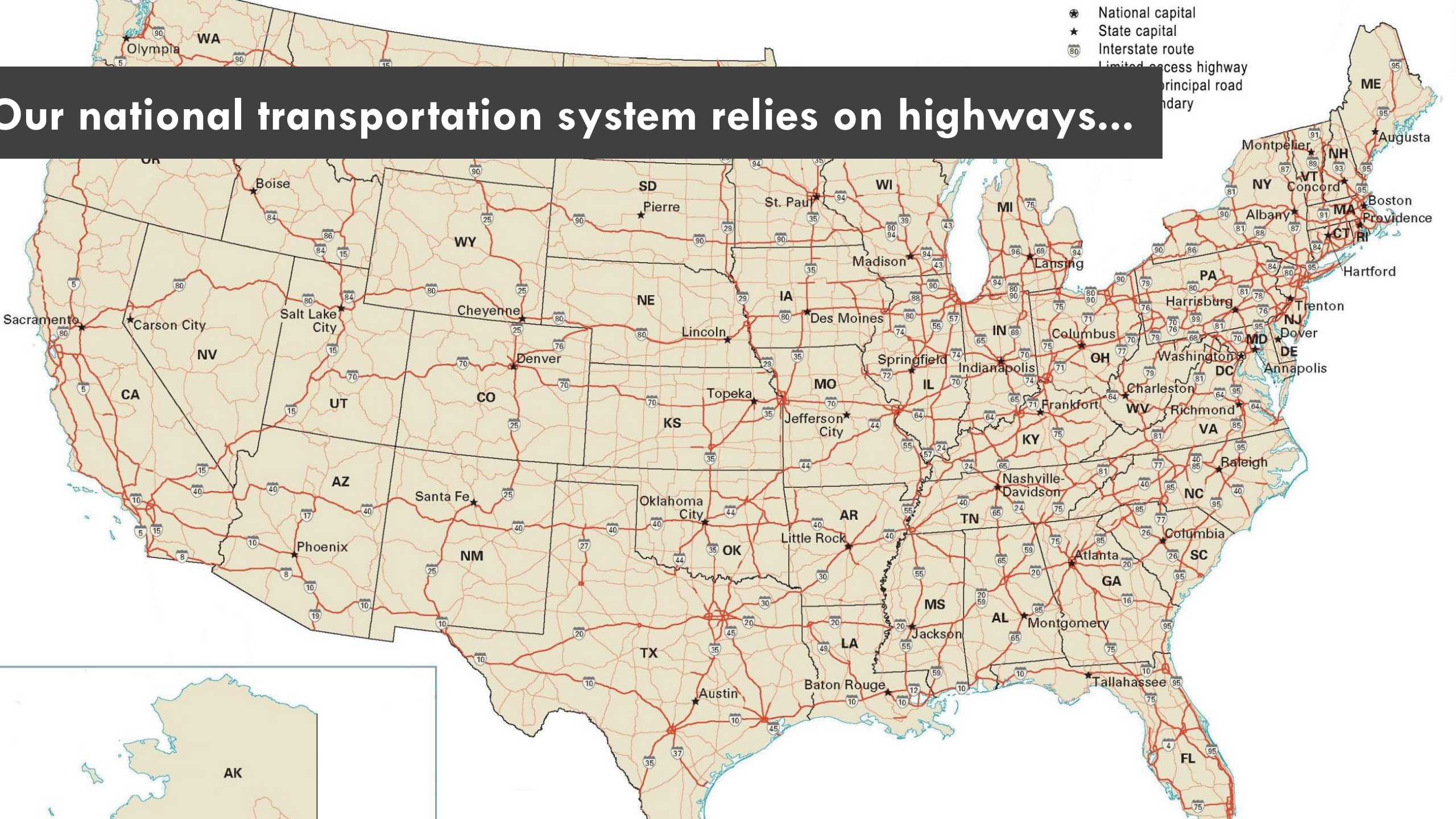
Takeaway: EV ecosystem is moving - lead or follow?

Stormwater, Tires, and Protecting our Nation's Fish

Chelsea Mitchell, PhD

King County, WA, Department of Natural Resources and Parks

Our national transportation system relies on highways...



