



State and Local Air Agencies' Perspective on Agricultural Air Emissions

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NACAA

- National Association of Clean Air Agencies (NACAA)
- Formerly known as STAPPA/ALAPCO
- National association representing state and local clean air agencies nationwide
- www.4cleanair.org



NACAA Agriculture Committee

- NACAA Agriculture Committee co-chairs
 - Shelley Kaderly, Nebraska
 - Doug Quetin, Monterey, California
- Forum for discussing agricultural air quality issues
- Opportunity to liaison with AAQTF



Clean Air Act Roles and Responsibilities

- Implementation of the Clean Air Act is a joint responsibility among EPA, states, localities and tribes
- “[A]ir pollution prevention (that is, the reduction or elimination, through any measures, of the amount of pollutants produced or created at the source), and air pollution control at its source is the primary responsibility of States and local governments.” CAA section 101(a)(3).



State and Local Air Agencies Perform Most of the Work

- Collect 99% of the data included in EPA's AIRS databases
- Handle 90% of all enforcement actions
- Receive delegation of over 80% of environmental programs
- Write SIPs demonstrating attainment/maintenance of NAAQS



More on State Implementation Plans (SIPs)

- Contain enforceable measures for reducing emissions
- Must demonstrate attainment by attainment date
- Federal measures help, but ultimately states and localities on hook to find emission reductions



More on SIPs

- Pollution control requirements apply to all industry sectors
 - Electric utilities but also dry cleaners, bakeries, auto body shops, e.g.
- Nonattainment areas: new sources LAER; existing RACT
- Attainment areas: new sources BACT; existing PSD increment

