

Illustration of Screening Procedures for PM Hot Spot Analyses

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Goal

1. Institute process to quickly screen projects
2. Motivation:
 1. Many projects are NOT "Projects of Air Quality Concern" (POAQC) after consultation
 2. Screening will eliminate the need for consultation on these project types

Outline

1. Overview of screening steps
2. Examples
 1. Freeway Connector (screens out)
 2. HOV and Truck Lanes (does not screen out)

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Screening Procedure Steps

1. Determine if hot spot analysis is needed
2. Determine if project is POAQC
3. Determine if interagency concurrence is needed
 - If project can be screened out, document
 - If project is POAQC, complete more detailed analysis and interagency consultation

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**Screening Criteria:
Projects NOT of Air Quality Concern**

- **New or expanded roads:**
 - AADT < 50,000 and
 - Total truck AADT < 6,000 and
 - No significant project effects on diesel truck traffic
- **Other projects that result in no significant increase in diesel truck traffic:**
 - Intersection channelization
 - Interchange reconfiguration
 - Traffic circles and roundabouts
 - Signalization projects at individual intersections
 - Realignments to improve flow (that do not increase idling)

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**Screening Criteria:
What's a Significant Effect on Truck Traffic?**

- **Freeways: "build" truck traffic 10% > than no-build**
- **Non-freeways:**
 - "build" truck traffic is 5% or more higher, or
 - "build" redirects truck traffic to / from facilities with 6,000 truck AADT, in amounts that exceed 10% of existing truck traffic at those facilities
- **Other: realignment or lane additions that move 6,000 or more heavy (3-axle or more) trucks/day closer to a sensitive receptor**

Basis for criteria: San Joaquin Valley and South Coast interagency project review results: Apr 2006 – Mar 2007

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**Additional Material Explaining Basis for
Screening Criteria**

- **EPA Final Rule: POAQC = 125,000 AADT and diesel trucks are 8% or more of traffic; i.e., 10,000 AADT for diesel trucks.**
- **This screening procedure is conservative:**
 - 50,000 total AADT threshold – lower than EPA's and consistent with ARB land use guidance
 - 6,000 truck AADT threshold – lower than EPA's, and applies to all trucks (only a fraction of which are diesel powered)

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Additional Material (cont.)

- South Coast and SJV experiences show the following projects are seldom found to be POAQC:
 - New HOV lanes on freeways with "moderate" (less than 6,000 AADT) truck volumes
 - Auxiliary lanes on freeways with moderate truck volumes
 - New or widened over- or under-crossings where local roads have moderate AADT (<25,000) and low truck volumes (<3,000 AADT)
 - Local street widening with moderate traffic and low truck volumes

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Example: Freeway Connector

- Project
 - Improve connector from one freeway to another
 - Replace one lane (20 mph) with two lanes (50 mph)
 - Project is not projected to increase the number of diesel vehicles on either freeway, connector ramps, or nearby intersections
 - Connector is LOS F in the no-build scenario, and will remain so even in the "build" scenario

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Freeway Connector (cont.)

Project details: year 2015 completion, build volumes increase 5%; truck percent unchanged

	No-Build	Build
AADT	47,000	49,350
Trucks (%)	2%	2%
Trucks (#)	940	987

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Freeway Connector: Step-by-Step Discussion

- Step 1: Project is not exempt or a signal synchronization project. A hotspot analysis is required.
 - Step 2: Is project a "Project of Air Quality Concern" (POAQC)?
 - Project does NOT carry more than 50,000 AADT
 - Truck volumes do NOT exceed 6,000 ADT
 - Build only increases truck volumes by 5%
- Therefore: project is NOT a POAQC, and meets the screening criteria.
- Step 3: Document (no need for interagency concurrence)

In this illustration, project screens out

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Example two: HOV and Truck Lanes

- Project
 - Add one 14-mile HOV lane in each direction to freeway
 - Add one 4-mile truck climbing lane in each direction to freeway

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HOV and Truck Lanes (cont.)

Project details: year 2015 completion, build volumes increase 20%; truck percent unchanged

	No-Build	Build
AADT	229,000	274,800
Trucks (%)	9%	9%
Trucks (#)	20,610	24,732

Volumes increase by 20%

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HOV and Truck Lanes: Step-by-Step Discussion

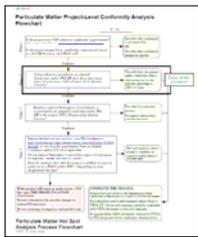
- Step 1: Project is not exempt or signal synchronization. Hotspot analysis is required.
 - Step 2: Is project a "Project of Air Quality Concern" (POAQC)?
 - Project DOES carry more than 50,000 AADT
 - Truck volumes DO exceed 6,000 ADT
- Project does not screen out and requires Interagency Consultation to determine whether or not it is a POAQC.
- Step 3: Complete more detailed analysis, document and gain concurrence through interagency consultation. If the 20% truck volume increase is correct, the project will be a POAQC. More detailed traffic analysis is recommended.

In this illustration, project does not screen out

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Relationship of Screening Process to Overall Hotspot Analysis Requirements

- The screening procedure is one part of a larger process (see written documentation)
- Projects that do not screen out will proceed to more detailed analyses



Overall Analysis Process: described in Oct 2007 draft report (contact: Mike Brady)

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