

Air Quality Regs and Requirements

December 8, 2015





**Gabriele Ludwig,
Almond Board**



Speakers

Gabriele Ludwig, Almond Board (Moderator)

Danielle Veenstra, Almond Board (Moderator)

Roger Isom, Western Agricultural Processors
Association

Michelle Buffington, California Air
Resources Board

Danielle Veenstra, Almond Board



Around the World in 15 Minutes: Update on Air Quality Issues Facing the Almond Industry

Roger A. Isom

President/CEO

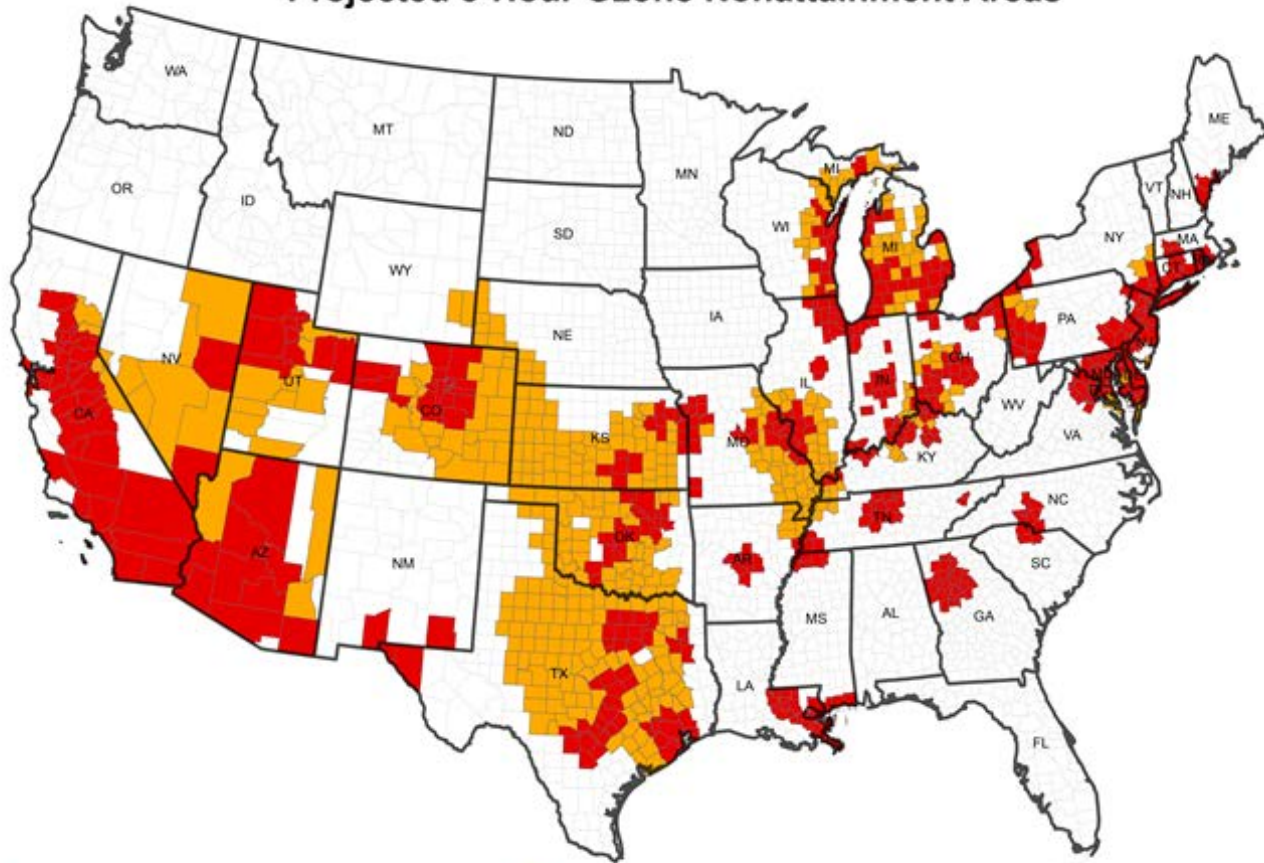
Western Agricultural Processors Association



New Ozone Standard

- EPA's own comments:
 - “For California’s nonattainment areas to meet the updated ozone standards, the state and EPA have recognized that transformational change is likely needed, such as a transition to **largely zero or near-zero emission vehicle technologies, and a significant turnover of the legacy fleet of vehicles,** among other changes.”