..and over 3 trillion vehicle miles are driven on US highways annually

U.S. Vehicle-Kilometers | Bureau of Transportation Statistics

But highways generate toxic stormwater runoff…

Which pollutes our waterways with thousands of toxic chemicals

But highways generate toxic stormwater runoff…

hydrocarbons

antiozonants

Vulcanization accelerators

quinones

sediments

plasticizers

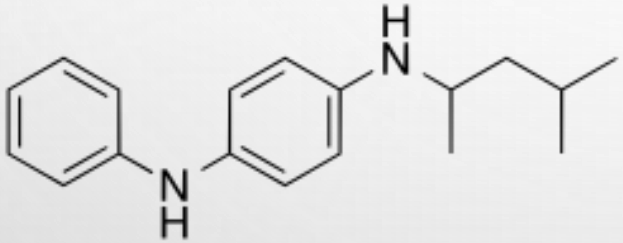
Heavy metals

microplastics

Which <u>pollutes our waterways</u> with thousands of toxic chemicals

6PPD-quinone is a toxic chemical that comes from tires

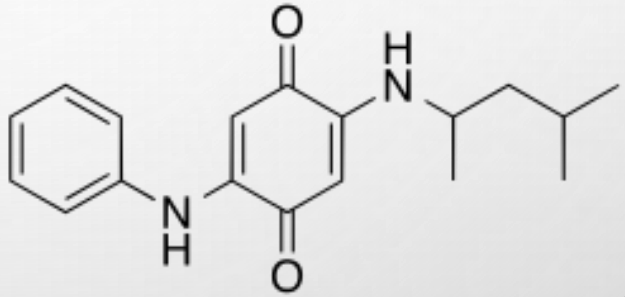
6PPD



O_3

Ozone/
UV light

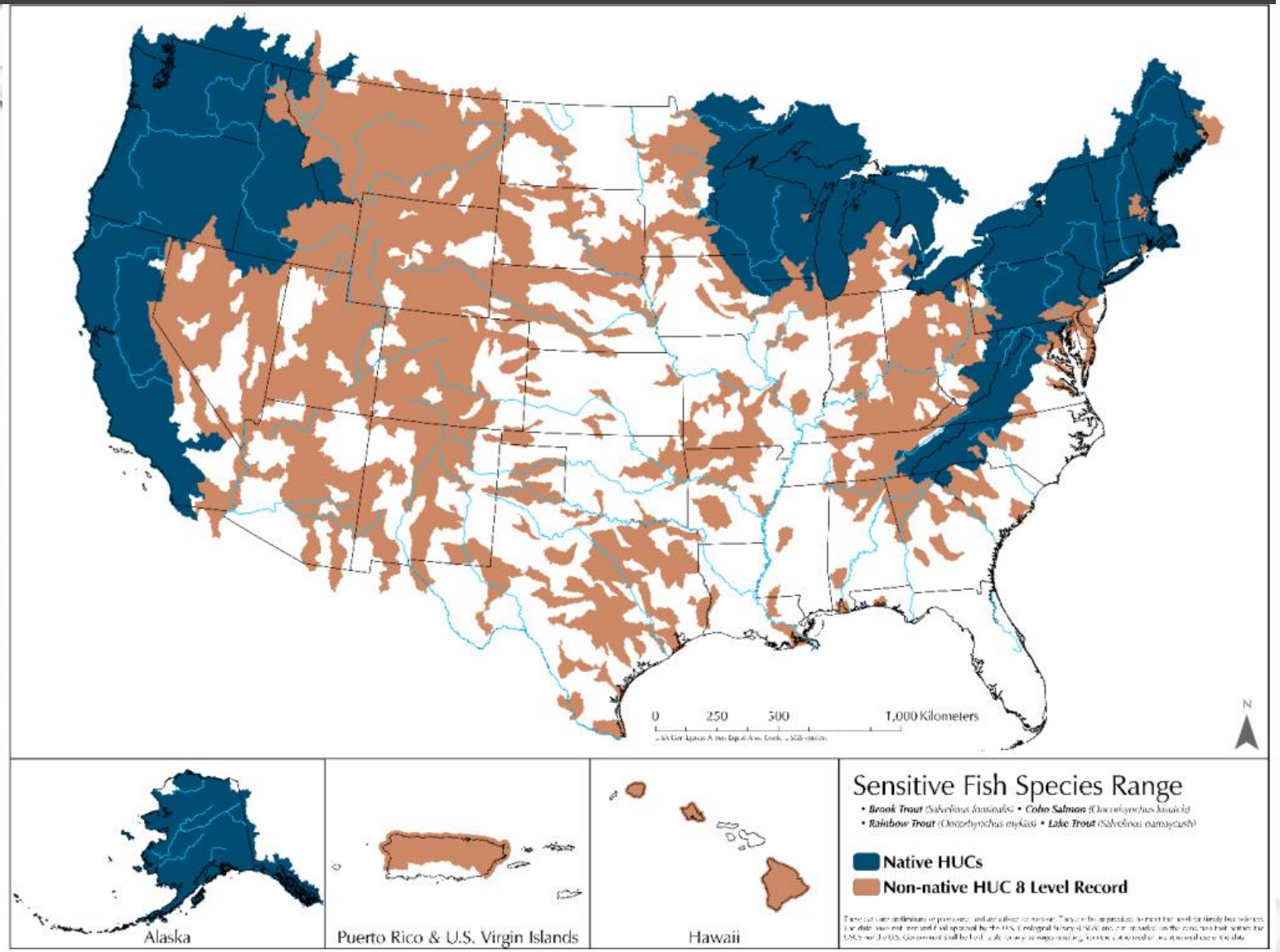
6PPDQ



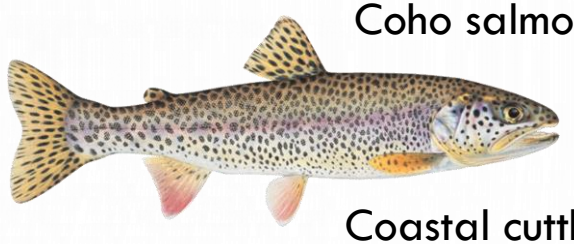
6PPDQ is one of the most toxic chemicals in water…

…it kills coho salmon, even at very low levels

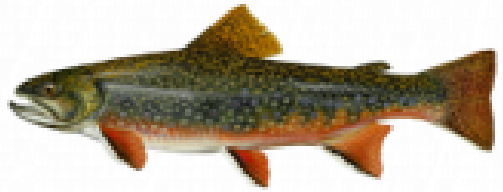
6PPDQ is toxic to fish species across the US



