

# **General Conformity** *Presumed to Conform*

## **Office of Airports** **Planning and Environmental** **Division**

Presented to: FAA Western-Pacific 4<sup>th</sup> Annual  
Airports Conference

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# Growing Interest in Air Quality

- Increasing public awareness
  - Greenhouse gases and global warming
  - Hazardous air pollutants
  - Beijing and the Summer Olympics
- Greater focus on aviation
  - EPA and State regulators
  - European community
  - LAX air quality and source apportionment study

*Air quality is a growing constraint to project schedules and project approvals!*

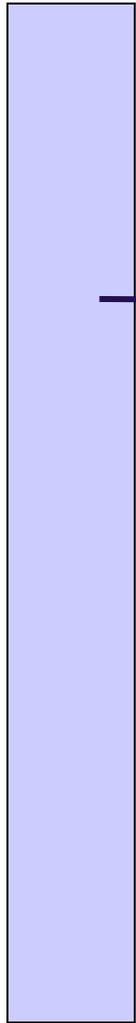


# The General Conformity Rule and affected airports

Presumed  
to Conform

Effects on  
Presumed to  
Conform

Proposed EPA  
revisions to  
General  
Conformity



# History of Conformity Laws

- **Clean Air Act of 1977**
  - EPA read as surface transportation conformity
- **Clean Air Act Amendments of 1990**
  - Applied conformity beyond surface transportation to everything else, including aviation
- **1993 General Conformity Rule (58 FR 63214)**
  - Requires Federal agencies to demonstrate conformity before approvals, permits, funding, or other starting actions



# EPA Air Quality Management

## 1. National Ambient Air Quality Standards

Standard	Primary (Human Health)	Secondary (H. Welfare)
<b>Carbon Monoxide (CO)</b> 8 Hour Average 1 Hour Average	9 ppm (10 mg/m <sup>3</sup> ) 35 ppm (40 mg/m <sup>3</sup> )	N/A N/A
<b>Particulate Matter (PM<sub>10</sub>)</b> Annual Arithmetic Ave. 24 Hour Average	<b>Revoked</b> 150 µg/m <sup>3</sup>	<b>Revoked</b> 150 µg/m <sup>3</sup>
<b>Particulate Matter (PM<sub>2.5</sub>)</b> 24-Hour Standard Annual Arithmetic Ave.	<b>35 µg/m<sup>3</sup></b> 15 µg/m <sup>3</sup>	<b>35 µg/m<sup>3</sup></b> 15 µg/m <sup>3</sup>
<b>Ozone (O<sub>3</sub>)</b> 8 Hour Average	<b>0.075 ppm</b>	<b>0.075 ppm</b>
<b>Sulfur Dioxide (SO<sub>2</sub>)</b> Annual Average 24 Hour Average 3 Hour Average	80 µg/m <sup>3</sup> 365 µg/m <sup>3</sup> N/A	N/A N/A 1300 µg/m <sup>3</sup>
<b>Lead</b> Calendar Quarter Average	1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>

# EPA Air Quality Management (cont.)

## 2. EPA Area Designations (by pollutant)

- Based on ambient monitoring
- Three types of designations
  - Attainment/Unclassifiable, Maintenance, Nonattainment
- Nonattainment classifications
  - Based on severity of NAAQS violation
  - Correlate with general conformity *de minimis* levels

## 3. State Implementation Plans (SIPs)

- Roadmap for achieving NAAQS attainment and maintenance
- Developed and adopted by States, Tribes, and local agencies with EPA approval
- Penalties for failure to attain (e.g., highway funding, FIPs)



# Purposes of General Conformity Program

## 1. To ensure that Federal actions do not interfere with the SIP

- No new NAAQS violations
- No increase in the frequency or severity of existing violations
- No delay in timely attainment

## 2. To foster collaboration between Federal and State governments

- Provide project level review
- Enable public participation in the review



# Emissions Covered by GC

- **Project emissions from FAA actions in non-attainment and maintenance areas**
  - Direct emissions (e.g., construction)

- Indirect emissions

- Reasonably foreseeable
- Agency has continuing program responsibility



- **Emissions from actions that are “presumed to conform”**

- *Not current part of “total direct & indirect emissions”*



# De Minimis Thresholds by Criteria Pollutant

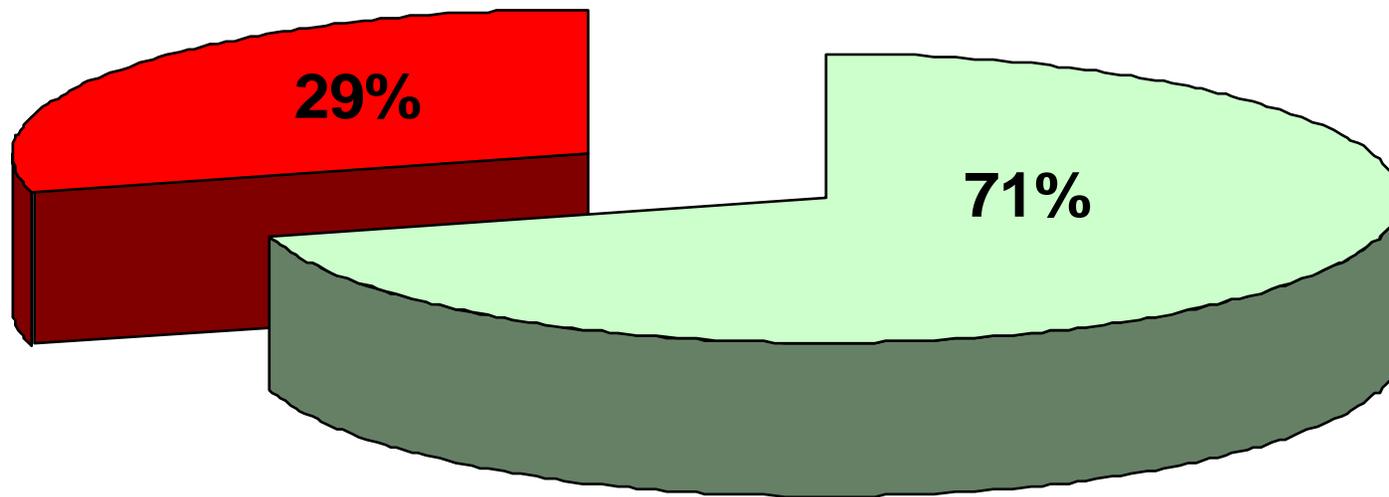
	<u>NONATTAINMENT</u> <u>AREAS (tpy)</u>	<u>MAINTENANCE</u> <u>AREAS (tpy)</u>
<b>Carbon Monoxide (CO)</b>	<b>100</b>	<b>100</b>
<b>Particulate Matter (PM<sub>10</sub>)</b>		
Moderate	<b>100</b>	<b>100</b>
Serious	<b>70</b>	<b>100</b>
<b>Particulate Matter (PM<sub>2.5</sub>)</b>	<b>100</b>	<b>100</b>
<b>Ozone (O<sub>3</sub>) (precursors are VOC &amp; Nox)</b>		
Extreme	<b>10</b>	
Severe	<b>25</b>	
Serious	<b>50</b>	
Marginal/Moderate		{All O <sub>3</sub> }
Inside Ozone Transport Region	<b>50 VOC/100 NOx</b>	<b>50 VOC/100 NOx</b>
Outside Ozone Transport Region	<b>100</b>	<b>100</b>
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>	<b>100</b>	<b>100</b>
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>	<b>100</b>	<b>100</b>
<b>Lead (Pb)</b>	<b>25</b>	<b>25</b>

# Conformity Demonstration Options

- **Action is exempt or presumed to conform**
- **Project emissions are in the SIP**
  - Project is accounted for specifically
  - State determines that project emissions are covered in a broader category (e.g., off-road transportation emissions) or as part of a conforming Transportation plan
  - State agrees to include new emissions (18-month SIP call)
- **Emissions inventory shows project emissions are below *de minimis* thresholds**
- **Emissions are mitigated or offset**
- **Modeling demonstration that local pollutants (except O<sub>3</sub> & NO<sub>2</sub>) do not violate the NAAQS**