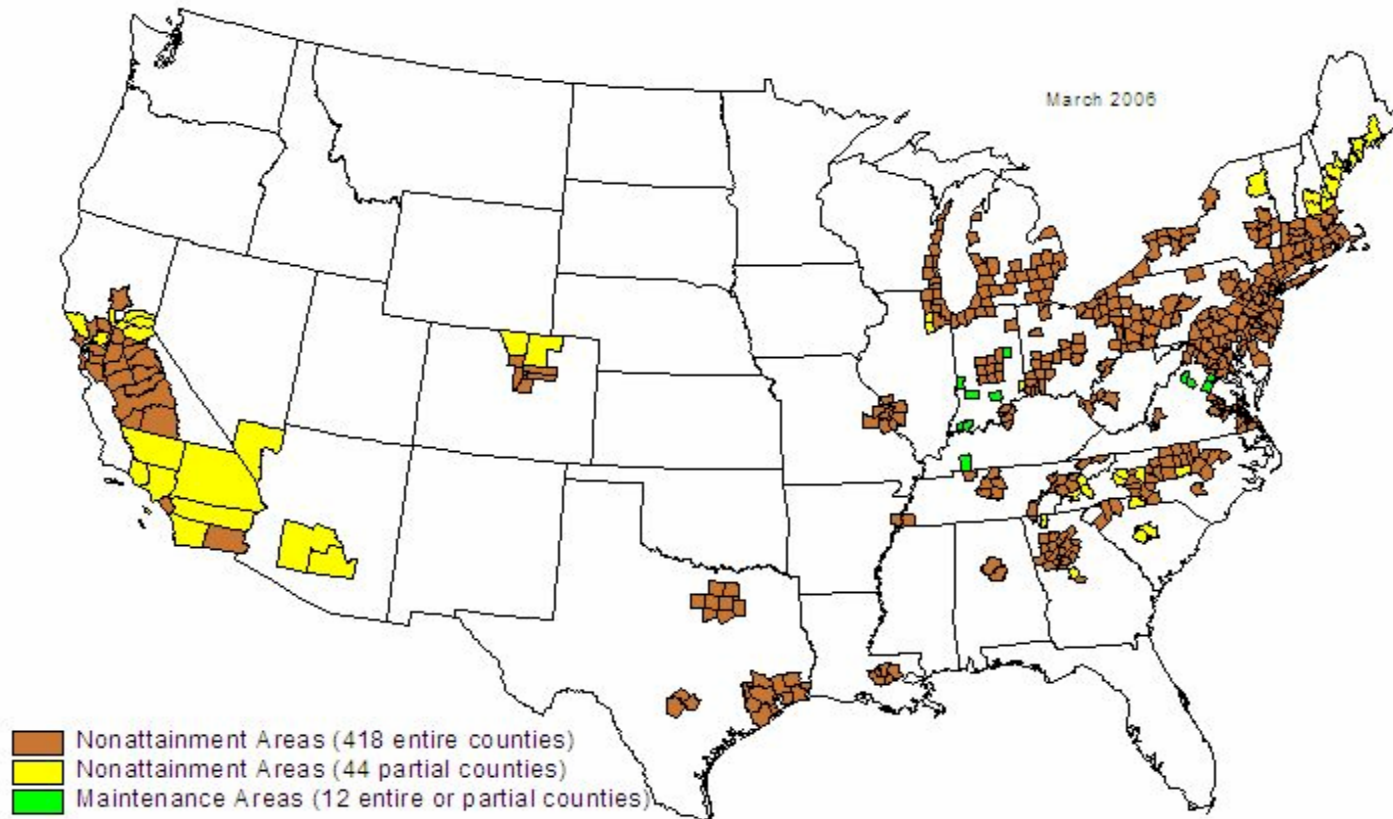


More on SIPs

- Zero sum game – if one industry does not reduce emissions, will need to seek emission reductions from another sector
- Ultimate test: monitoring data – are