



MOVES2010 Emissions Model & 8-Hour Ozone Standard Update

**FAMPO Meeting
October 25, 2010**

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MOVES2010

- **MO**tor **V**ehicle **E**mission **S**imulator
- Replaces the current MOBILE6.2 model
- EPA approved MOVES2010 on March 2, 2010
- EPA released Policy and Technical Guidance on the use of MOVES2010 in SIPs and transportation conformity in December 2009
- EPA granted a 2-year grace period before MOVES2010 is required for transportation conformity determinations; ends March 2, 2012

MOVES2010

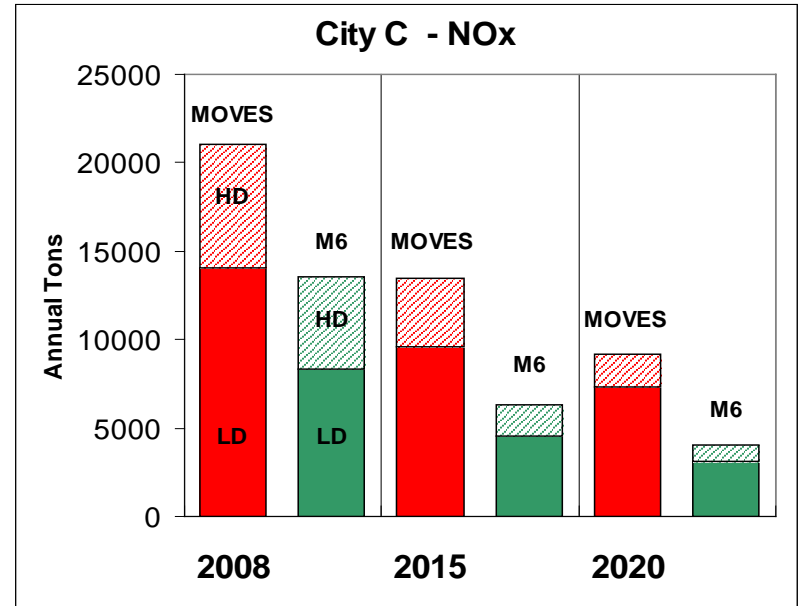
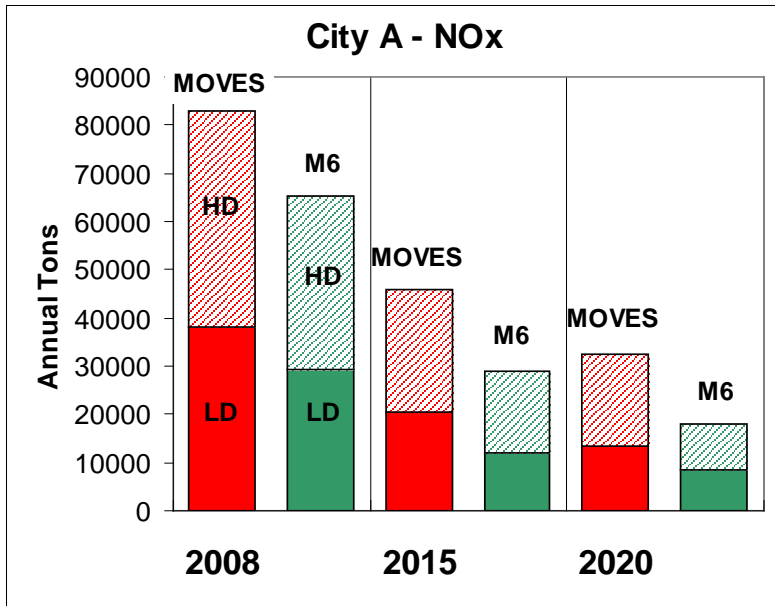
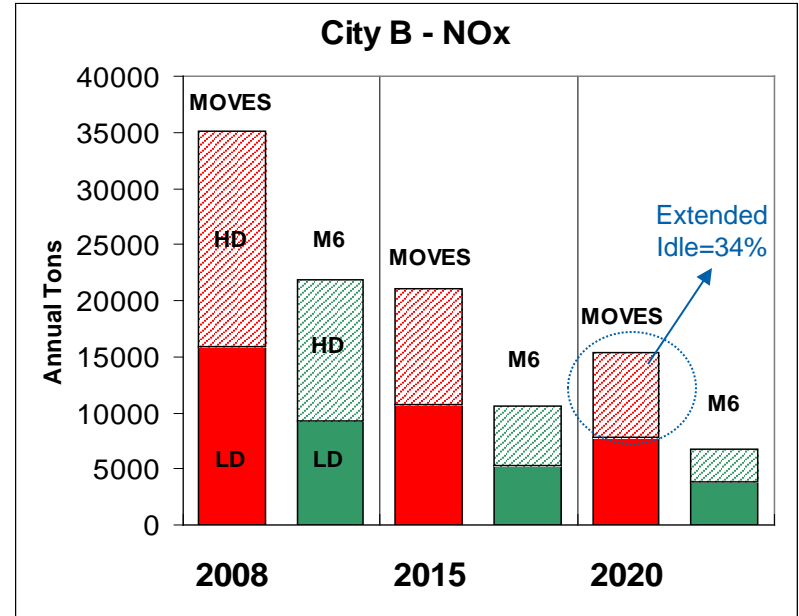
Enhancements