Coho salmon

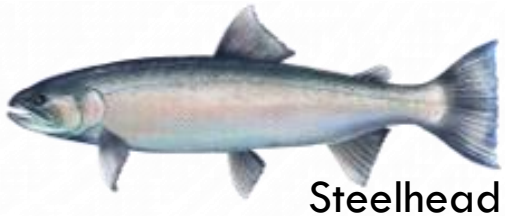


Coastal cutthroat trout



Brook trout

Rainbow trout



Steelhead

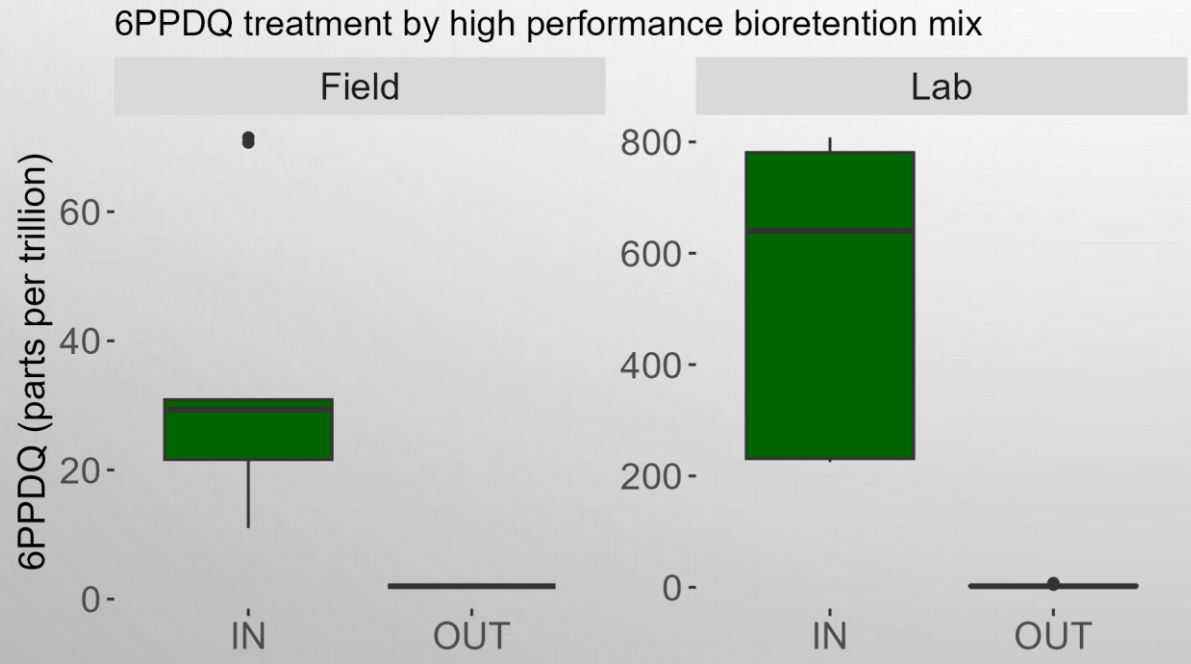
Lake Trout

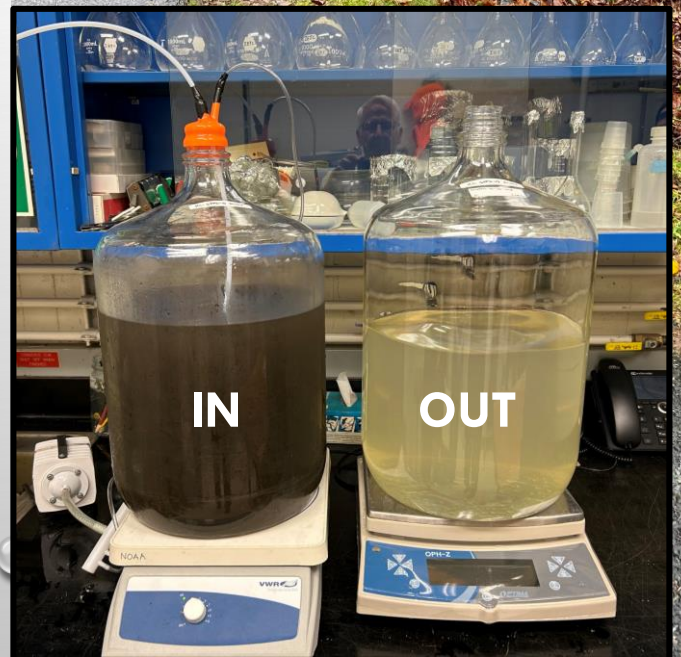
Interstate Technology Regulatory Council (https://6ppd.itrcweb.org/)


Green stormwater infrastructure can improve water quality…
…and protect fish and water resources

