Speaker Notes

Ozone Nonattainment in North Texas:
A Land-Use Problem Requiring a Land-Use Solution

Mustafa Abdul Haque
PLSC 3333 – Environmental Policy

Fall 2025

Total Time Budget: 7 minutes maximum (with Q&A)
Target Speaking Time: 5–5.5 minutes
Q&A Buffer: 1.5–2 minutes

Pace yourself—if running long, trim examples, not core arguments.

1 SLIDE 1: Title Slide [5 seconds]

What to say:

"Good [morning/afternoon]. I'm Mustafa Abdul Haque, and today I'll be discussing Dallas–Fort Worth's ozone problem—and why it requires a land-use solution, not just a technology fix."

Transition: Move directly to next slide.

2 SLIDE 2: The Problem [45–50 seconds]

Key message: Establish urgency. DFW faces real consequences on a fixed deadline.

What to say:

"Dallas–Fort Worth is running out of time. Ten counties in our region exceed federal ozone standards—the pollution that causes smog and triggers asthma attacks.

In June 2024, the EPA reclassified DFW from 'moderate' to 'serious' nonattainment. That's not just a label change—it comes with a hard deadline. We must meet the 70 parts-per-billion standard by 2027, or face federal funding sanctions.

The stakes are significant. A study by Carvour and colleagues found that meeting ozone standards could avoid up to $932 million in annual health costs in our region—costs from premature deaths, hospitalizations, and lost productivity.

This isn't an abstract environmental issue. It's a public health crisis with an approaching deadline."

Transition: "So what's causing this?"

3 SLIDE 3: The Cause [40–45 seconds]

Key message: Establish the causal chain—sprawl drives VMT drives ozone.

What to say:

"The research is clear on what's driving our ozone problem. [Point to the causal chain on slide]

Urban sprawl leads to more driving, which leads to more ozone precursor emissions.

When you have low-density, car-dependent development, people take longer trips. They drive more. And more vehicle miles traveled means more emissions.

What makes this worse is that highway expansion actually *induces demand*. Duranton and Turner's landmark 2011 study showed that adding lanes doesn't reduce congestion—it attracts more traffic until congestion returns.

DFW has followed this pattern for decades. We're one of the most highway-intensive metros in the country. I-35, I-635, I-30—we keep widening, and traffic keeps growing.

Meanwhile, research consistently shows that compact development does the opposite: shorter trips, lower emissions, better health outcomes."

Transition: "Let me show you what this looks like in the data."

4 SLIDE 4: The Data [50–55 seconds]

Key message: Technology improvements are being overwhelmed by VMT growth.

What to say:

"This table tells the whole story. [Point to table]

Look at the ozone column first. From 2012 to 2024, our ozone levels dropped from 87 to 77 parts per billion. That's a 10-point improvement—and that's real progress from cleaner vehicles and stricter fuel standards.

But now look at VMT—vehicle miles traveled. It went from 154 billion to 175 billion. That's a 14 percent increase.

Here's the paradox: we made cars cleaner, but we're driving so much more that it's erasing those gains. We're still 7 parts per billion above the federal standard.

The bottom line? Cleaner engines *slowed* ozone formation. They didn't *reverse* it. If we keep adding driving at this rate, we'll never meet the 2027 deadline no matter how efficient our vehicles become.

Technology is necessary, but it's not sufficient."

Transition: "So why hasn't our current approach addressed this?"

5 SLIDE 5: The Policy Gap [30–35 seconds]

Key message: Current policies focus on technology, not the root cause.

What to say:

"Our current approach focuses on what you see on the left: Air North Texas, emissions testing, clean vehicle incentives. These are technology-focused strategies.

What's missing is on the right: any authority over land use—the actual driver of VMT. We have no VMT reduction targets, no induced-demand analysis for highway projects, and no funding tied to air quality outcomes.

[Point to graph] This chart shows where we're headed. Without policy change, congestion in Collin and Denton counties will nearly double by 2050. That means more driving, more emissions, more ozone.

We're treating the symptom while ignoring the disease."

Transition: "Here's what I propose."

