

Ozone in the Front Range



Sources, Status, Programs & Tips

June 16, 2009



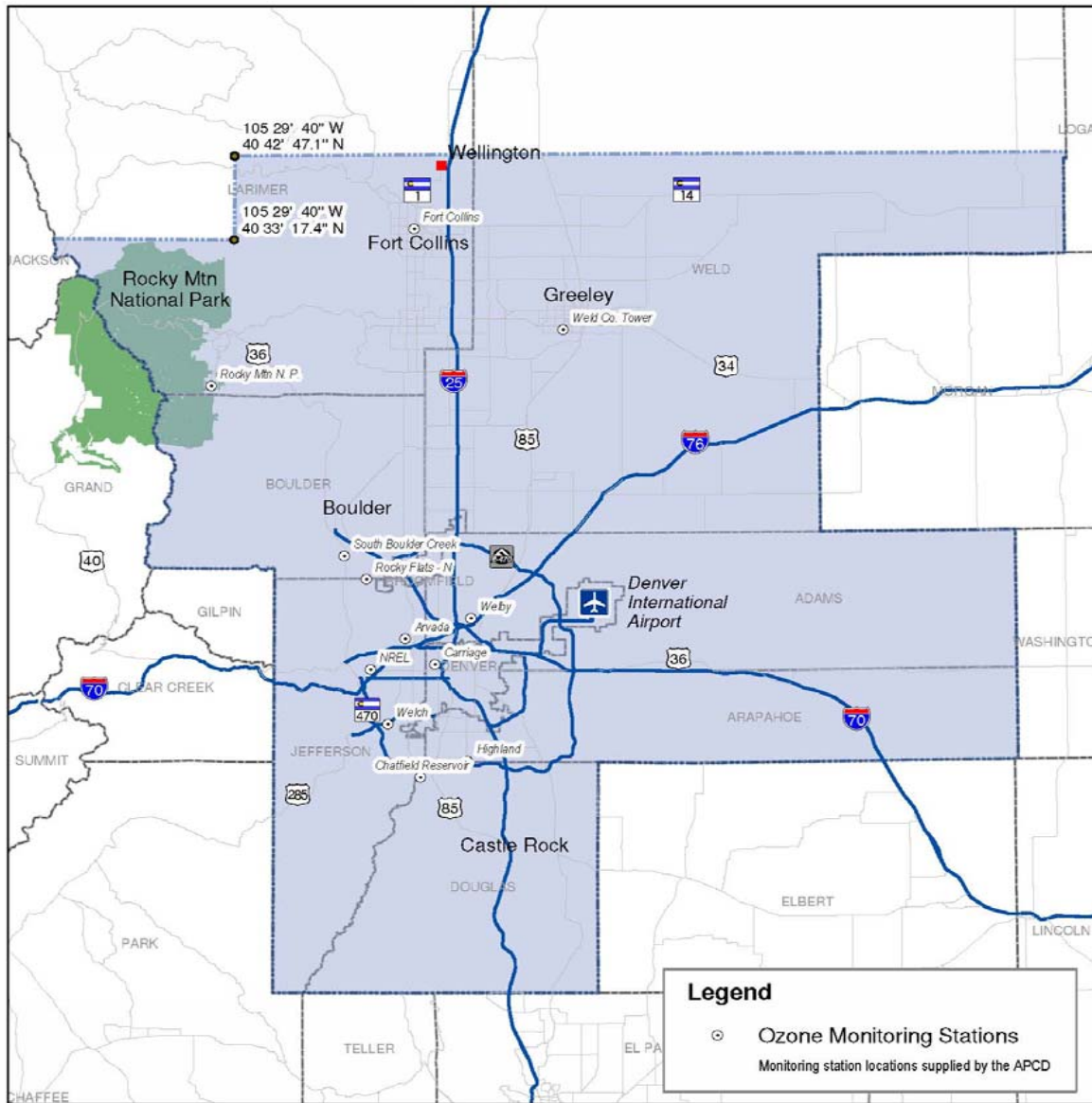
LET'S TAKE CARE OF OUR SUMMER AIR.