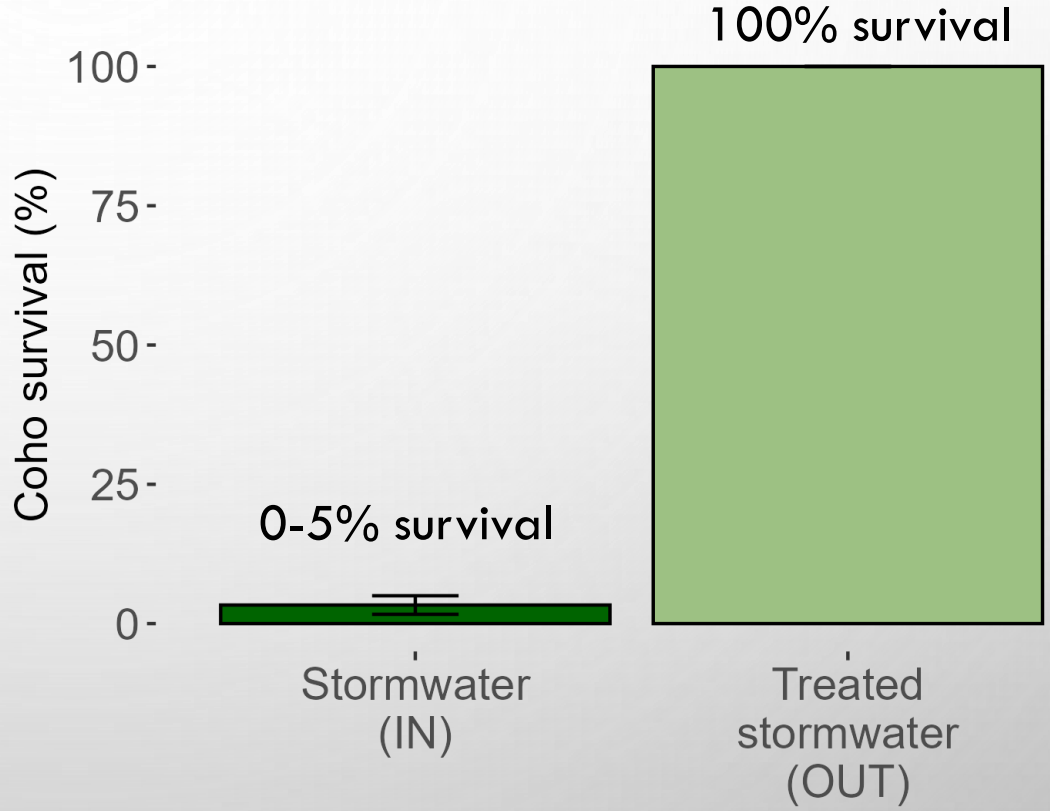
Bioretention soils can remove 6PPDQ from stormwater…

- Sand, biochar, and coconut coir
- Doesn't release nutrients, treats 6PPDQ, and many more contaminants



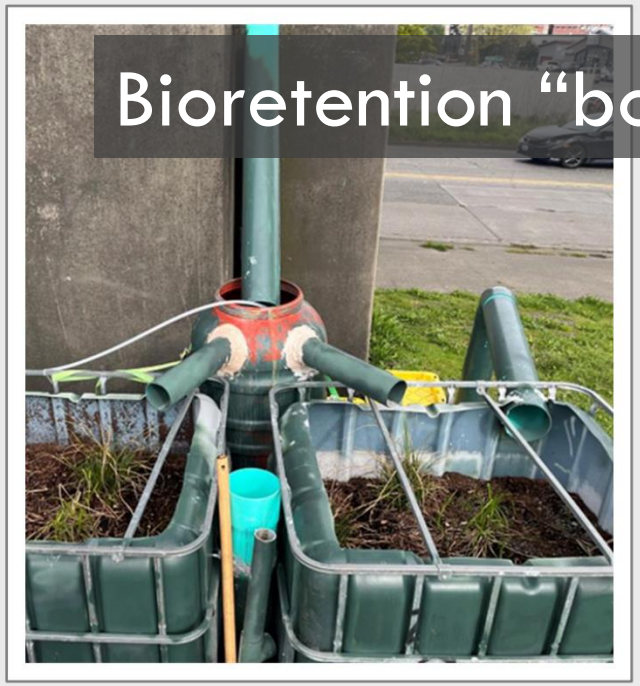


…and protect salmon from its toxic effects



Other ways to treat 6PPDQ on highways

Low cost, simple retrofit



https://www.stewardshippartners.org/adopt-a-downspout/

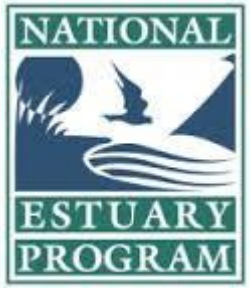
Improve road safety

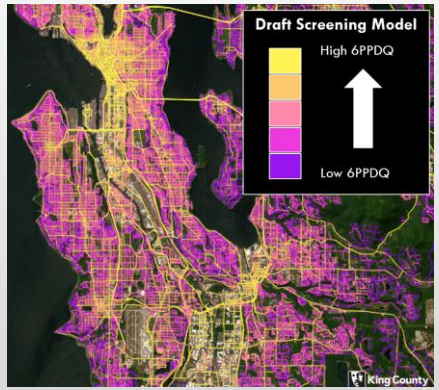
Federal support is critical for water quality research and stormwater retrofit projects

Federal funding, policies

Applied research, mitigation by state and local governments

Technologies, tools, programs with broad reaching benefits





QUESTIONS?