pollution concentrations going down? Three years of clean data needed.

8-Hour Ozone Standard

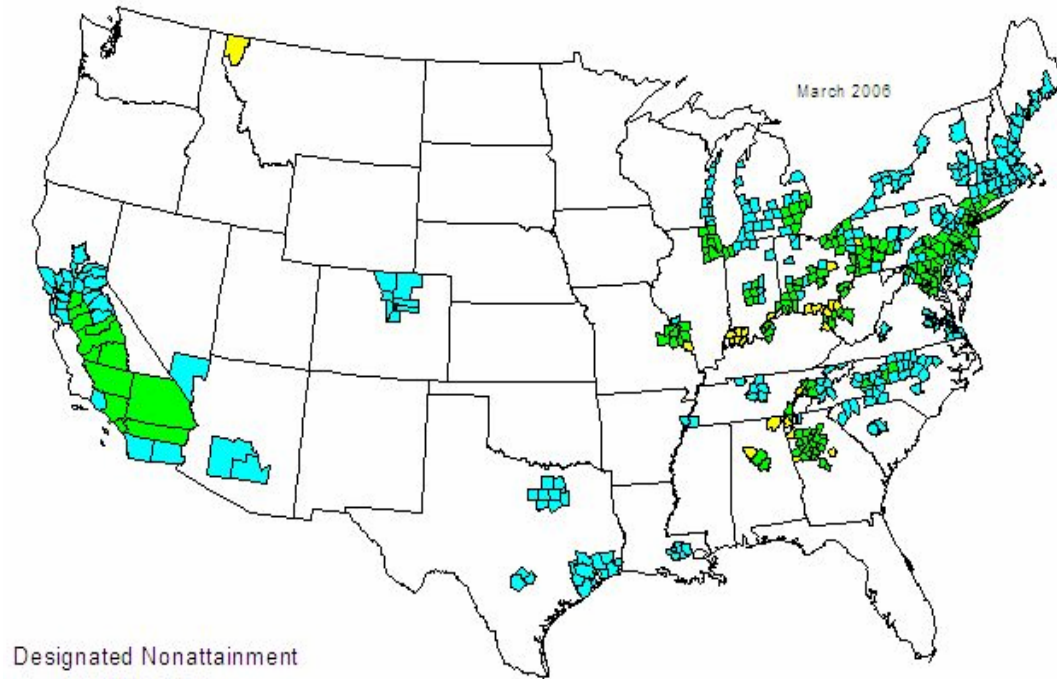
Nonattainment and Maintenance Areas in the U. S.
8-hour Ozone Standard