OzoneAware.org

Front Range Air Quality Status



- **Denver reached a historic achievement in 2002 when it met all NAAQS after previously violating 5 of the 6 standards**
 - **However, region violated ozone standard in 2007, based on 2005-07 rolling average**
 - **“Nonattainment” designation effective as of late November ’07**
 - **EPA announced new standard in 2008 of .075 ppb**



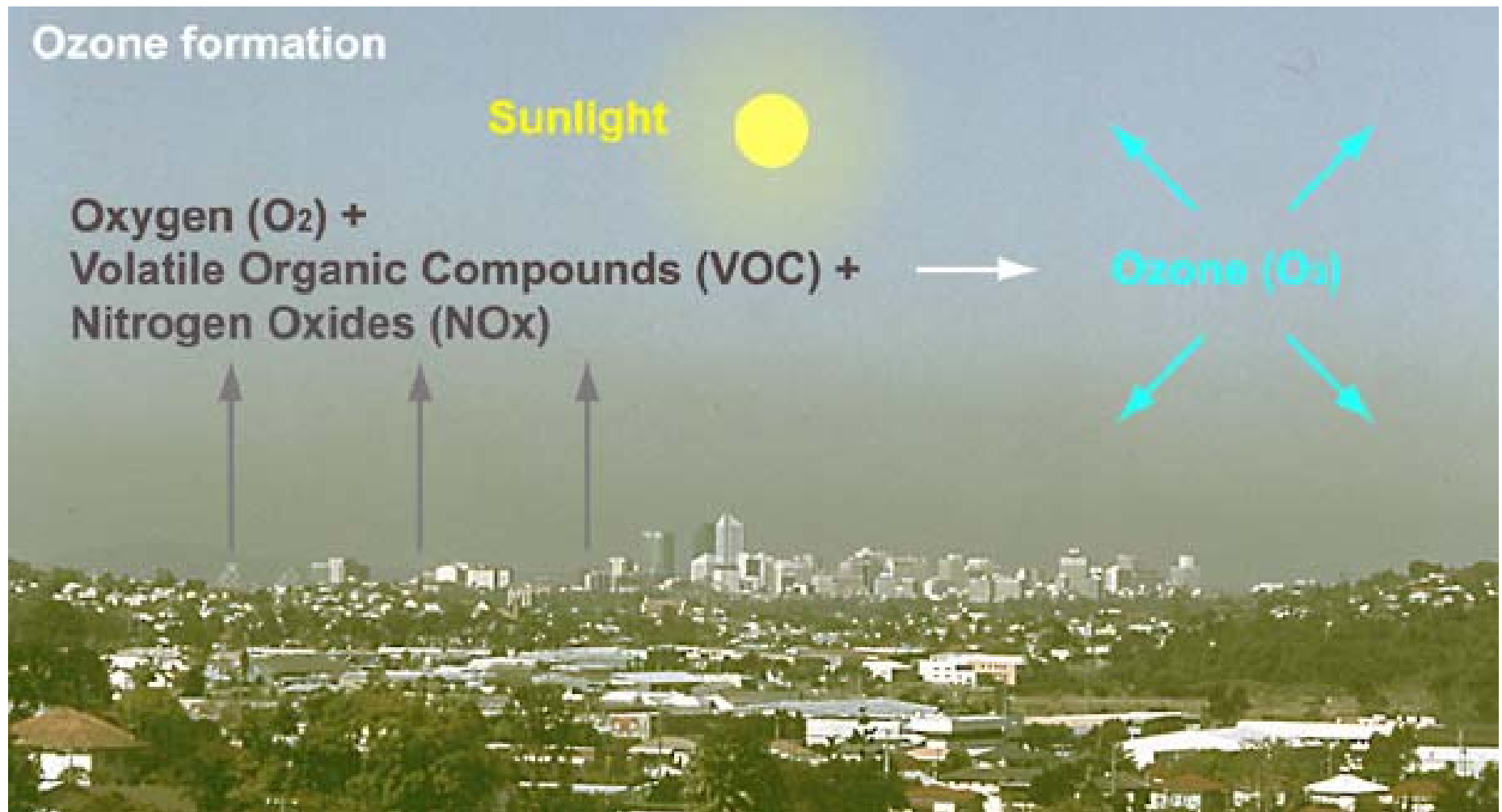
Denver-Boulder-Greeley-Fort Collins, Colorado
Eight-Hour Ozone Control Area