My contact info

chemitchell@kingcounty.gov

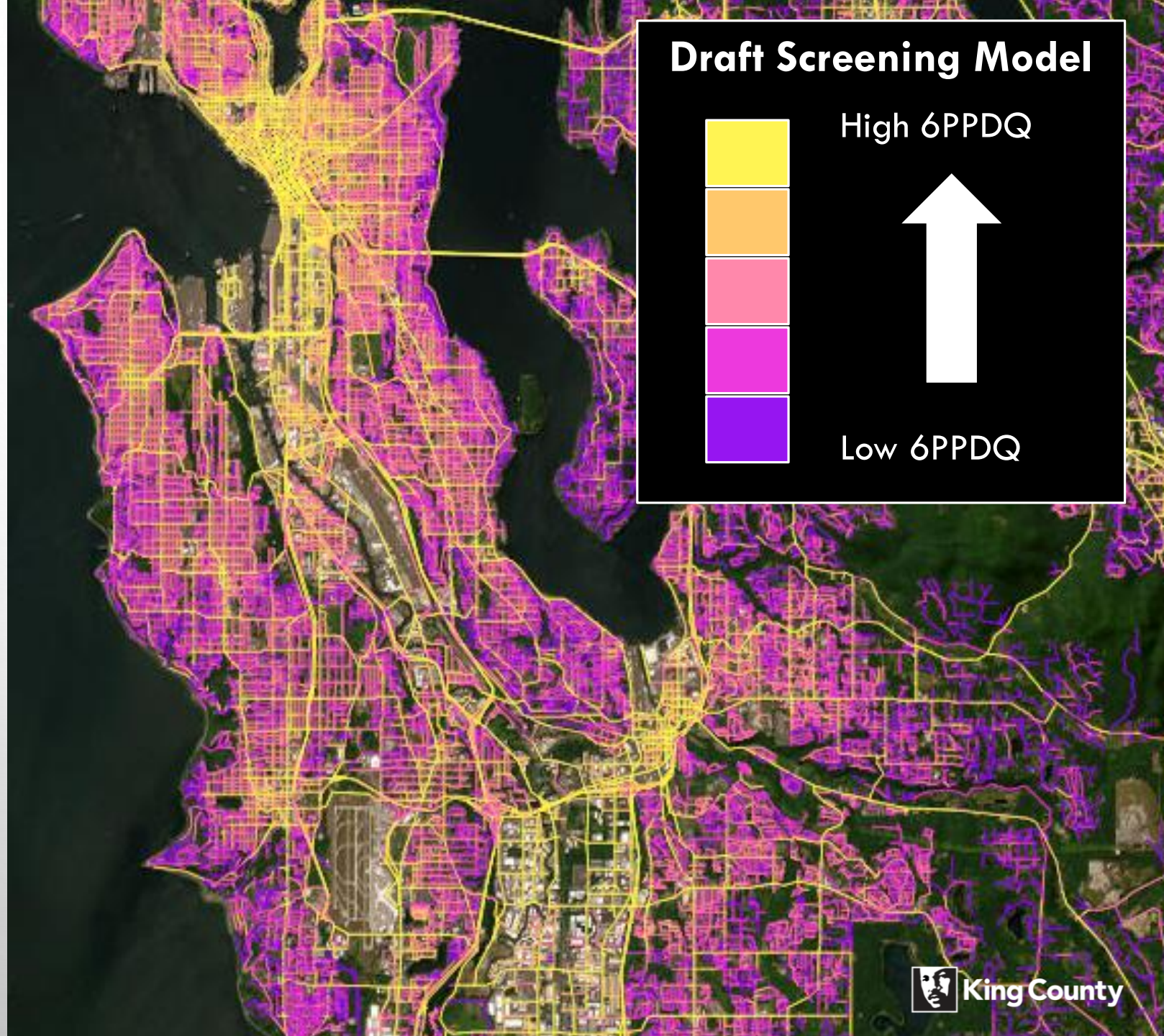
EXTRA SLIDES

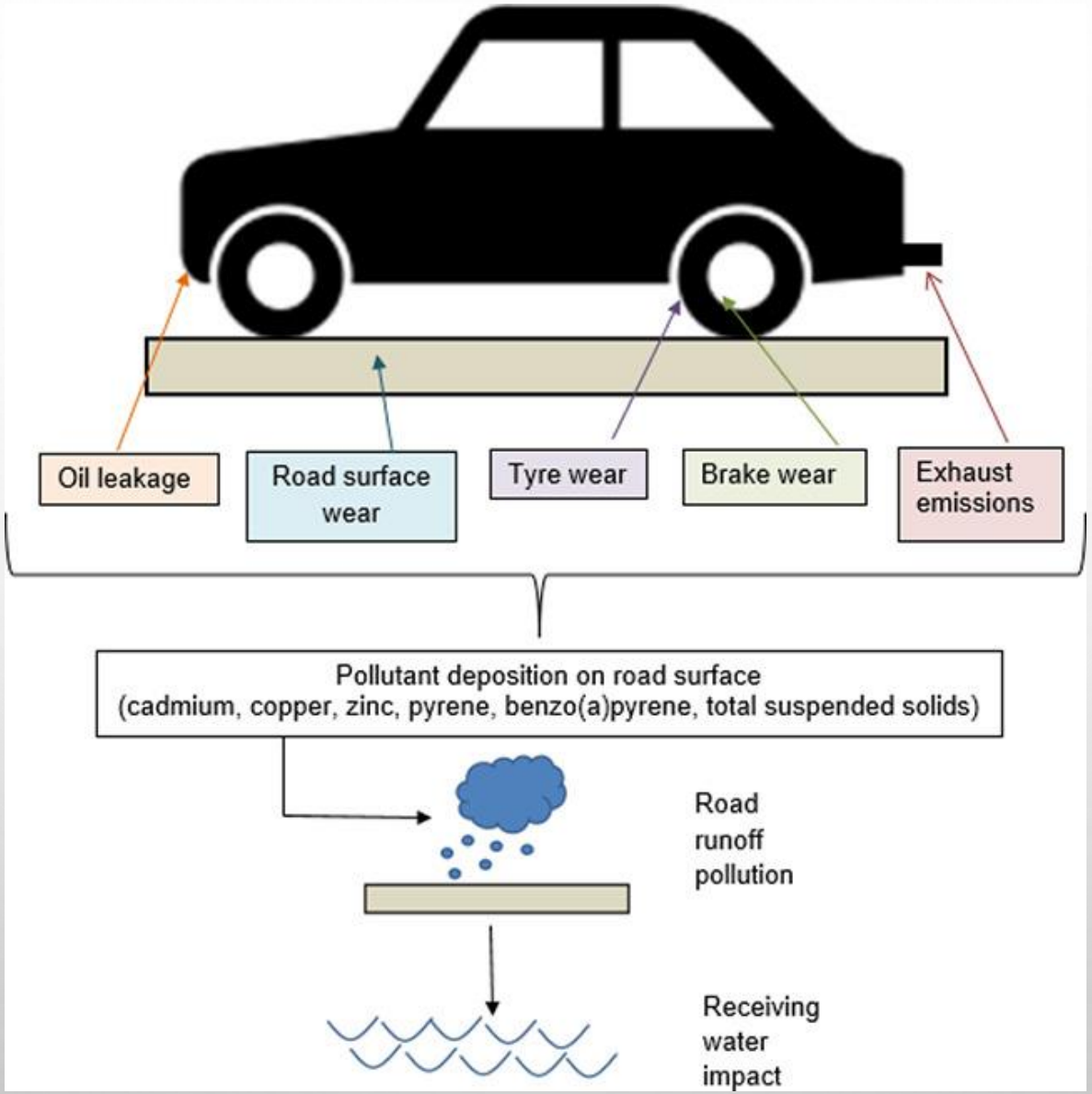
SCREENING MODEL

1. Roadway characteristics

2. GIS data

3. Score




Oil leakage
Road surface wear
Tyre wear
Brake wear
Exhaust emissions
Pollutant deposition on road surface
(cadmium, copper, zinc, pyrene, benzo(a)pyrene, total suspended solids)
Road runoff pollution
Receiving water impact

