Regional Models of Cooperation

Air Quality Planning







U.S. Department of Transportation Federal Transit Administration



U.S. Department of Transportation

Federal Highway Administration

Purpose & Background

Promote cooperation and coordination across MPO and State boundaries to develop a regional approach to transportation planning

Supported by:

- Planning Emphasis Area (PEA) Fiscal Year 2015
- Every Day Counts (EDC-3)



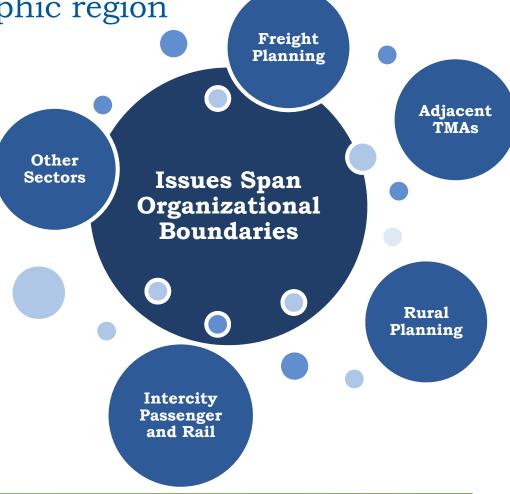
Why is Enhanced Coordination Needed?





Why is Enhanced Coordination Needed?

Recognize mutual needs, goals, and objectives of the geographic region as a whole





Regional Models of Cooperation: Implementation Activities

- 1. Webinar Series
- 2. Peer Exchange Workshops
- 3. Handbook



Regional Models of Cooperation Webinar Series

- 1. Regional Models of Cooperation Overview (Jan 27, 2015)
- 2. Air Quality Planning (August 25, 2015)
- 3. Regional Transit Planning (date)
- 4. Safety Planning (date)
- 5. Congestion Management (date)
- 6. Freight Planning (date)
- 7. Data Sharing, Systems, and Tools (date)
- 8. Joint Planning Products (date)



Today's Speakers

Cecilia Ho

Team Leader, FHWA Air Quality & Noise Team

• Pragati Srivastava

Administrator, Memphis MPO

Anna Gallup

Program Manager, Metrolina Regional Model, Charlotte DOT

Tanisha Taylor

Senior Regional Planner, San Joaquin COG



TRANSPORTATION CONFORMITY: INTERAGENCY CONSULTATION & COOPERATION

Cecilia Ho

Air Quality & Noise Team Leader

FHWA Office of Natural Environment

Transportation Conformity: A Link Between Air Quality and Transportation Planning

Transportation Conformity

Air Quality Planning

State Implementation Plan (SIP)

Transportation Planning

Metropolitan Transportation Plan and Transportation Improvement Program (TIP)

Interagency Consultation - Overview

- A collaborative process between organizations on key elements of transportation and air quality planning
 - Required in all nonattainment and maintenance areas
 - Formally integrated into a SIP and legally enforceable by a state court
 - Conducted for development or modification of plans,
 TIPs, SIPs, and conformity determinations



Interagency Consultation Process

- Ensures all agencies:
 - Meet regularly
 - Share information
 - Collaboratively make decisions
 - Key issues
 - Assumptions



Roles and Responsibilities

- Regulations require the participation of all relevant agencies in interagency consultation
 - Not <u>all</u> agencies are <u>required</u> to participate in <u>every</u> activity covered by interagency consultation
- Typical key participants include:
 - MPO(s)
 - State and local transportation agency
 - State and local air quality / environmental agency
 - US DOT (FHWA/FTA)
 - US EPA

Best Practices

- The consultation process works best when:
 - The process is continuous with periodic meetings
 - Key decisions are made early in the process
 - Discussions and determinations are well documented
 - Agreements
 - Assumptions
 - Meeting agendas and notes



Benefits of a Well Executed Process

- Provides a forum for state and local agencies to share information
- Allows agencies to identify and discuss key issues early in the process and to reach agreement
- Facilitates for effective consensus building and decision making