Ground-Level Ozone Pollution



- **Secondary air pollutant formed in the atmosphere through reaction of:**
 - Volatile Organic Compounds (VOC)
 - Nitrogen Oxides (NO_x)
- **Prime conditions for ozone formation**
 - Intense sunlight, high temperatures, persistent high pressure systems, light winds & little moisture

Ozone Formation



Understanding the Origination of Ozone Pollution



- 60 percent of pollutants that cause ground level ozone are a result of our day-to-day activities
- Background pollutants
 - Includes biogenic (plants, trees) sources and transport (emissions from other areas)

Health Effects



- **Ozone can trigger attacks & symptoms in individuals with pre-existing health conditions**
- **Ozone especially effects young children and the elderly as well as those who are particularly active during peak ozone hours**
 - **Asthma affects more than 89,000 children between the ages of 1 and 14 in Colorado**
 - **Kids spend 50% more time outside than adults in the summer**
 - **Kids have a higher breathing rate, meaning more pollution is delivered to their lungs**

Ozone Related Efforts



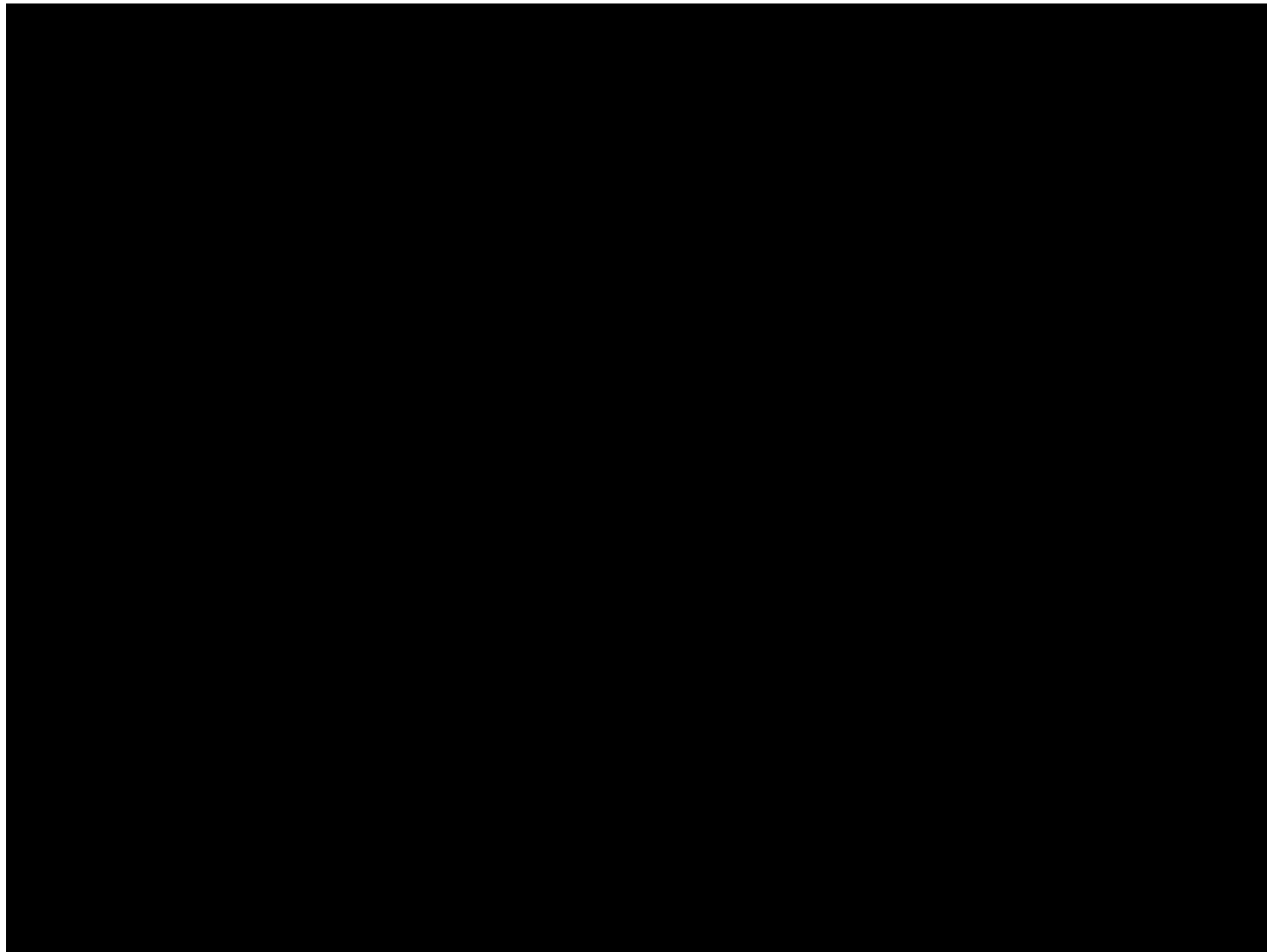
- **Tightening standards for vehicle emissions tests**
- **Voluntary and regulatory oil & gas industry measures**
- **Diesel Retrofit Programs**
 - **\$3.3M retrofit program with schools, public works and private fleets**
- **Lawn equipment exchange program**
- **Public awareness efforts**