6 SLIDE 6: Policy Recommendation [55–60 seconds]

Key message: Present a concrete, actionable policy with clear components.

What to say:

"I'm proposing an Ozone-Safe Mobility and Land Use Compact, to be adopted by NCTCOG's Regional Transportation Council.

It has four components:

First, **performance-based funding**. Tie regional transportation dollars to per-capita VMT reduction. Cities and counties that reduce driving get more funding.

Second, **prioritize multimodal projects**. That means transit corridors, sidewalks, bike networks, and infill infrastructure—not just more highway lanes.

Third, **induced-demand analysis**. Before any highway expansion, require an analysis of how much additional traffic it will generate. Make that data public.

Fourth, **reconnect communities**. Prioritize investments in neighborhoods that were historically divided or burdened by freeway construction—often Black and Hispanic communities.

For accountability, we track two metrics by subregion: per-capita VMT and monitored ozone values. Transparent, measurable, enforceable."

Transition: "Now, you might ask—is this feasible?"

7 SLIDE 7: Why This Works [40–45 seconds]

Key message: This is practical and builds on existing infrastructure.

What to say:

"The answer is yes, and here's why.

This approach uses *existing* regional authority. NCTCOG already controls how federal and state transportation dollars are allocated in our region. They can create these incentives without needing the Texas Legislature to act.

And they're already moving in this direction. [Point to graph] This chart shows the growth in regional active transportation infrastructure—bike paths, shared-use trails, on-street bikeways. NCTCOG's Mobility 2045 plan includes multimodal goals.

What this policy does is *accelerate* that trend and *tie it to air quality outcomes*. It takes what's already happening and gives it teeth."

Transition: "Let me leave you with this."

8 SLIDE 8: Conclusion [25–30 seconds]

Key message: Reframe the problem and call for action.

What to say:

"DFW's ozone problem is not a technology problem. It's a land-use and transportation problem. The causes are documented. The solutions are proven. The authority already exists. North Texas's challenge is not identifying causes—it's implementing known solutions. Thank you."

Transition: Move to questions slide and open for Q&A.

9 SLIDE 9: Questions [Q&A: 1.5–2 minutes]

Anticipated questions and responses:

1. **"Isn't this politically difficult in Texas?"**

   "It is, which is why this proposal works through NCTCOG rather than the state legislature. Regional councils of government have more flexibility, and there's already buy-in for multimodal investment through Mobility 2045."

2. **"Won't reducing highway investment hurt economic growth?"**

   "The research actually suggests the opposite. Congestion costs DFW billions annually. Compact development attracts talent and reduces infrastructure costs. Cities like Houston are removing highways and seeing property values rise."

3. **"What about electric vehicles?"**

   "EVs will help, but they don't solve congestion, and they don't address ozone precursors from tire and brake wear. VMT reduction is still necessary."

4. **"How would you measure success?"**

   "Two primary metrics: per-capita VMT by subregion, which NCTCOG already tracks, and monitored ozone values at existing TCEQ stations. Both are transparent and already collected."

5. **"What about freight and commercial traffic?"**

   "This policy focuses on personal vehicle travel, which is the largest share of VMT. Freight strategies like rail investment could complement this but are outside the scope of this proposal."

General Delivery Tips

- **Pace:** Speak slightly slower than feels natural. Nerves speed you up.
- **Eye contact:** Look at different sections of the room, not just the professor.
- **Pauses:** Use brief pauses after key points to let them land.
- **Pointing:** When referencing data or graphs, physically gesture toward the screen.
- **If running long:** Cut the EJ/community reconnection point or the feasibility graph description.
- **Confidence:** You know this material deeply from the paper. Trust your preparation.

Timing Checklist

Slide	Target Time	Cumulative
1. Title	5 sec	0:05
2. Problem	50 sec	0:55
3. Cause	45 sec	1:40
4. Data	55 sec	2:35
5. Policy Gap	35 sec	3:10
6. Recommendation	60 sec	4:10
7. Why It Works	45 sec	4:55
8. Conclusion	30 sec	5:25
9. Questions	—	Q&A

Total speaking time: approximately 5 minutes 25 seconds, leaving 1:35 for Q&A.