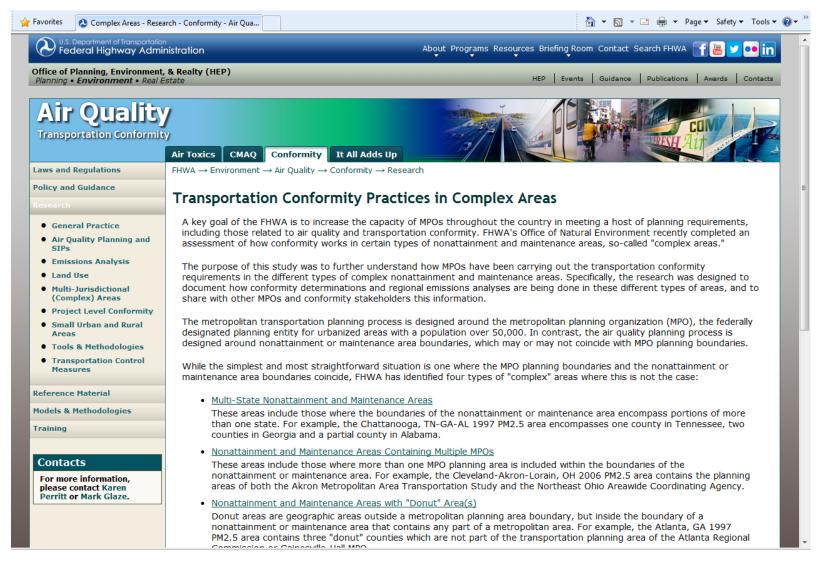


Examples of Transportation Conformity Practices

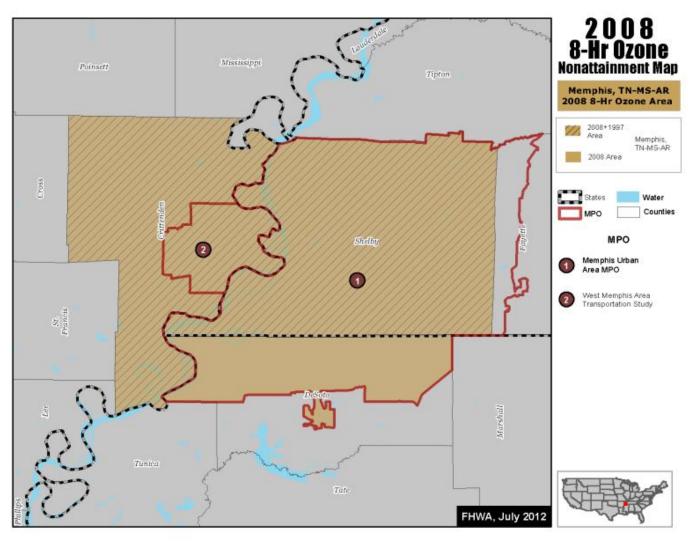
- PM quantitative hot-spot analyses
- State and local procedures to determine project of air quality concerns
- Interagency consultation practices
- Conformity work groups information sharing
- Conformity determination reports
- CO screening protocols