8-Hour Ozone and PM_{2.5} Standards

Counties Designated Nonattainment for PM-2.5 and/or 8-hour Ozone Standard



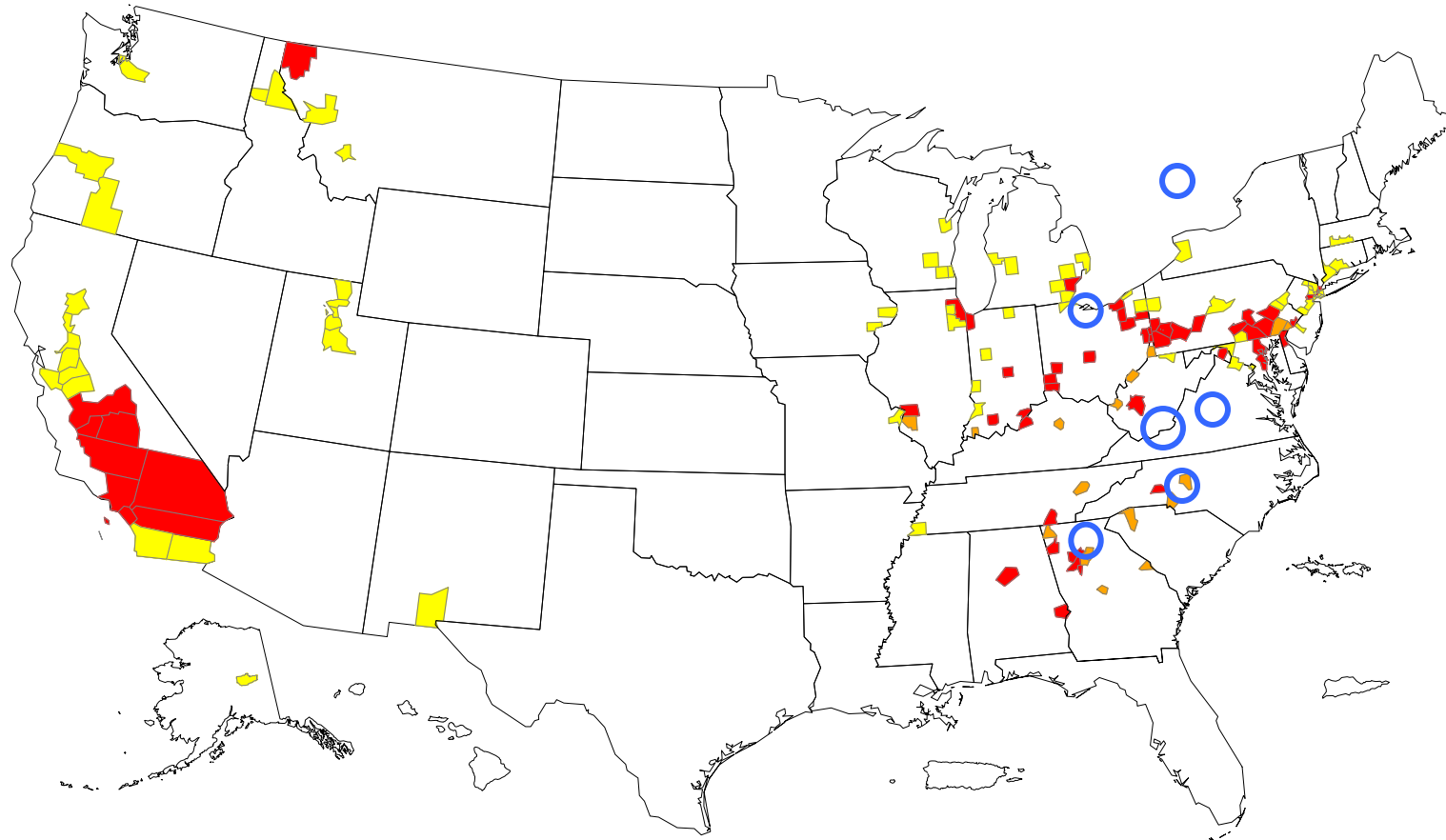
Designated Nonattainment

- PM-2.5 Only
- PM-2.5 and 8-hour Ozone
- 8-hour Ozone Only

Several counties have only a portion of their county designated nonattainment. These counties are represented as whole counties on this map.