- Graphical Users Interface
- Can prepare inventories, not just emission factors
- Estimates emissions at national, regional, and local level
- Incorporates updated activity and vehicle emissions data

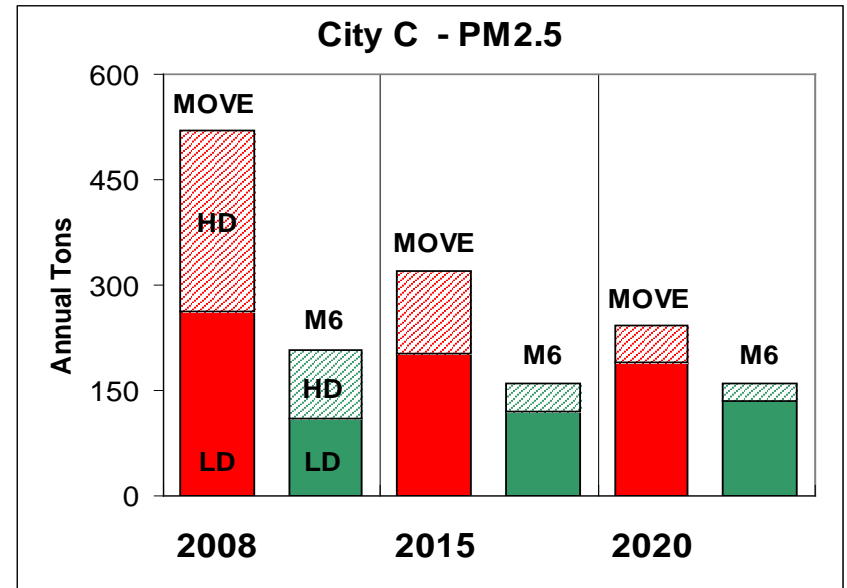
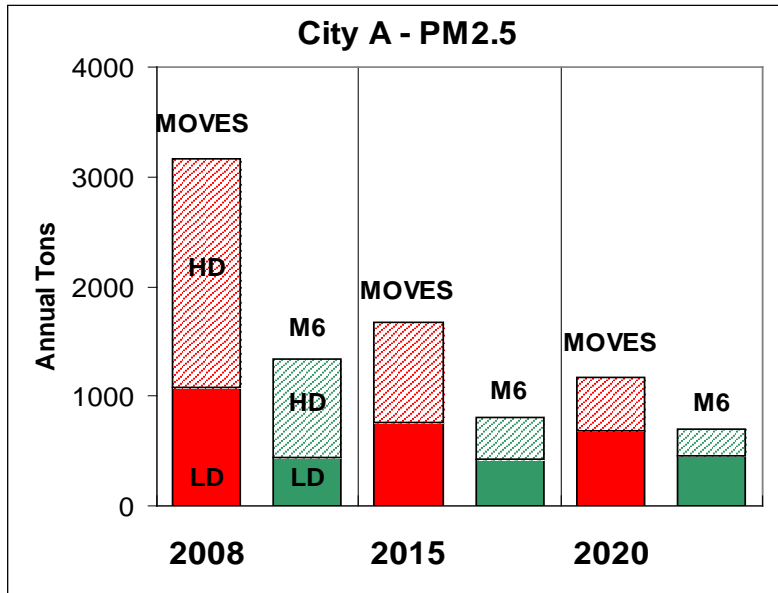
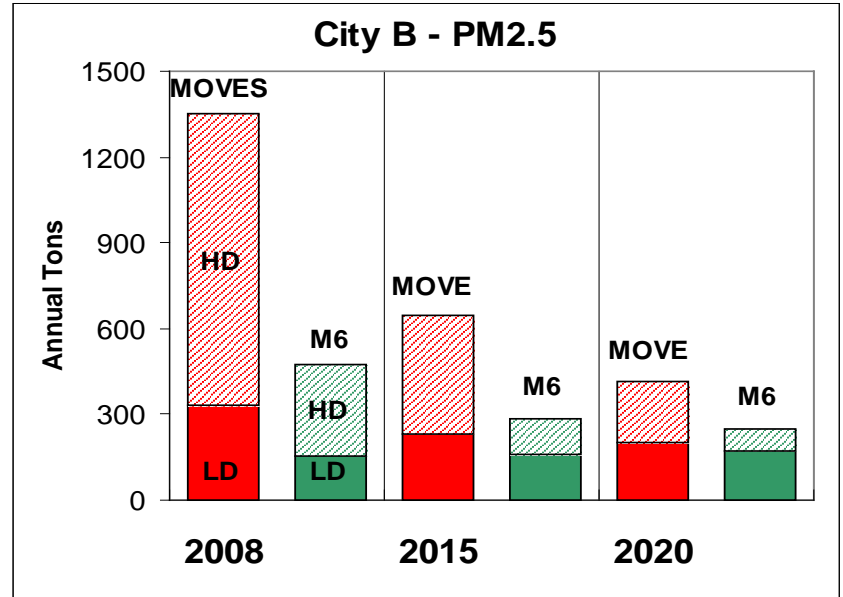
Drawbacks