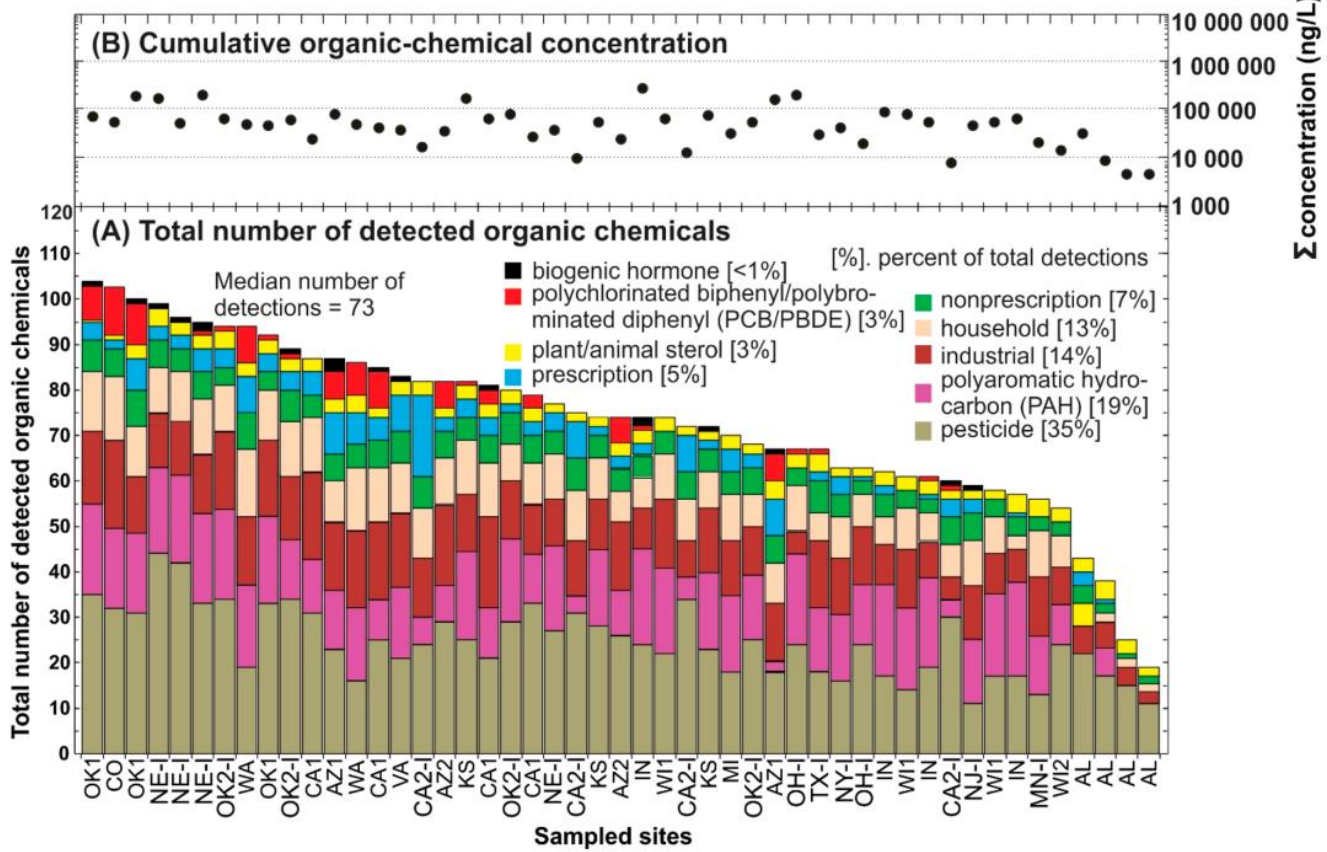


Figure 1. Total number of detected organic chemicals for sampled sites, sorted from left to right by decreasing number of detections (A) and total measured organic-chemical concentration for sampled sites (B).

Masoner et al. 2019. Urban Stormwater: An Overlooked Pathway of Extensive Mixed Contaminants to Surface and Groundwaters in the United States. Environmental Science and Technology.