Counties Exceeding Revised PM_{2.5} Standards

Based on 2003-2005 Monitoring Data



Legend

County with monitor exceeding:

■	both annual (15 µg/m ³) <u>and</u> 24-hour (35 µg/m ³) PM _{2.5} standards	56
■	ONLY the 24-hour PM _{2.5} standard (35 µg/m ³)	70
■	ONLY the annual PM _{2.5} standard (15 µg/m ³)	17

Total Counties Exceeding **143**

Number of Counties

- = areas violating annual standard but not designated NA
- Data from AQS 7/10/2006
 - Data completeness computed per CFR 7/10/2006
 - EPA will **not** base designations for the new fine particle standards on these data.



8-Hour Ozone and PM_{2.5} Deadlines Facing States & Localities

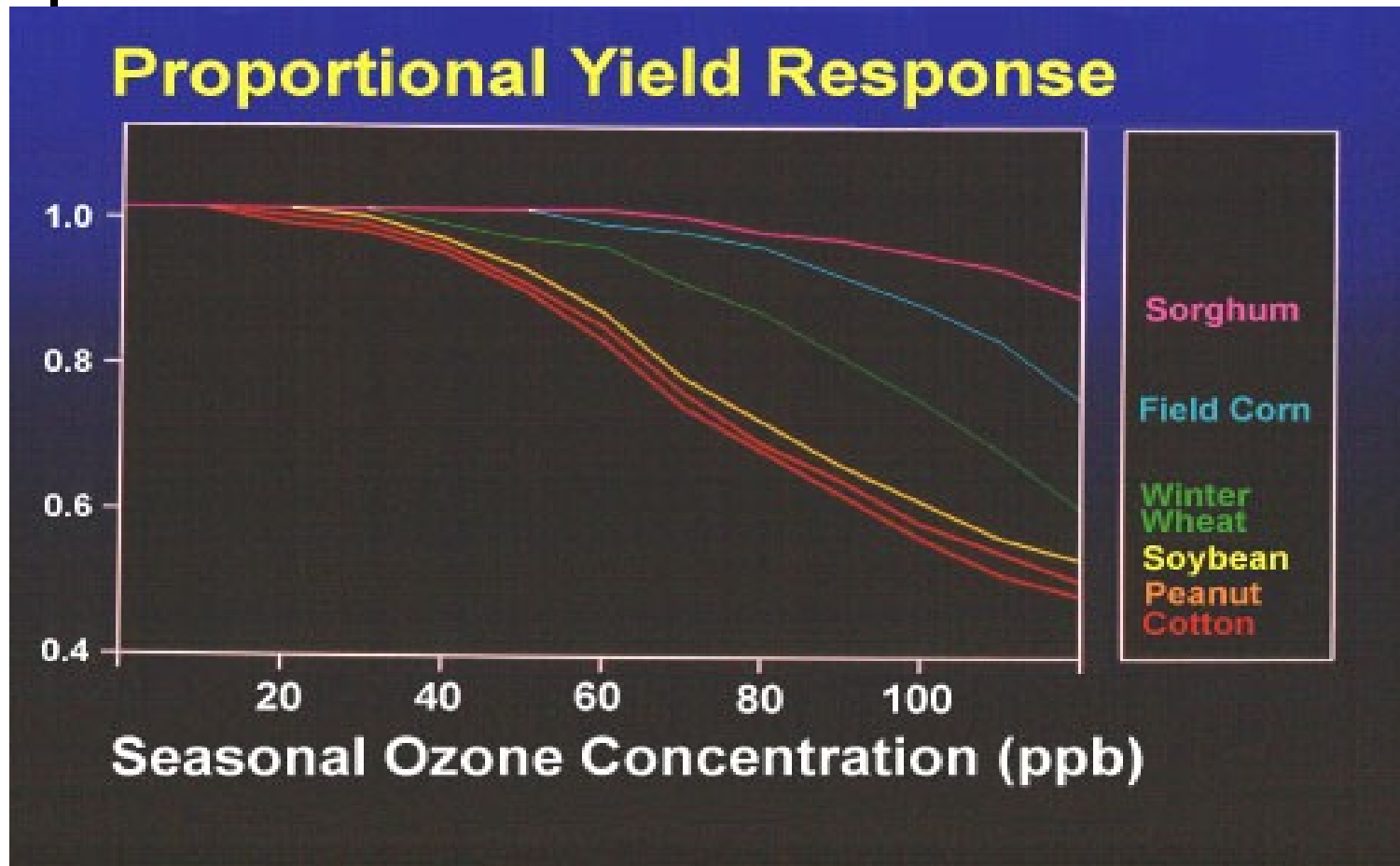
Action	Deadline
8-hour ozone	
Attainment demonstration SIPs due	June 2007
Attainment deadlines	June 2007-June 2024 (areas with more severe pollution problems get more time)
Fine Particulate Matter (PM_{2.5})	
SIPs due	April 2008
Attainment Date	April 2010
Attainment Date w/extension	April 2015