# 150 of 514 Commercial Service Airports are in Nonattainment or Maintenance Areas



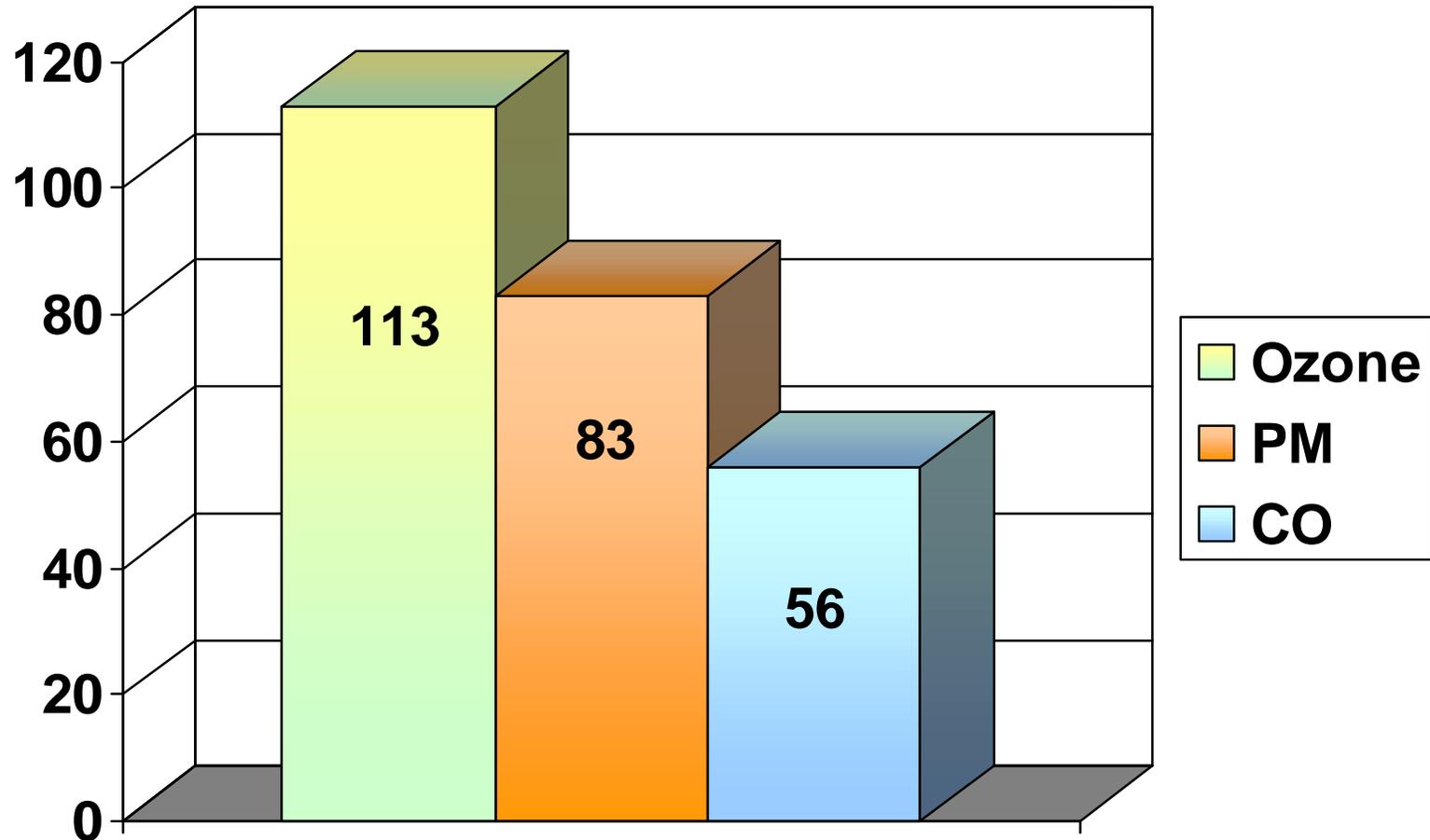
■ Attainment (NEPA responsibilities)

■ Nonattainment (NEPA & General Conformity)

NPIAS 2005



# Poor Air Quality Status by Pollutant for 150 Commercial Service Airports



# New Ozone NAAQS

March 12, 2008

- New 8-hr. ozone standard = 0.075 ppm
  - Replaces the 0.08 ppm standard set in 1997
  - “Primary” and “secondary” standards remain the same for public health and public welfare (i.e., vegetation, ecosystems)

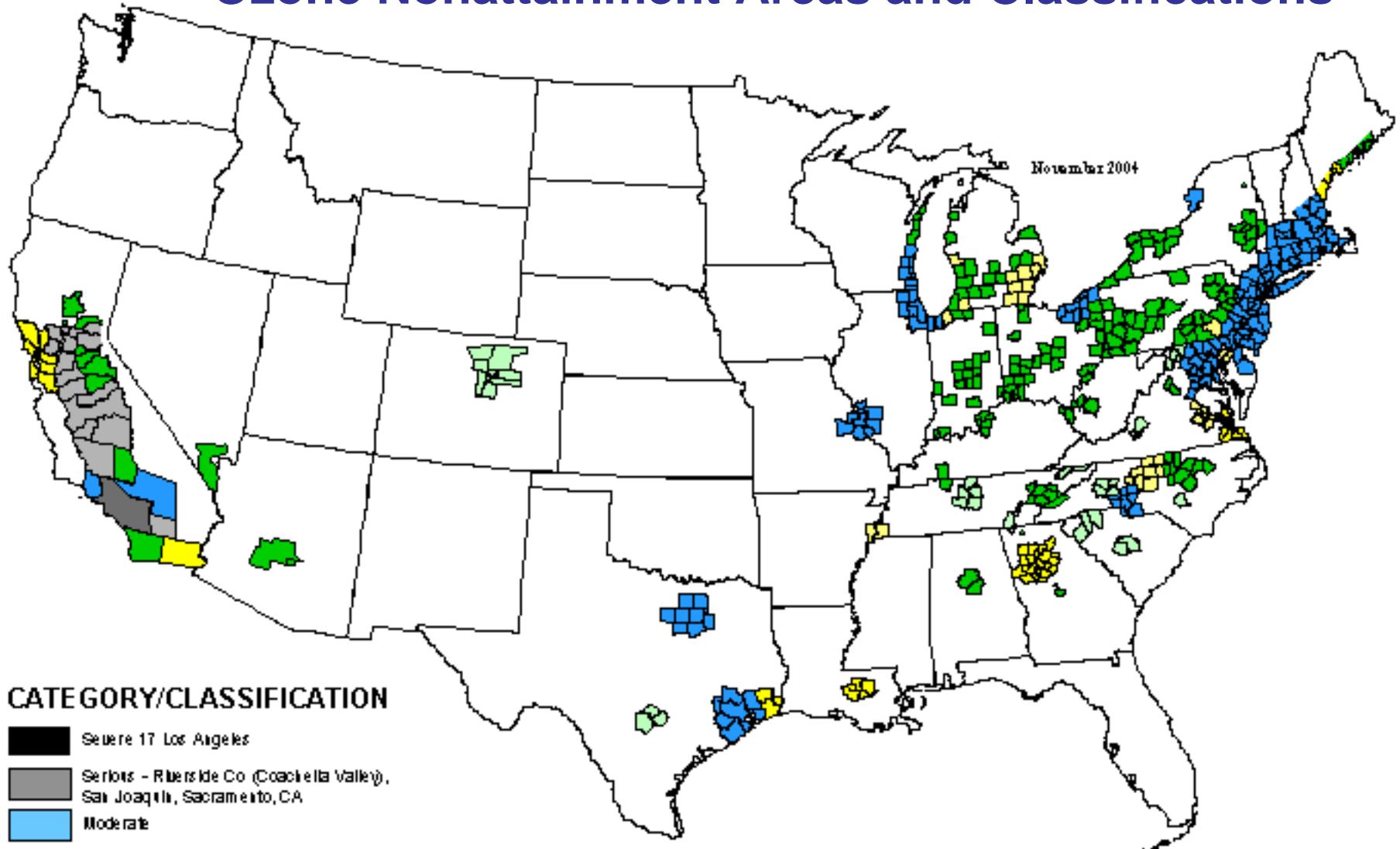


# New Ozone Standard (cont.)

- EPA's implementation process:
  - 3/2009 - State recommended designations to EPA based on ambient monitoring and modeling
  - 3/2010 - Final designations
  - 2011 - Conformity required for new areas
  - 2013 - SIPs due. Attainment dates will be 2013-2030 depending on classifications (severity of problem)
- GC *de minimis* thresholds unlikely to change
- But, airports may see fewer allowable emissions per project if area is reclassified (e.g. serious to severe)