<u>http://www.fhwa.dot.gov/environment/air_quality/conformity/practices/</u>

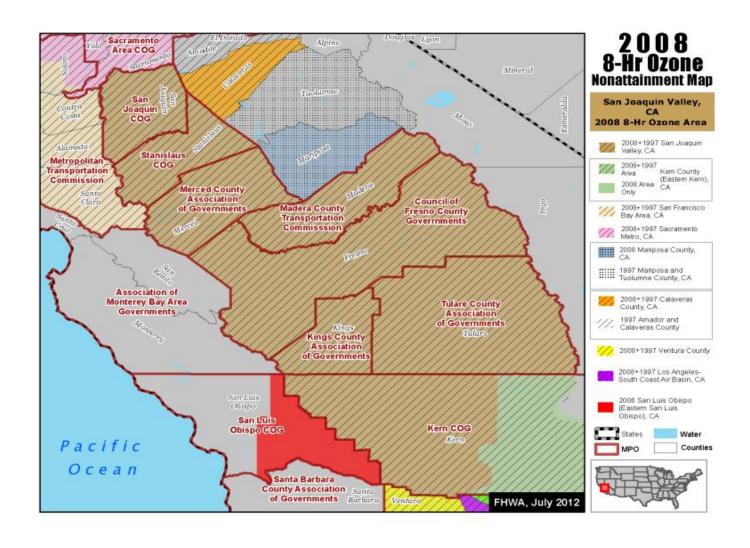
Conformity Practices in Complex Areas



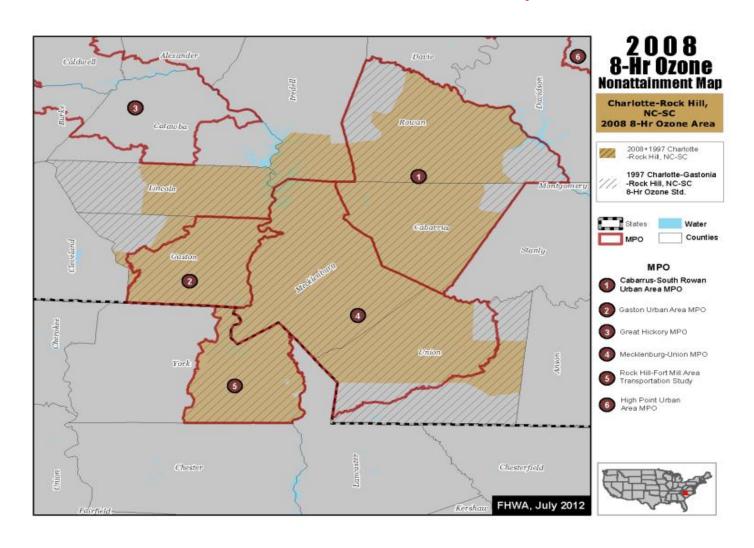
Multi-State Area: Memphis, TN-MS-AR 2008 8-hour Ozone Nonattainment Area



Multi-MPO Area: San Joaquin Valley, CA 2008 8-hour Ozone Nonattainment Area



MPO with Donut Area: Charlotte-Rock Hill, NC-SC 2008 8-hour Ozone Nonattainment Area Map



Summary

- The importance of interagency consultation cannot be over emphasized
- Interagency consultation provides opportunities to raise issues early and minimize disruption to the conformity process
- State and local agencies should initiate interagency consultation as soon as possible after a nonattainment designation

Contact information

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http://www.fhwa.dot.gov/environment/air_quality/conformity/

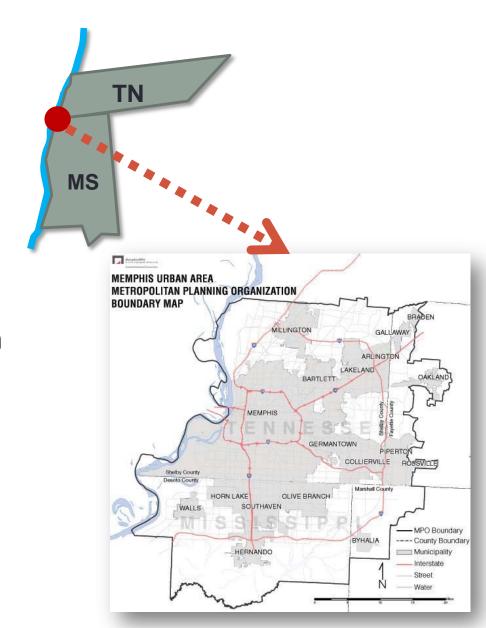
REGIONAL MODELS OF COOPERATION IN AIR QUALITY PLANNING

MEMPHIS URBAN AREA MPO

August 25, 2015

Background

- Bi State MPO (TN and MS), includes 4 Counties :
 - Entire Shelby Co, TN
 - Entire Desoto Co, MS
 - Partial Fayette Co, TN
 - Partial Marshall Co, MS
- Population approx. 1.1 million
- Major Freight Hub
 - 5 Class 1 Railroad
 - 4th largest Inland Port
 - 2nd busiest cargo airport in the world