Paid Media

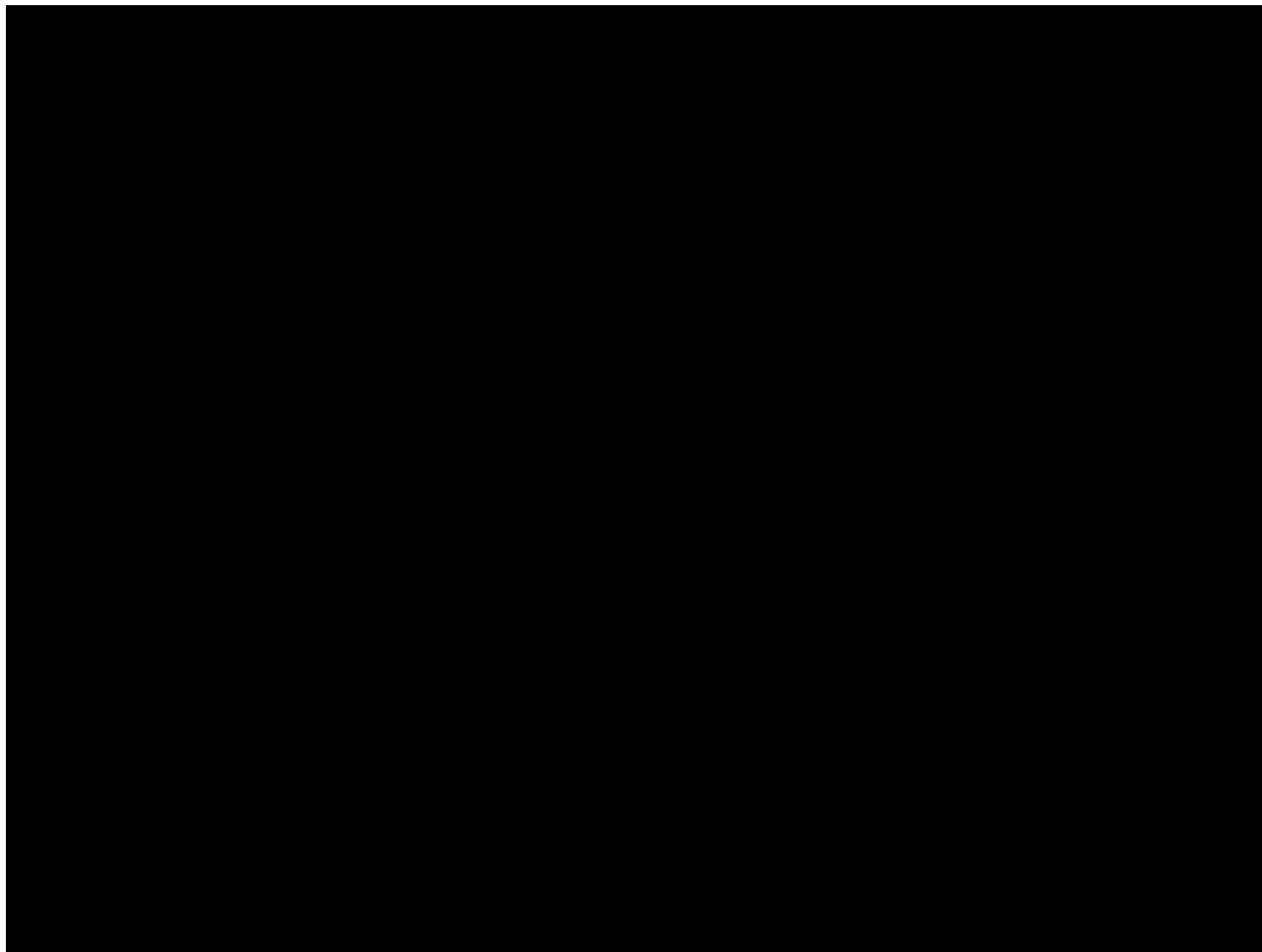


- **Several radio and television commercials run throughout the summer months**
- **Billboards are scattered throughout the metro area**
- **Digital animated billboards around the Denver Center for Performing Arts also raise awareness**