Projected 8-Hour Ozone Nonattainment Areas



■ Monitored CBSAs and rural counties that would be violating a 70 ppb standard ■ Unmonitored areas that are anticipated to violate a 70 ppb standard based on spatial interpolation

Source: URS, August 3, 2015.





P A Z Z A G E

Hop & Stork

Hofs d' Toppers







Sustainable Freight Strategy

- Another Truck Regulation
 - Hybrids
- Transportation Refrigeration Units (TRUs)
 - Electric
 - Plug-in requirements
- New LSI Regulation
 - Electric forklifts
- Facility Diminishing Cap
 - Emission reductions mandates for distribution



ARB Truck Regulation

- Key dates ahead for replacement
- January 1, 2017 – Limited-Mileage Trucks
 - Pre-1996 (< 15,000 miles)
 - 1996-2005 (< 20,000 miles)
 - 2006 or later (< 25,000 miles)
- January 1, 2023 – “AG” Trucks
 - < 10,000 miles/yr

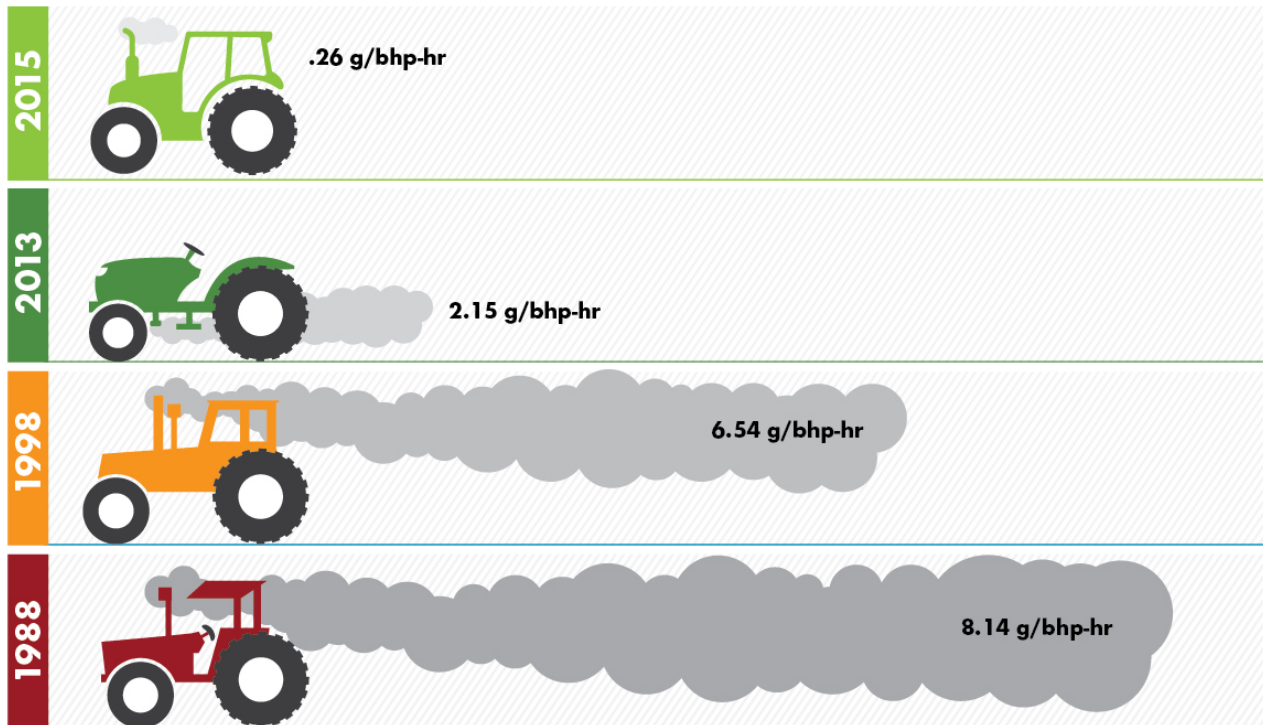


Farm Equipment Regulation

- Incentives, Incentives, Incentives!
 - Carl Moyer Program (CARB & Local Air District)
 - National Air Quality Initiative (NAQI) – USDA NRCS
 - Diesel Emission Reduction Act (DERA) – US EPA
- Economic Study by Cal Poly
 - What is the financial impact of a potential mandatory regulation?
 - 22 farms studied including four (4) almond growers
- Working close with California Air Resources Board