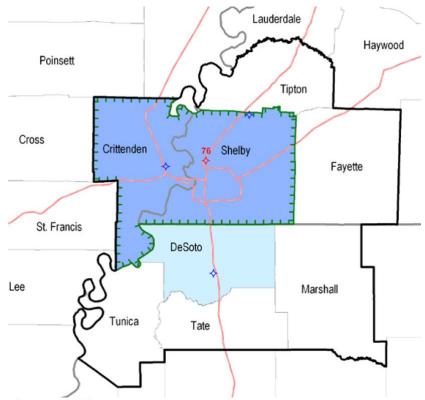
Strengthening Regional Transportation

Background contd.

- Memphis- TN-AR-MS MSA-
 - 9 counties
 - Includes 2 MPOs
 - Memphis Urban Area MPO (TN & MS)
 - West Memphis MPO, AR

Air Quality

- Carbon Monoxide- Shelby County, TN
 in Maintenance, ends in 2017
- Ozone- Non- attainment under 2008 8 hr. Includes:
 - Entire Shelby Co and Partial Desoto
 Co (Memphis MPO)
 - Crittenden Co (West Memphis MPO)

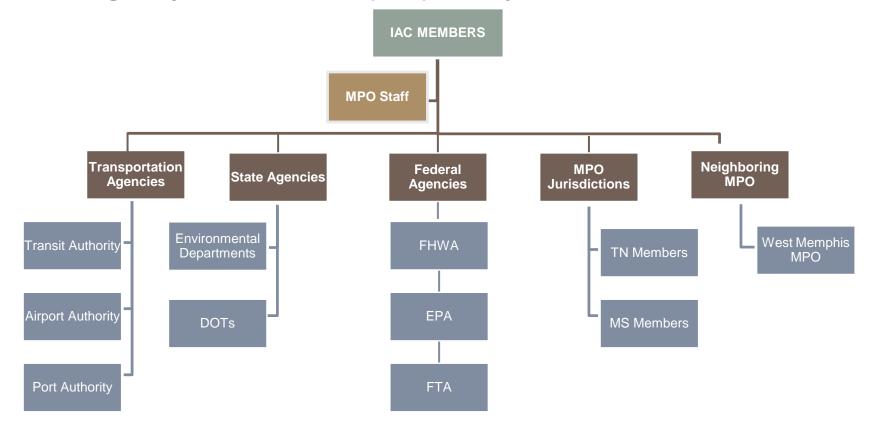


Legend

- EPA designated whole county as nonattainment
 - EPA designated partial county as nonattainment
- County in separate ozone nonattainment area
- Monitor violating 2008 ozone NAAQS in 2008-2010
 Monitor attaining 2008 ozone NAAQS in 2008-2010
- Monitor attaining 2008 ozone NAAQS in 2008-2010
- 2009 Statistical Area boundary
- 1997 ozone NAAQS nonattainment area

Air Quality Coordination

Inter-Agency Consultation (IAC) Group:



Air Quality Coordination cont.

- Requires consultation with IAC on:
 - Development of New Plans
 - Amendments to the Plan
- Cooperative and Consensus Based Approach
- MOU between the two MPOs:
 - Separate budgets, separate conformity process, separate plans
 - But continued participation in each others planning process, incl. AQ

Budgets:

- No MPO level budgets (Shelby Co has budgets, Desoto Co does not)
- Hence, separate conformity analysis