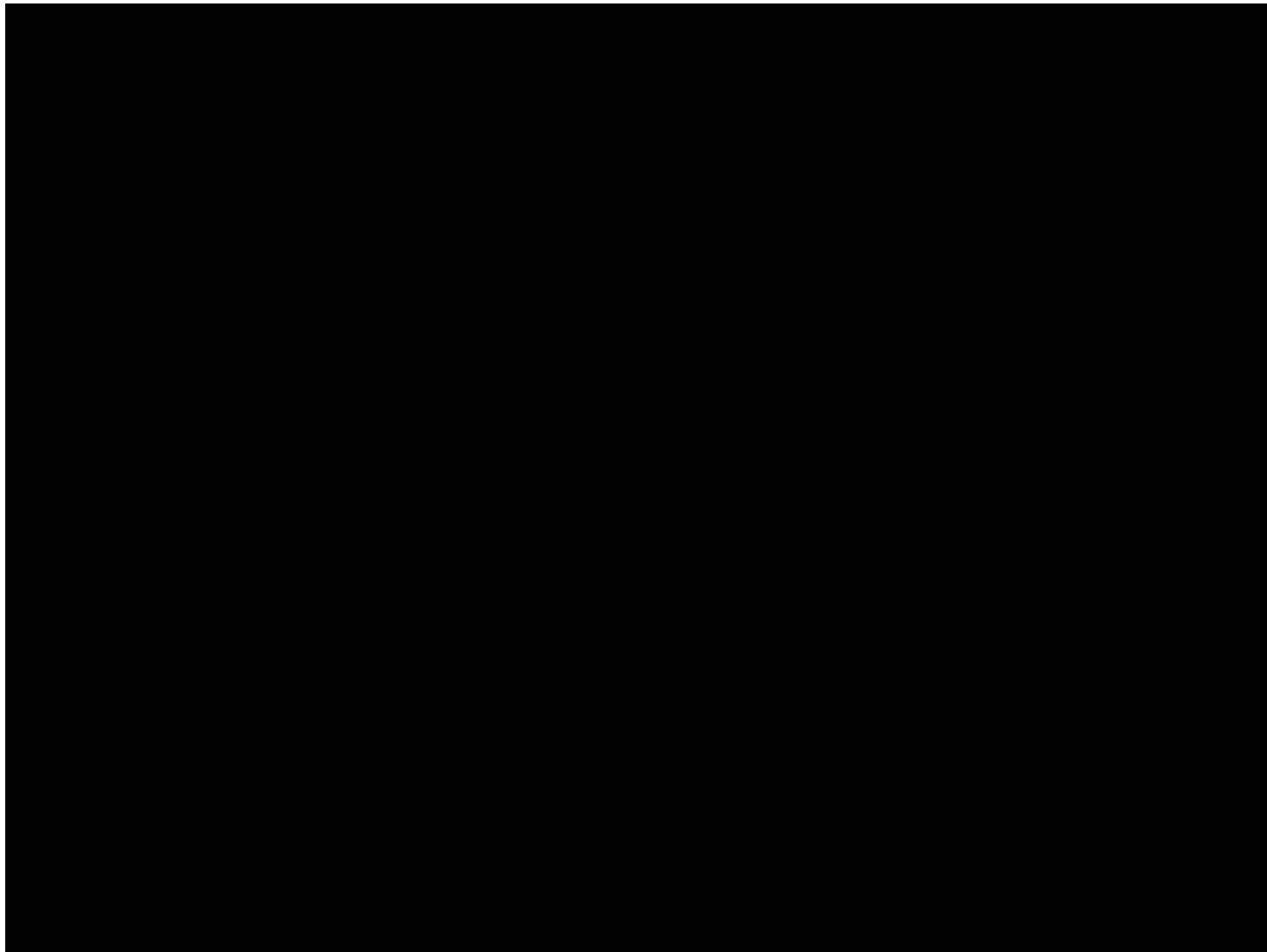
If You Drive...