- Significant new local data requirements
- Longer run times
- Computer resource intensive
- Significant manpower effort
- Lots of bugs, updated database releases

EPA's MOVES vs. MOBILE6 NO_x emissions comparison



EPA's MOVES vs. MOBILE6 PM_{2.5} emissions comparison



MOVES2010 Concerns

- **Significantly higher motor vehicle emissions estimates expected throughout Virginia**
- **Unable to meet existing MOBILE6.2-based motor vehicle emissions budgets (MVEB)**
- **8-Hour Ozone Maintenance Plan will likely need to be updated with MOVES2010**
 - Currently working with VDEQ to develop inputs, update motor vehicle emissions inventory
 - Ideally only MVEBs will need to be updated in Maintenance Plan
 - Target: Updated draft SIP to FAMPO by early next year
 - EPA will need to approve expeditiously
- **AASHTO/AMPO effort to extend 2-year grace period**





8-Hour Ozone Standard

- Lung irritant: primary component of smog
- Good up high, bad nearby
- 8-hour ozone standard originally set at essentially 84 parts per billion (ppb) in 1997
- EPA lowered 8-hour ozone standard to 75 ppb in March 2008
- EPA is currently “reconsidering” the 8-hour ozone standard
 - Primary - proposed range of 60-70 ppb
 - Secondary - W126 proposed range of 7-21 ppm-hrs
- Expected to be finalized in October 2010

8-Hour Ozone Design Values 2007-2009 (ppb)

Loudoun	77	Newport News**	66	Wythe	67
Prince William	71	Suffolk-TCC	72	Rockbridge	64
Arlington	79	Suffolk-Holland	75	Page	66
Alexandria	75	Stafford	72	Fauquier	66
Fairfax-Lee Park	80	Caroline	74	Rockingham**	67
Fairfax-McLean	77	Chesterfield	74	Albemarle**	69
Fairfax-Mt. Vernon	80	Henrico	78	Shenandoah	73
Fairfax-Chantilly	73	Hanover	75	Frederick	69
Fairfax-Annandale	78	Charles City	77	Roanoke	70

**Less than 3 years of data

-  Northern Virginia 8-hour Ozone Nonattainment Area
-  Fredericksburg 8-hour Ozone Maintenance Area
-  Richmond 8-hour Ozone Maintenance Area
-  Hampton Roads 8-hour Ozone Maintenance Area