AG TRACTOR REPLACEMENT PROGRAM



g/bhp-hr = grams per brake horsepower hour of smog forming oxides of nitrogen

Irrigation Pump Engines

- Tier 0 (Pre-1996) banned as of January 1, 2009
- Tier 1 & Tier 2 (1996-2006) banned as of January 1, 2015
 - Or 12 years after the date of installation**
- Electric motors
 - AG ICE Tariff ends this year
 - AECA has successfully received 3 year phase-in to new rates

Gasoline Tanks

- New requirements could trigger problems
- Replacing tanks may trigger vapor recovery
 - Phase 1, and
 - Phase 2!
 - Gasoline only
- New fire code requirement
 - UL listed aboveground tank
 - Double walled
 - No gravity feed, must have pump
 - Would apply to diesel and gasoline



Hullers and Processors

- Pasteurization units – Rule 4307
- PPO chambers
- Stockpile elevators
- Permitting Issues

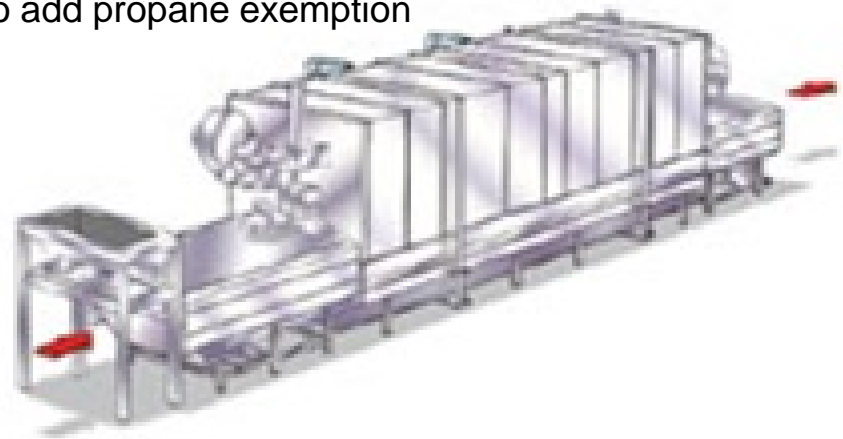


PPO Chambers

- Permitting challenges
- WAPA developed nut specific emission factors
- Working on scrubber requirements
- New risk assessment requirements present challenge

Pasteurization Units

- Exempt from Lo-NOx burners
 - Only for natural gas
 - Not applicable to propane – must meet BACT
- WAPA working with Air District & manufacturer to add propane exemption
 - Requires rule modification
 - EPA & ARB review



Stockpile Elevators

- Air District looking at requiring them to be permitted
 - > 50 hp
 - Combustion emissions
 - Would trigger Tier 4 Final
 - Fugitive PM10 emissions



Permitting Issues

- Farms
 - If you switch to Tier 3, Tier 4 or electric engines, check you emissions...you may no longer need a permit
- Larger huller projects
 - Triggering public notice
 - Close to offset requirements
- No modifications without authority to construct!
- Risk assessment issue with fumigation
- Be strategic!



Questions?





**Michelle Buffington,
California Air Resources Board**



Agriculture and Air Quality

*December 8th, 2015, The Almond Conference
Michelle Buffington, Manager, ARB*



Broad ARB Goals





Plans to Get Us There

- ▣ Mobile Source Strategy
- ▣ State Implementation Plans
- ▣ Scoping Plan
- ▣ Sustainable Freight Action Plan
- ▣ Short-lived Climate Pollutant Plan

Guiding Principles for Strategy Development



Agriculture's Role

- ▣ Part of all of the strategies
- ▣ Continue to participate in:
 - ▣ Voluntary incentive programs
 - ▣ The public process
- ▣ Partnership for data to understand contributions and economics of the industry



Have Questions?

Michelle Buffington

Manager, Off-road and Agricultural Strategies Section

Michelle.Buffington@arb.ca.gov

916.322.8748



Danielle Veenstra, Almond Board

Managing Dust at Almond Harvest



How to Reduce Dust

- Dust management includes:
 - Awareness of regulations and risks
 - Using research-based techniques and strategies
 - Opportunities and incentives to improve
- Dust Tool Kit + Quick Guides are durable tools to remind all involved in almond harvest of best practices
 - Growers
 - Operators
 - Custom harvesters



Harvest Dust Tool Kit

4 Key Strategies:

- 1) Maintain clean orchard floors.
- 2) Blow into the orchard when working near field edges and use the trees and their canopies to naturally filter dust.
- 3) Set sweeper head height to optimum level and use fewer blower passes when possible.
- 4) Reduce harvester ground speed to allow more time for gravity separation.