# Ozone Nonattainment Areas and Classifications



## CATEGORY/CLASSIFICATION

- Severe - Los Angeles
- Serious - Riverside Co. (Coachella Valley), San Joaquin, Sacramento, CA
- Moderate
- Marginal (Greensboro, NC is an EAC)
- Subpart 1 (Basic)
- Subpart 1 EAC (Basic)

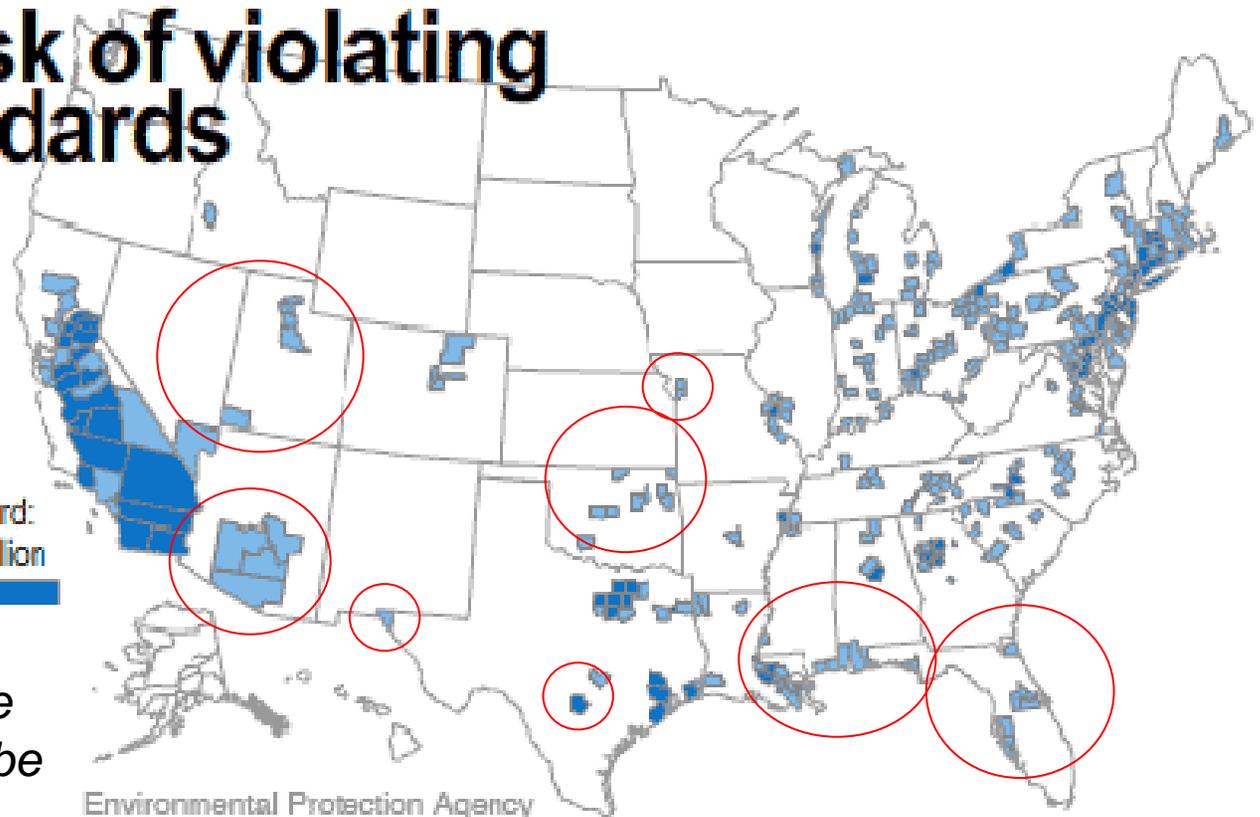
# Ozone Nonattainment Areas in the Future

Federal Aviation  
Administration

## Counties at risk of violating new EPA standards

The federal ozone, or smog, standard will drop from 80 parts per billion to 75, the Environmental Protection Agency announced Wednesday. If the new standard took effect today, 345 counties would be in violation†.

(New standard): 75 parts per billion	Current standard: 80 parts per billion
-----------------------------------------	-------------------------------------------



*It is possible that 3 times the number of US counties will be in violation, from 104 to 345.*

*This could place many new airports into nonattainment for ozone, including airports in Arizona, Utah, Texas, Oklahoma, Arkansas, and along the gulf coast to Florida.*

# Status of PM<sub>2.5</sub> Standards

- **PM<sub>2.5</sub> NAAQS implemented in March 2007**

- Area designations but no classifications

- *De minimis* level = 100 tpy

- PM<sub>2.5</sub> has four precursors

- **PM<sub>2.5</sub>** and **SO<sub>2</sub>** (analysis required)

- **NO<sub>x</sub>** (analysis required unless waived by EPA or State)

- **VOCs** and **Ammonia** (analysis only if requested by EPA or State)

- **SIP Development Schedule**

Dec. 2007 - State recommended designations due to EPA

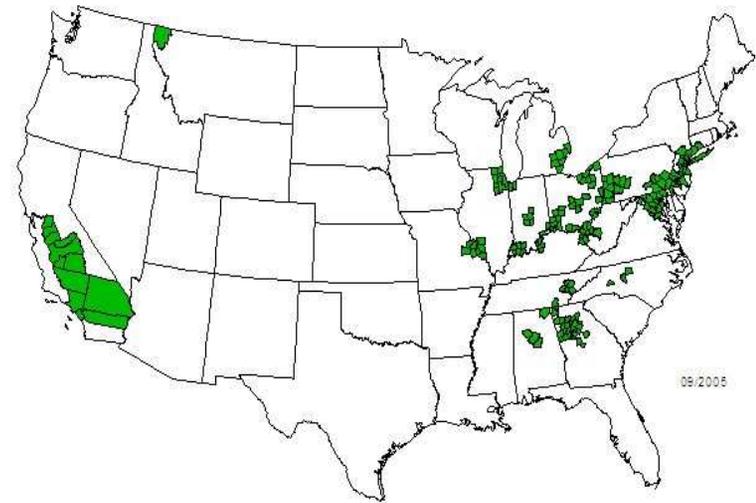
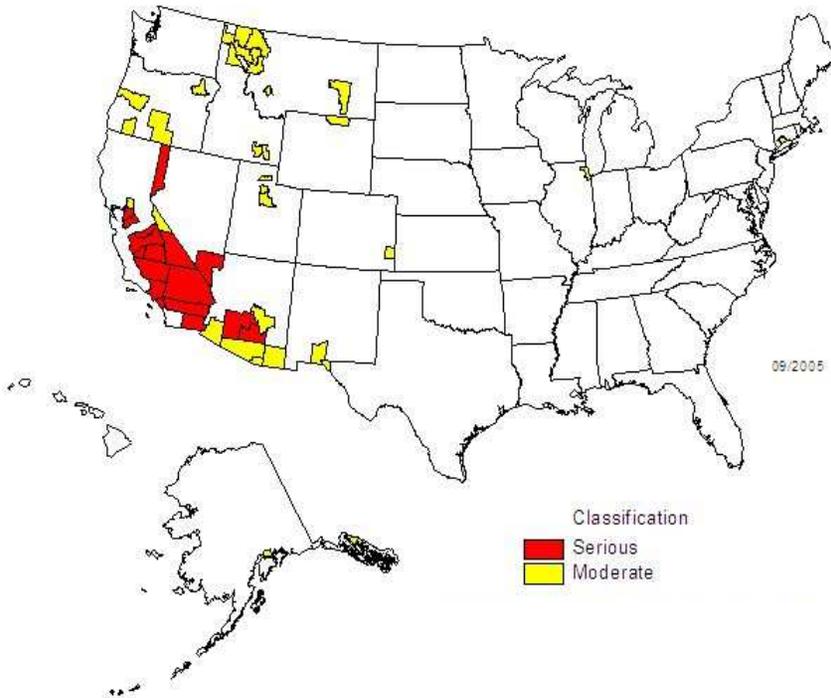
2008/2009 - Final EPA designations