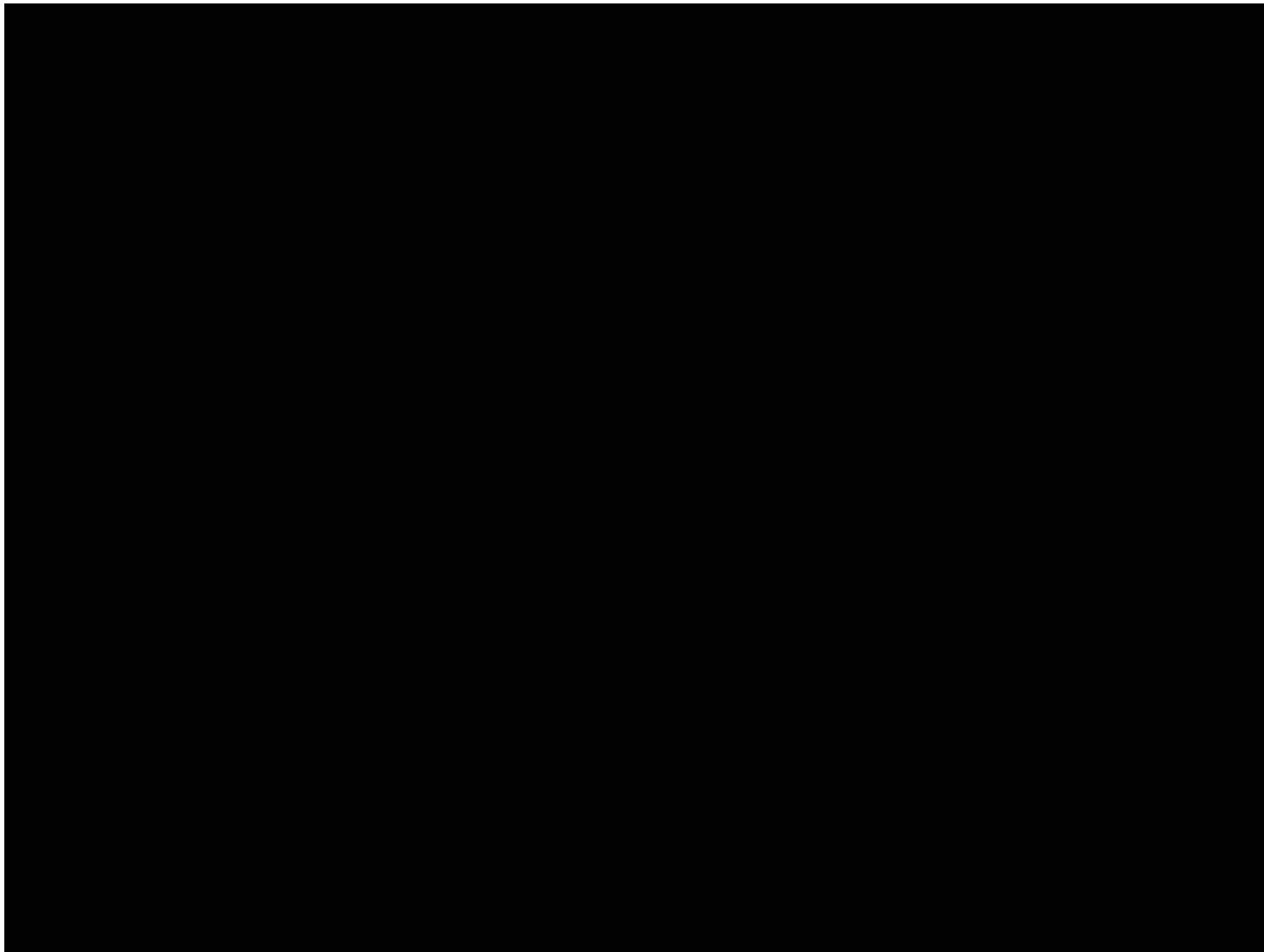
If You Mow...



Good up high, bad nearby.



Ozone Pollution and Health



Online Outreach



- **The new OzoneAware.org website was recently launched**
- **Ozone Action Alerts are issued each day when elevated ozone levels are expected**

Public Outreach



- **Zoo Launch Event – June 4**
 - Mom focused event
 - VIP luncheon
- **Hispanic Outreach**
- **Social Media**
 - Facebook
 - Twitter- @OzoneAware
- **Media Outreach**

Local Government Outreach



- **Local government guide**
 - Resource providing copy for newsletters, information about RAQC programs
- **Fleet gas cap testing and replacement program**
 - Goal is to work with 5 local governments
- **Local government sub-grant program**
 - We will award \$1500 grants for ozone outreach

Summer Chill Tips



- **Lawn and Garden – ‘Don’t mow, let it grow’**
 - Reduce mowing and mow after 5pm
 - Limiting the use of pesticides and fertilizer
 - Reduce watering to reduce growth and need for mowing
 - Mow with an electric lawn mower
- **Transportation**
 - Keep your vehicle well maintained (tire inflation, filters)
 - Refuel after 5pm and stop at the click
 - Combine trips to reduce driving
 - Commit to utilizing public transportation at least once a week
- **Home**
 - Change over to compact fluorescent bulbs
 - Reduce water usage inside the house
 - Avoid solvent based paints and stains

Mow Down Pollution



- **The RAQC offered significant rebates on electric lawnmowers and other lawn equipment**
 - **Coupons are available for \$100 off battery operated lawn mowers at OzoneAware.org**

Contacts



Ozone

- Sarah Anderson (303) 629-5450x220
- Trevor Noel (303) 629-5450x210
- www.ozoneaware.org

Mobile Sources

- Steve McCannon (303) 629-5450x230
- Kate Riegle (303) 629-5450x290
- www.repairyourair.org

Main RAQC site: www.raqc.org