Ozone harms plants



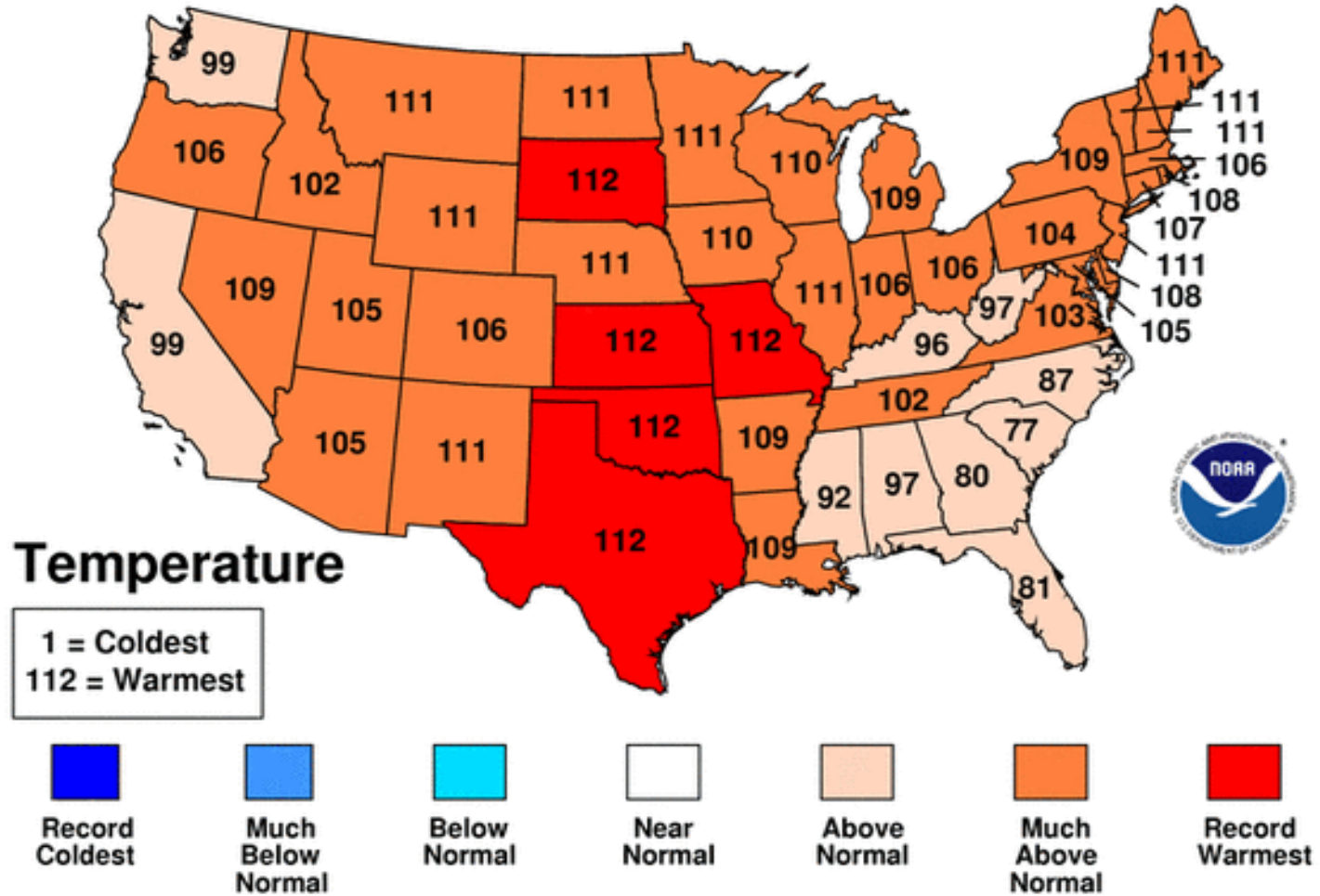
- ● ● | Ozone decreases plant yield





Jan - Jul 2006

National Climatic Data Center/NESDIS/NOAA





Air Emissions from Ag

- Manure lagoons and piles
- Land application of manure
- Barns
- Feed preparation/storage & handling
- Unpaved areas
- Internal combustion engines
- Agricultural burning
- Field dust



AFO Air Emissions

- 50% of U.S. NH_3 emissions
- 25% of U.S. N_2O emissions
- 18% of U.S. methane emissions
- NO_x & VOCs are ozone precursors
- NH_3 , H_2S and NO are $\text{PM}_{2.5}$ precursors
- Direct emissions of $\text{PM}_{10-2.5}$
- Odor

Source: National Research Council, 2002



Concerns with Safe Harbor Agreement

- Enforcement waiver
- SIP issues
- Results not timely
- No study of BMPs and no requirement to put on BMPs
- Industry control of study
- Only 14 monitoring sites



Other concerns

- EPA deeming emissions from barns and lagoons fugitive
- Grassley proposal to exempt dust from PM NAAQS
- Other exemptions (e.g., manure & EPCRA and CERCLA)
 - Emissions still have an impact on air quality even if don't "count"



Another Model -- California

- SB 700 removed permitting exemption for agricultural activities in CA
- ARB defined “large confined animal facility”
- Local air districts must establish a permitting program for agriculture
- Areas in nonattainment for ozone and/or PM must adopt rules for limiting emissions from agriculture



Another model -- California

- San Joaquin Valley adopted rule 4570 limiting VOC emissions from dairies June 2006
 - VOC emission factors determined August 2005
 - Next up: BACT for dairies
- San Joaquin Valley adopted rule 4550 limiting fugitive dust emissions from ag sites in May 2004



Another model -- California

- AB 32 set greenhouse gas (GHG) emission cap for state
- California's Climate Action Team identified manure management as one of the 11 sectors for controlling GHG emissions
- ARB recently adopted staff's recommendations to amend the Stationary Diesel Engine Air Toxic Control Measure to include emission performance standards for in-use stationary diesel agriculture engines.



Opportunities for Collaboration

- BMPs that limit or avoid release of air pollution
- Control technologies
- Win-wins
 - Methane as an energy source
 - Reduce odor/reduce nuisance complaints
 - Avoid need for regulation if emissions below permitting thresholds
 - ↓emissions = ↓impact of pollution on agriculture
 - GHG market



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