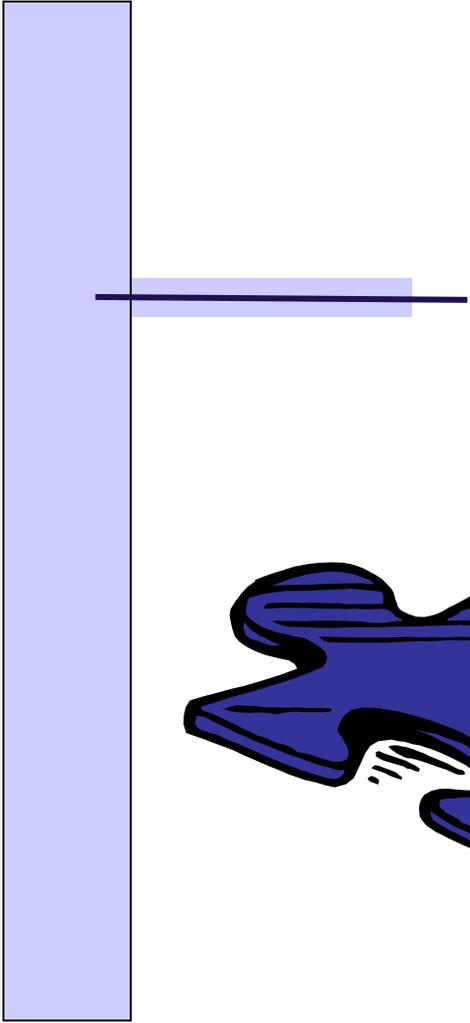
2011/2012 - SIPs due 3 years after designations

# Comparison of Counties Designated Nonattainment for $PM_{10}$ and $PM_{2.5}$

$PM_{10}$

$PM_{2.5}$





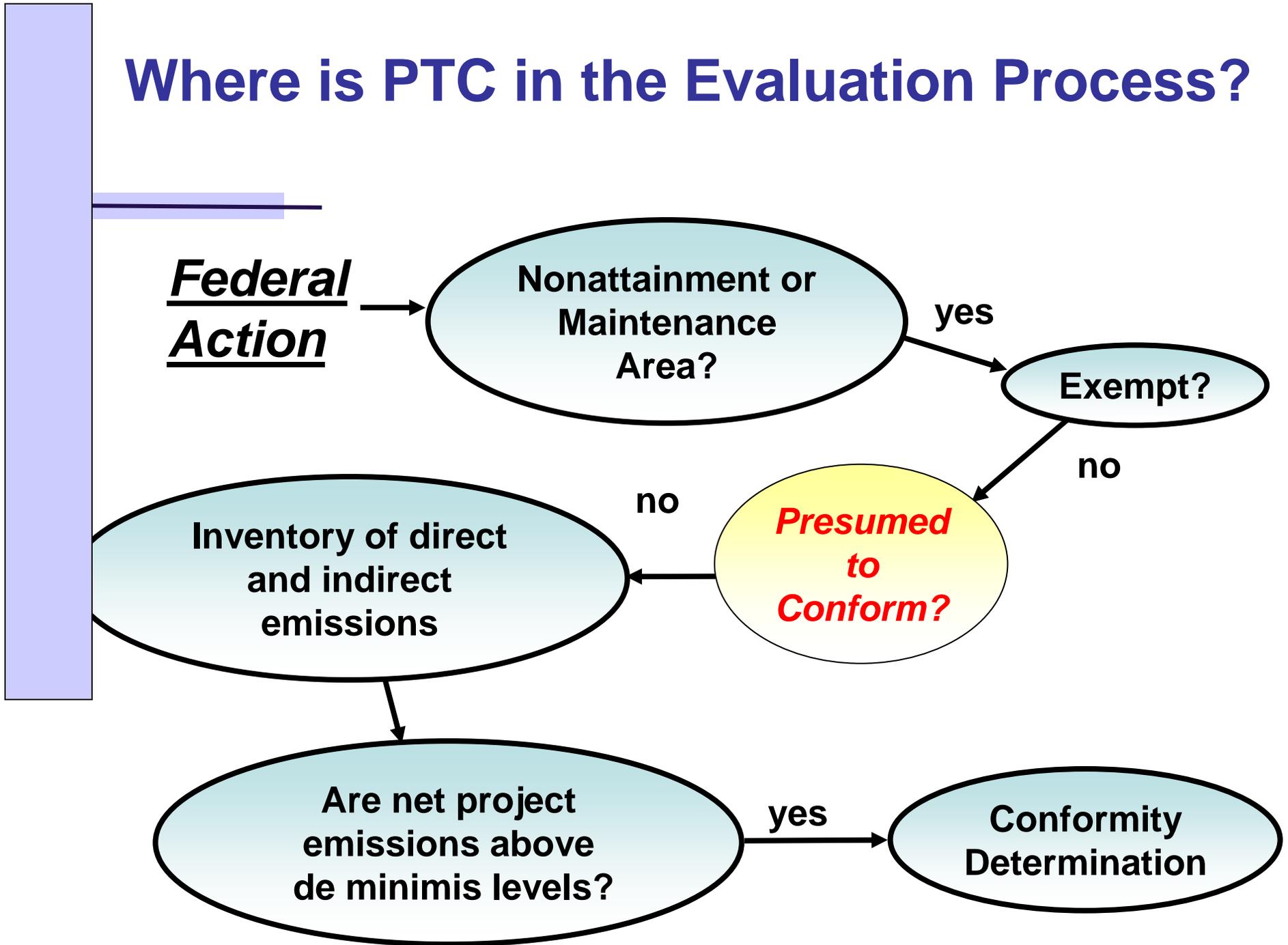
Presumed  
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# FAA Presumed To Conform List

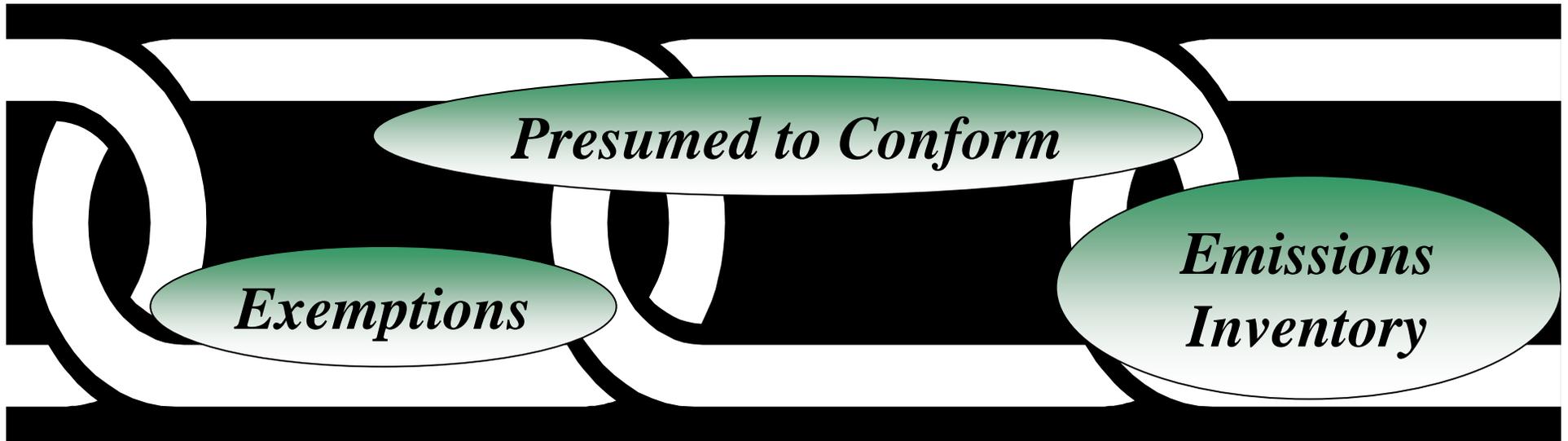
- Authorized under General Conformity Rule (Subpart B, §93.153)
- Streamlining goal: to reduce workload and cost of environmental reviews for projects with few if any emissions, thereby keeping an appropriate focus on major actions
- 6-year effort
  - July 30, 2007 Federal Register (*Vol.72, No.145, p.41565-41580*)
- FAA is 1<sup>ST</sup> and only agency to develop list