HOW DO YOU MEASURE SUCCESS?

1. Maintain clean orchard floors.
2. Blow into the orchard when working near field edges and use the trees and their canopies to naturally filter dust.
3. Set sweeper head height to optimum level and use fewer blower passes when possible.
4. Reduce harvester ground speed to allow more time for gravity separation.

california almonds
Almonds.com

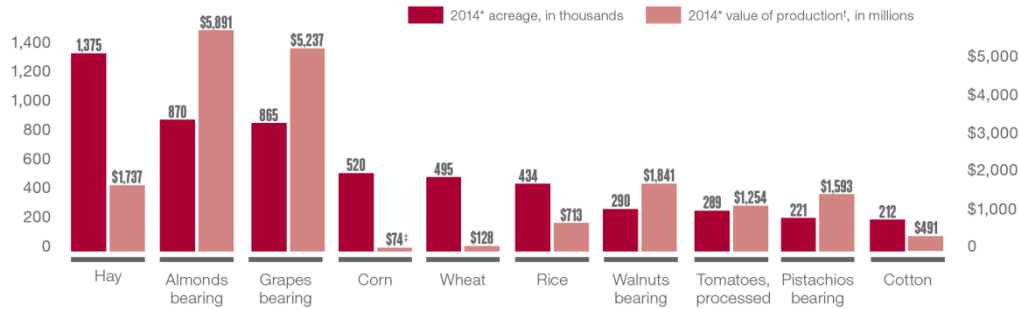


DUST MANAGEMENT STEPS

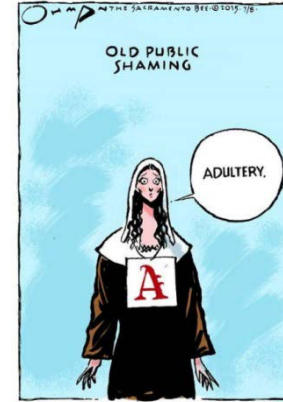
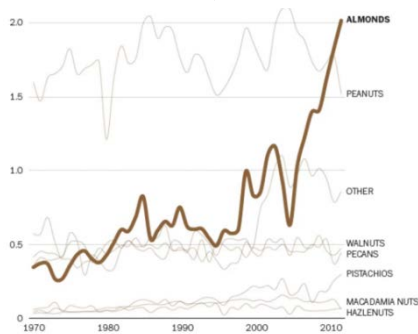
Available downstairs at Almond Board booth and upon request.

With Success Comes Attention and Scrutiny

TOP TEN CALIFORNIA CROP ACREAGE



Almonds surpass peanuts in popularity



LETTERS TO THE EDITOR OCTOBER 22, 2015

Martin Sullivan: Almond harvest too dusty

Regarding "Tolerate the dust because almonds are gold" by Dick Hagerly (Opinions, Sept. 18): Almonds are more like gold than Dick Hagerly seems to realize.

During the Gold Rush hydraulic miners had little consideration for the effects on other citizens or wildlife. They filled streams and rivers with silt and caused big problems for farmers and others downstream. It took years to bring the miners under control.

Currently, almond farmers completely externalize the cost of harvesting to everyone by filling the valley with dust, dirtying all surfaces and causing respiratory issues for most of us. If people want to be outdoors during almond harvest, currently they just have to accept the unpleasantness.

If the harvesters' dirt stayed on their property or at least close by, it would be no big deal, but the dust fills the whole valley.

It is especially outrageous if they are making so much money that they don't modernize, since technology allows much cleaner harvesting.



LETTERS TO THE EDITOR AUGUST 22, 2015

Krista Smith: Where there's dust, making money's a must

Almonds are a dusty business we all know, "That's OK," says the Almond Board, "Because it helps our economy to grow!"

When dust control during harvest is voluntary, And dust control cuts profits, that's monetary,

With this status quo, I think we all know That the dust will continue to grow!

KRISTA SMITH, OAKDALE

[MORE LETTERS TO THE EDITOR](#)





Why to Reduce Dust

- The California Almond industry is **larger than ever** — both in size and value to our communities and the state as a whole.
- Continued **drought** means little soil moisture to aid in reducing dust.
- Dust at harvest is part of growing almonds but it's also a **visible reminder** of the presence of farming in our communities.
- Harvest dust impacts those **who live, work, play and drive** nearby.
 - Neighboring homes and communities
 - Farmworkers in neighboring crops
 - Schools and daycares