# Where is PTC in the Evaluation Process?



# Two-Way PTC Linkage



## *PTC Actions...*

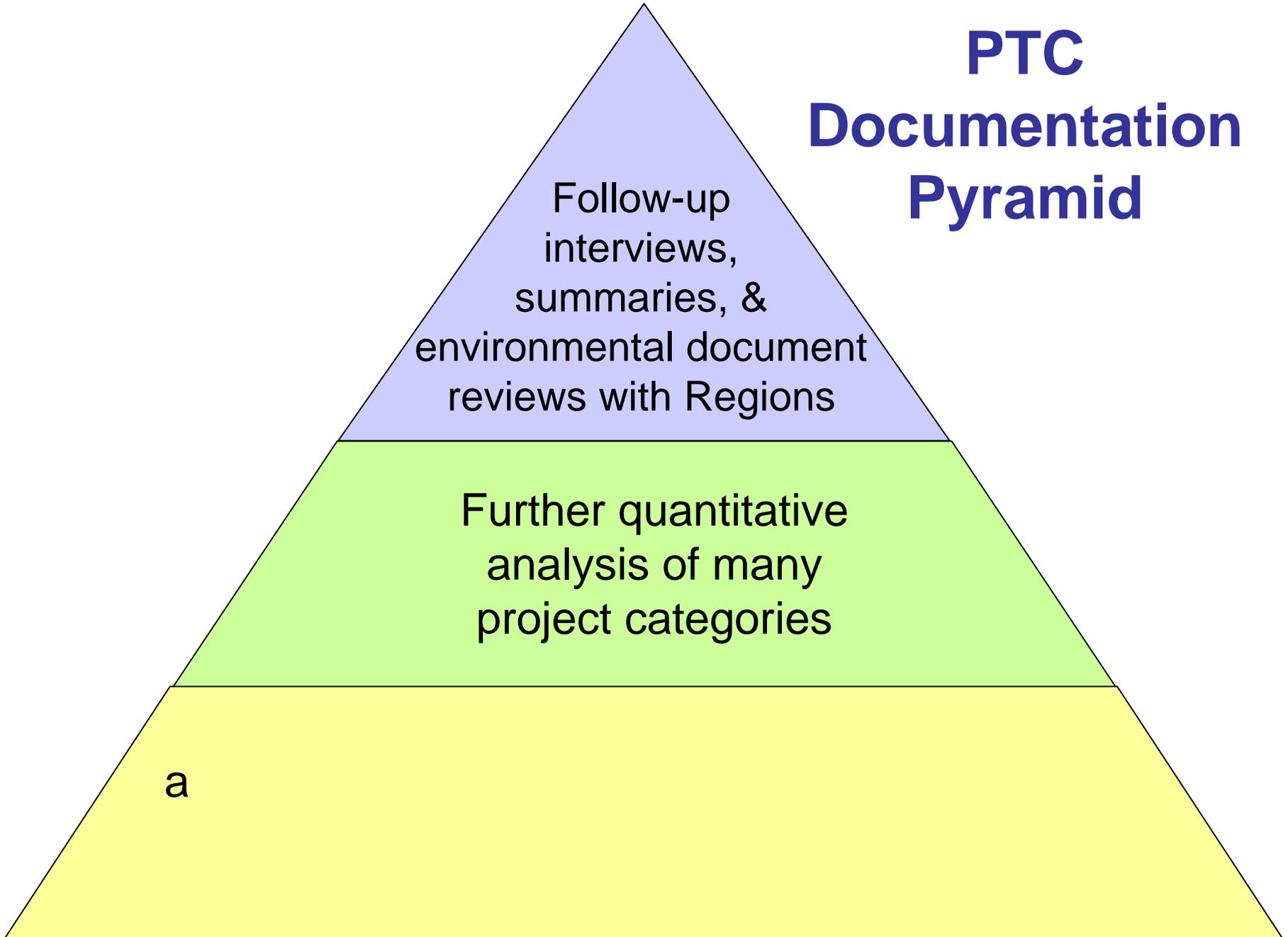
- *Relatively small upgrades and system improvements not covered by existing exemptions (e.g., routine maintenance)*
- *Do not require an emissions inventory because they are always under de minimis*
- *Do not increase airport capacity or change the operational environment of the airport in such a way as to affect air emissions*

# PTC Documentation Pyramid

Follow-up  
interviews,  
summaries, &  
environmental document  
reviews with Regions

Further quantitative  
analysis of many  
project categories

a



# PTC Project Categories

(Items in blue have quantitative ranges)

1. Pavement Markings
2. Pavement Monitoring Systems
3. Non-Runway Pavement Work
4. Aircraft Gate Areas on Airside
5. Lighting Systems
6. Terminal and Concourse Upgrades
7. New HVAC Systems, Upgrades, and Expansions
8. Airport Security
9. Airport Safety
10. Airport Maintenance Facilities
11. Airport Signage
12. Commercial Vehicle Staging Areas
13. Low Emission Technology and Alternative Fuel Vehicles
14. Air Traffic Control Activities and Procedures
15. Routine Installation and Operation of NAVAIDS



# Airfield Activities

- **Pavement markings**

- Most painting of paved surfaces is still “routine maintenance” and therefore *exempt*
- PTC covers new system markings
  - 22,000 gallons of paint to reach a 10 tpy limit of extreme ozone NA area (VOCs is “limiting pollutant”). This volume would cover eight (8) Cat III 13,000 ft. ILS runway projects.
  - No increase in airport capacity or change to normal traffic flow

- **Pavement monitoring systems**

- Indicators of pavement strength and durability
  - Typical construction < 1 week (construction would have to last one year to reach 10 tpy NOx limit in an extreme NA area )

# Airfield Activities (cont.)

- **Non-runway pavement work**
  - Apron areas and taxiways limited to improvements that do not affect airport capacity, fleet mix, or runway use (e.g., high-speed exits), or that involve blasting or substantial “cut and fill”
    - $\leq 220,000$  ft<sup>2</sup> (5 acres) and typical apron construction methods to reach 10 tpy NO<sub>x</sub> limit in an extreme NA area
- **Aircraft gate areas on airside**
  - Addition or modification of jetways to terminals
  - Gate electrification



# Terminal Activities

- **Terminal and concourse upgrades**
  - Increasing or renovating interior terminal space, including offices, hold rooms, concessions, restrooms and gate areas.
    - Representative construction  $\leq 18,000$  sq. ft.
    - Cannot be designed to accommodate new aircraft types and more passengers
- **New HVAC systems, upgrades, expansions**
  - Limits based on fuel type and consumption
    - E.g.,  $\leq 5$  million  $m^3$  of natural gas annually, sufficient to heat 210,000  $ft^2$  bldg. (severe ozone NA area with 25 tpy limit)



# Lighting and Signage

- **New lighting systems for airport roadways, taxiways, runways, and parking areas**
  - Projects generally < 2 weeks and would have to last 17 months to exceed 10 tpy of NOx
- **Installation of signage on airport property to direct passengers, employees and vendors to terminals, parking lots, etc.**
  - Projects generally days or weeks and would have to last several months to a year to exceed limits



# Safety, Security, Maintenance

- **Runway Safety Area (RSA) projects**
  - No new road or road relocation
- **Aircraft Rescue and Firefighting Facility (ARFF) projects**
  - Build, expand, replace, upgrade or equip
- **Upgrading airport maintenance facilities for vehicle service, fueling, storage, etc.**



# Congestion Relief and Emission Reduction Strategies

- **Commercial vehicle staging areas for taxis, limos, etc. to decongest terminal roadways and access areas**
  - Typical construction  $\leq 560,000$  ft<sup>2</sup> (13 acres) to reach 25 tpy NO<sub>x</sub> limit in a severe NA area
- **Low-emission technology**
  - Alternative fuel vehicles
  - VALE projects



# Air Traffic and Nav aids

- **Arrival and departure procedures**
  - PTC above 3,000 ft AGL (mixing height)
  - PTC below 3,000 ft. when modifications:
    - Enhance operational efficiency to reduce delays
    - Increase fuel efficiency
    - Reduce community noise impacts (via thrust cutbacks)
    - Reduce queuing, idling, and flight delays (e.g., gate holds)
- **Routine installation and operation of airport navigational aids**
  - No airport capacity increase or change to operational environment



# Pending PTC Applications

- **NY/NJ Airspace Redesign Project**
- **Airport terminal upgrade involving interior work with no new gates**
- **Construction of a new air traffic control tower (ATCT) at a small airport**
- **VALE retrofit project at a small airport**



# How to Apply

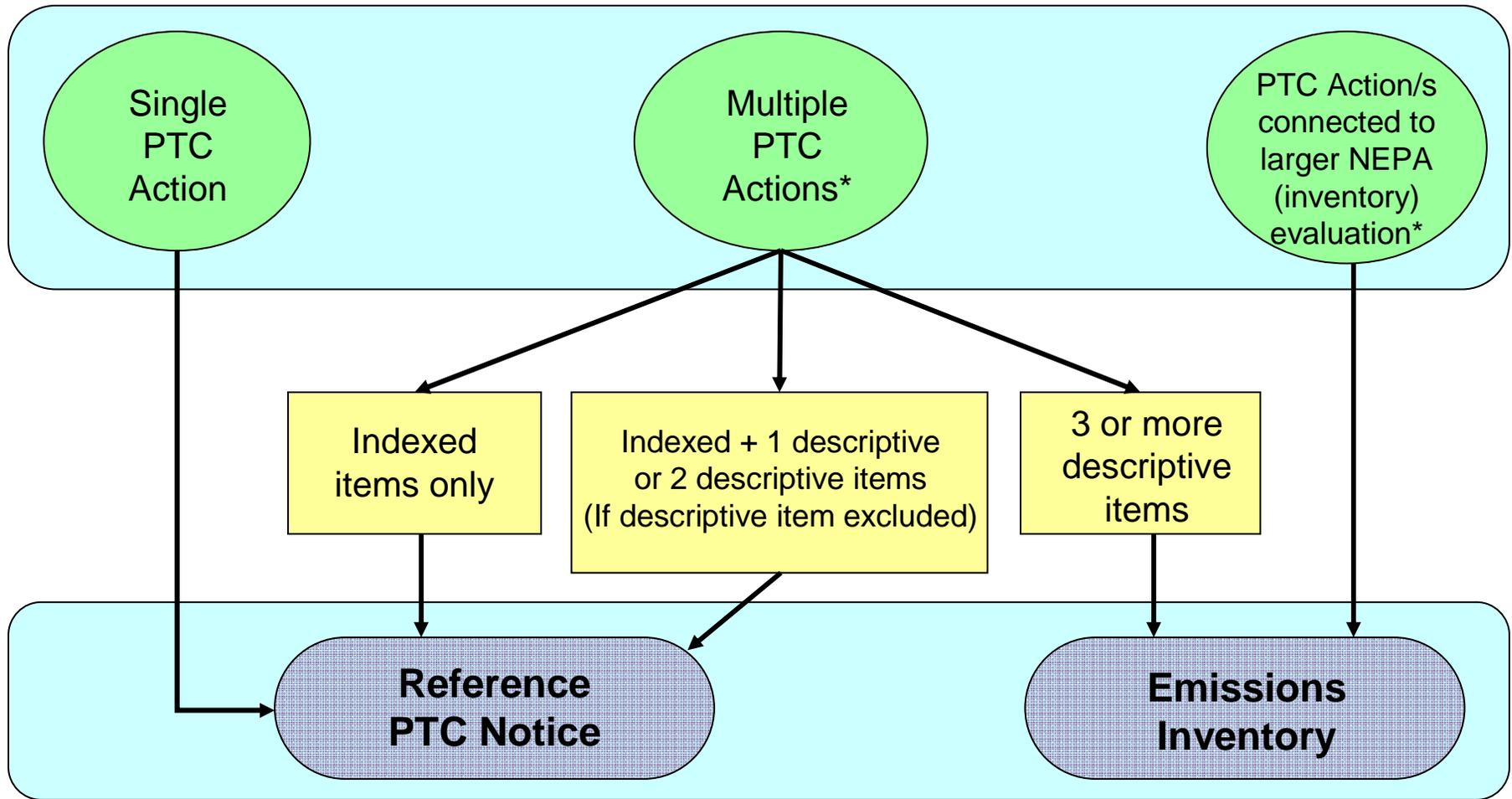
- **Project emissions fall into various “buckets”**

- Direct
- Indirect
- PTC



- **EPA/FAA compromise: one PTC action can be subtracted from inventory of total direct and indirect project emissions**
  - 9 PTC items are “indexed” with added quantification
  - 6 PTC items are “descriptive” (each below *de minimis* but we wouldn’t know by exactly how much)

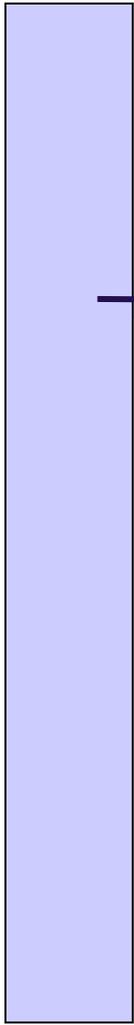
# DRAFT - How to Apply and Document PTC Actions to avoid an unneeded EI or GC Determination



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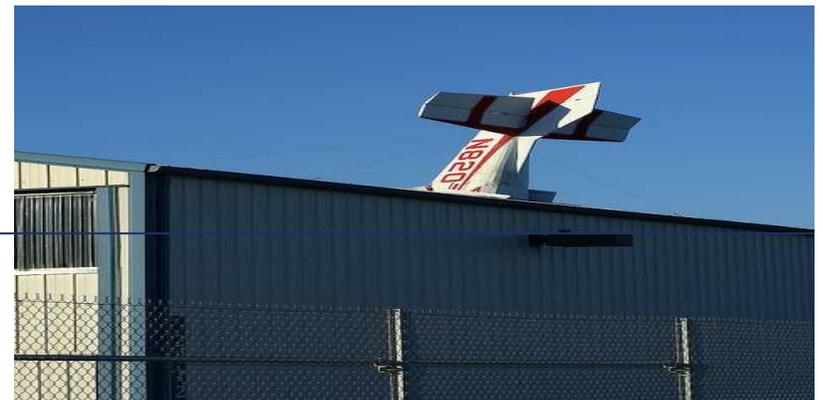
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Proposed EPA  
revisions to  
general  
conformity

# Reasons for General Conformity Rule Revisions

- **15 years old**
  - Two new NAAQS (8-hour O<sub>3</sub>, PM<sub>2.5</sub>) and three CAA revisions §176(c)
- **To consolidate best practices and experience (e.g., EPA Q&A documents of July 1994 and Sept. 2002)**
- **To streamline the process, reduce the regulatory burden, and add flexibility**
  - Maintain environmental protections
  - Provide States with a better idea of Federal emissions
  - Encourage earlier coordination
- **To codify common terms and definitions**
  - Conformity evaluation, applicability analysis, GC determination
  - Emissions inventory
  - Mitigation vs. offsets
  - Facility and facility-wide budget



# EPA Schedule to Revise General Conformity

*July 2004*

- Initial meeting with Federal agencies

*2004 - 2006*

- Revisions drafted

*2006 - 2007*

- Consultations with Federal agencies/OMB review

*January 2008*

- Proposed rule changes

*March 2008*

- Public hearing

*April 2008*

- Comment deadline

*Late 2008*

- Publish Final Rule



# Range of GC Revisions

(Blue underlines = FAA focus)

- Emission budgets
- Construction emissions
- Emission reduction credits
- Grandfathering provisions in existing regulations
- Application of grace period for new designations
- Harmonizing horizon years
- Inter-precursor offsets
- Actions affecting multiple Nonattainment/Maint. Areas
- Geographical limits for offsets
- Regional Significance test
- Offsite mobile sources
- Clarify general conformity determination process
- Minor Source NSR permits
- Protect classified materials
- Response to emergency episodes
- Revise emergency episode to include military readiness
- Definition of terms, including “emissions inventory”
- Wildland fire policy
- SIP submittal timing
- Mitigation timing
- Presume to Conform



# Demonstrating Conformity

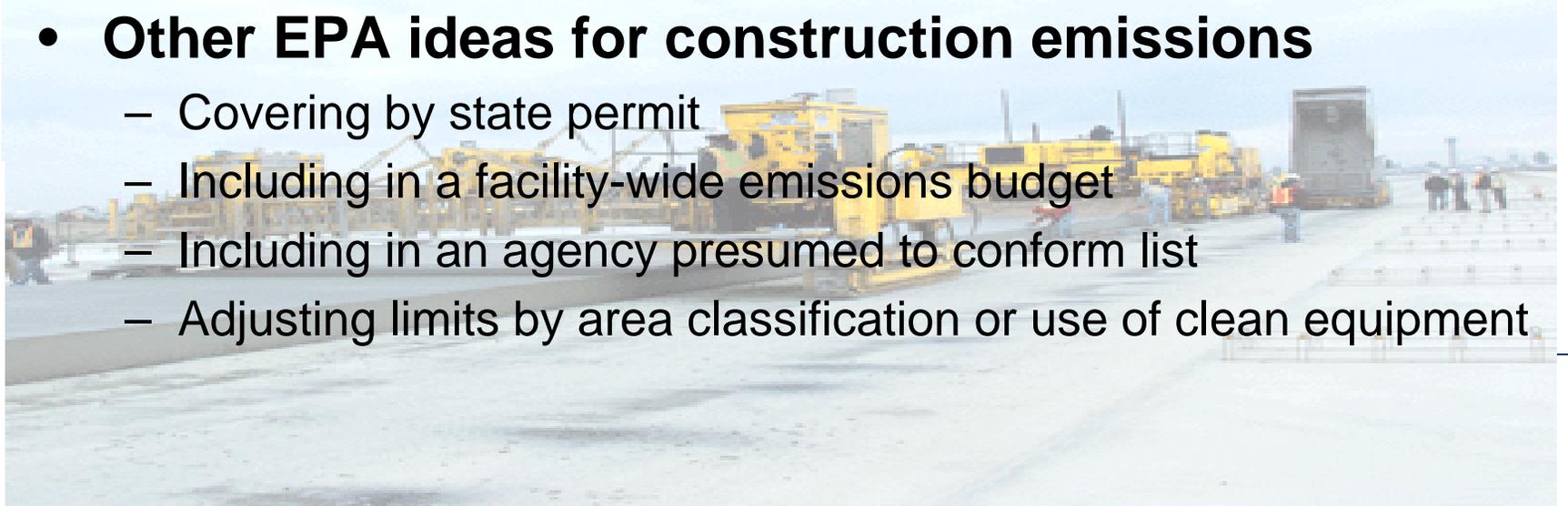
## Facility-wide Emissions Budget

- **Federal & State agencies may adopt “facility-wide” emission budgets (e.g., airports, military bases)**
  - Flexibility to negotiate budget years and terms with State
  - Not prohibited in existing rules
- **State accounts for emissions budget in the SIP**
- **With a budget for facility emissions, all actions are presumed to conform, thereby eliminating standard conformity evaluation requirements**
  - Requires upfront work but saves on standard evaluation



# Construction Emissions

- **EPA is reluctant to exempt them because States may not be planning for Federal actions involving large or long-term construction**
  - Invited comments on excluding “short-term” construction
    - How “short” is short-term?
    - Short-term allowances if there is a commitment to substantial long-term reductions (with state concurrence)
- **Other EPA ideas for construction emissions**
  - Covering by state permit
  - Including in a facility-wide emissions budget
  - Including in an agency presumed to conform list
  - Adjusting limits by area classification or use of clean equipment



# Harmonizing Horizon Years



*Problem: project analysis years go farther into the future than the SIP*

- EPA proposes to use a “straight” or “flat” line assumption for future analysis based on the last budget year in the SIP
- States can make enforceable commitments (IOUs) to include emissions in future SIPs

# Emission Reduction Credits for Early Actions

- **Codifies and extends FAA VALE Program methodology for airport emission reduction credits (AERCs) to all Federal agencies**
- **Use of AERCs by facility (i.e. airports)**
  - Applied as a “design measure” not an “offset”
  - Annualization methodology
    - No banking
    - EPA may allow offset trading within same area



# Streamlining and Burden Reduction

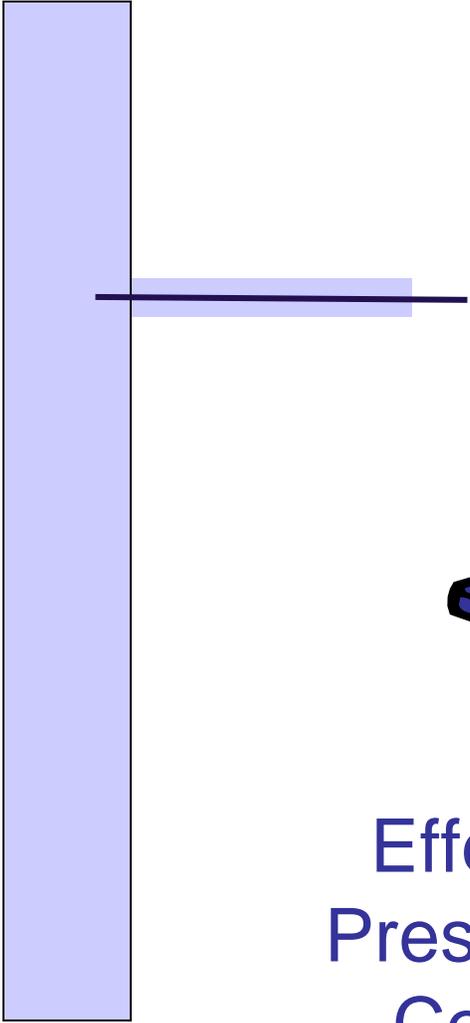
- **Exempts aircraft operations above 3000 ft.**
  - Recognizes that emissions from air traffic control activities and adopting approach, departure and enroute procedures for aircraft above 3000 ft. are always de minimis
- **Exempts emissions from Minor NSR sources**
  - Currently only Major NSR sources are exempt
  - Avoids duplication as State and local agencies have adopted NSR programs for minor sources
- **Eliminates “regional significance” test**
  - Project emissions above 10% of an area’s total emissions inventory
  - In 15 years, no projects have exceeded this level



# Other Provisions

- **More notification to Tribes**
- **Protection of classified materials in public documents**
- **Multiple areas**
  - If an action occurs in more than one NA area, the areas are treated separately for conformity
- **Inter-precursor offsets**
  - Allowed if technically justified and beneficial (e.g., NOx reductions to offset VOC increases)
- **Mitigation timing**
  - If States see an environmental benefit, allow agencies to negotiate extended mitigation schedules
    - Mitigation measures cannot extend longer than 2 or 3 times project length (EPA invited comment on length)





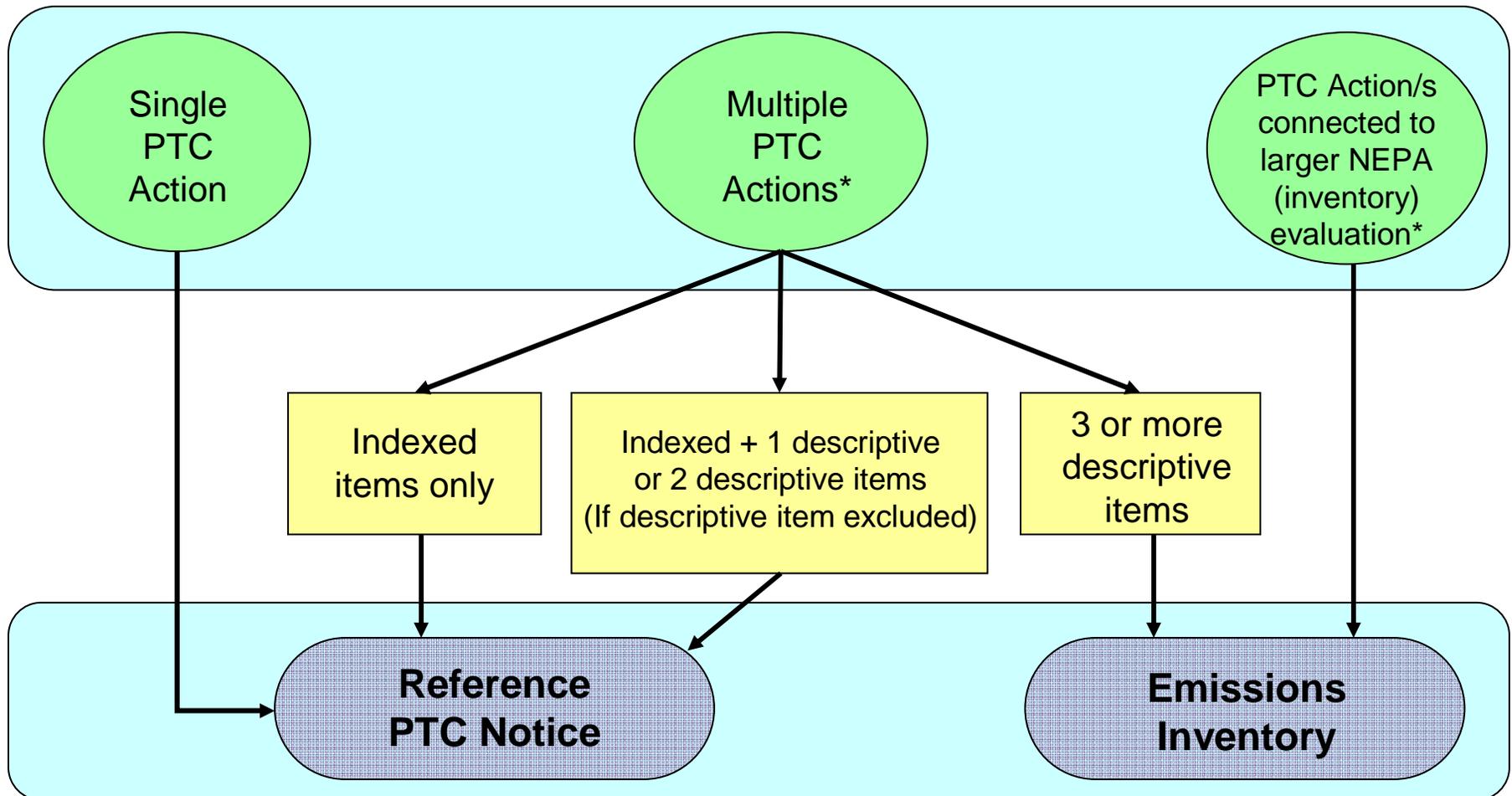
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# EPA Changes to PTC in Proposed GC Revisions

- **PTC emissions may be redefined as part of “total direct and indirect emissions”**
  - FAA will no longer be able to take one PTC action “off the table”
  - Simplifies procedures
- **Exemption for air traffic procedures above 3,000 ft.**
  - Re-scope PTC category to below 3,000 ft. only
- **No regional significance test**
- **Other PTC Revision Notes**
  - States and eligible Tribes may establish their own PTC lists in SIPs or TIPS
  - PTC is applicable to standard general conformity analysis, not emission budgets



# DRAFT - How to Apply and Document PTC Actions to avoid an unneeded EI or GC Determination



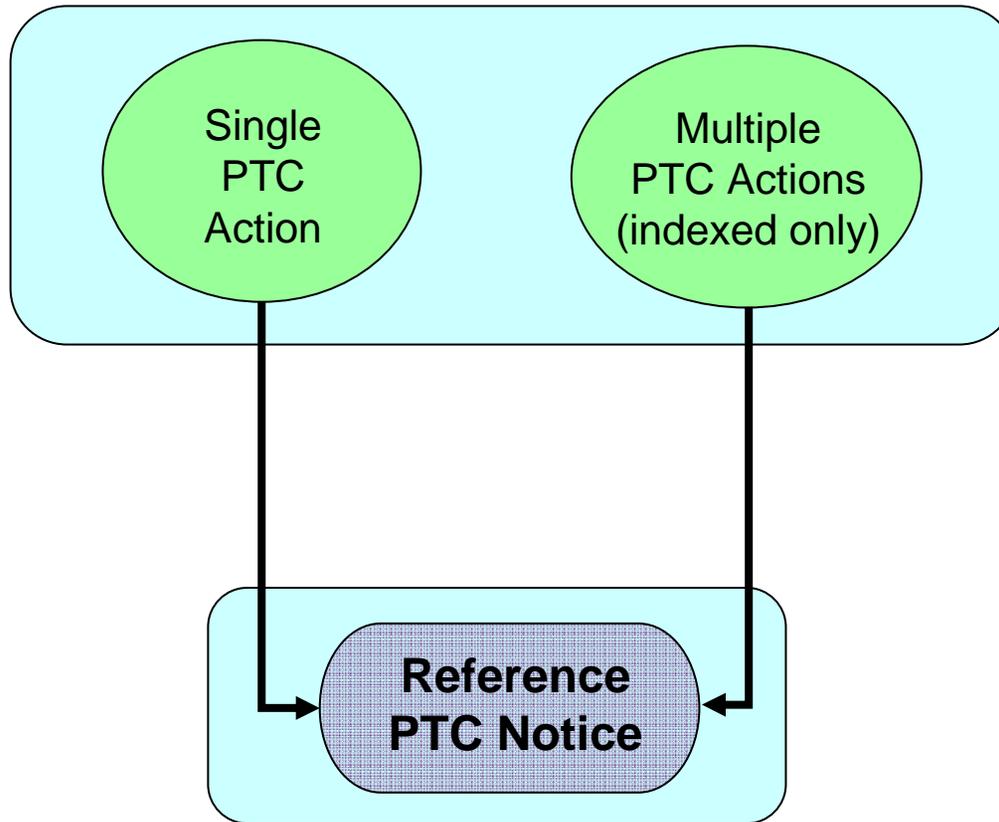
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\* FAA procedures for “**combined actions**” (either multiple PTC actions or PTC actions connected to larger NEPA evaluation) permit the exclusion of one PTC action from the calculation of total direct and indirect project emissions (see PTC Notice 72 FR 41565).

# Possible Post-GC Rule Revisions

How to Apply and Document PTC Actions  
if PTC emissions are part of “total” emissions



# Final Notes

- **The future of the PTC list**
  - FAA Airports can add to its PTC categories
  - Other FAA lines of business can develop PTC lists
- **PTC implementation by FAA regional offices**
  - HQ coordination until there is more collective experience
- **To obtain a copy of the PTC list:**  
*faa.gov/airports\_airtraffic/airports  
/environmental/air\_quality/*