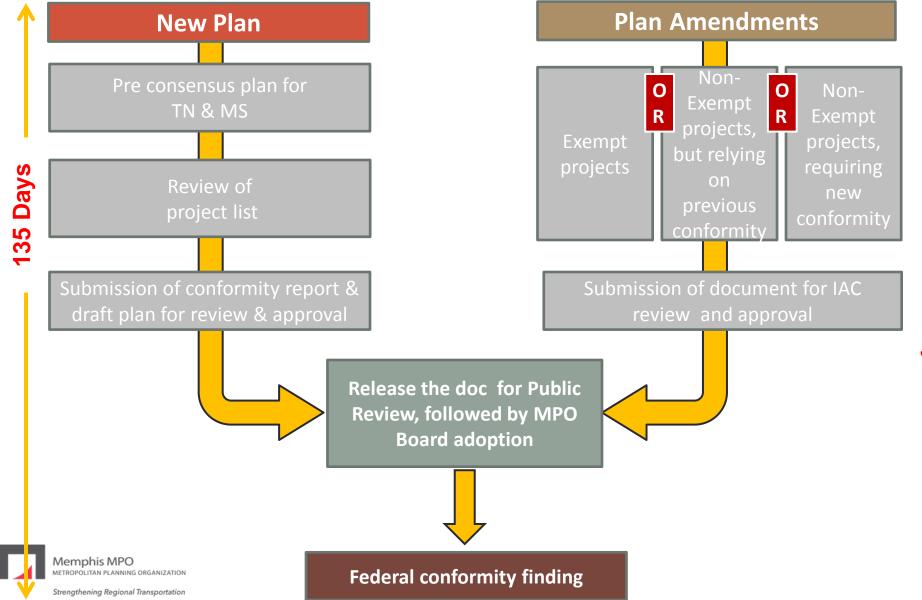
Air Quality Coordination cont.

Data:

- Memphis MPO Regional Travel Demand Model (TDM)
- Memphis MPO Regional Land Use Model
- Some common Input
 - Metrological data from the airport
 - MOVES Model Technique (Inventory Method)
 - Age Distribution
 - Vehicle Type VMT
 - Some Model Years

Strengthening Regional Transportation

Air Quality Process



Example of Documentation

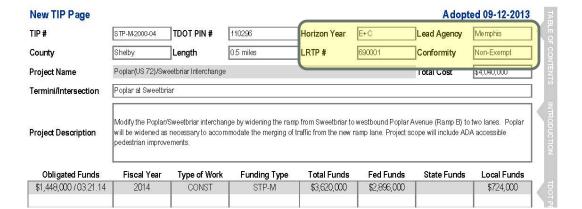
Plan Development

	TDOT Projects													
S N				Horizon Year		Status	Lead gency	Length	Func Clas	Can it be modeled?		Regionally Significant	LRTP Amendment Needed	
1	I-40		Interchange @ Canada Road		Interchange improvements including replacing bridges, reconstructing acceleration and deceleration lanes and tapers	Non-Exempt	FDOT	NA	Urban Interstate	Yes	83,350	Yes	No	
2	I-40		HPP-ID# 1359 and 4945, Interchange @ I-240 East of Memphis (Phase 2)	E+C	Construct I-40 flyover ramp	Non-Exempt	TDOT	NA	Urban Interstate	Yes	134,240	Yes	No	
3	I-55		Interchange at Crump Boulevard	2020	Interchange modification	Non-Exempt	TDOT	NA	Urban Interstate	Yes	48,173	Yes	No	
4	I-240		Interchange at Airways Blvd	2030	Interchange modification	Non-Exempt	TDOT	NA	Urban Interstate	Yes	147,032	Yes		Amend LRTP to remove reference to Plough Blvd in termini

Plan Amendments

						August 2015 Proposed TIP Ame	endments -	Memphis	MPO						
S NO	TIP ID# Lead Agency County Funding Source Project Name Proposed Changes				2014	New Fed	eral Funds 2016	2017	Old Federal Funds 2014 2015 2016 2017				Conformity Exempt		
1 1 1	TN-IM- 2011-01	TDOT	Shelby		I-55 Interchange at Crump	Amend the project by adding \$31,500,000 in NHPP federal funds and \$3,500,000 in state funds for FY 2016 Construction. The total project cost has increased so additional construction funds are needed.	\$4,630,419	2013	\$60,750,000	2017	\$4,630,419	2017	\$29,250,000	2017	Non-Exempt

TIP Document





IAC – what makes things works

- Communication email, conf calls or one to one phone calls
- Timely delivery of information/ documentation
- Provide easy to read information e.g. summary documents
- Education
 - EPA's presentation in Desoto Co before non-attainment designation
 - MPO 101 for members
- Build relationships with the agencies responsible for SIPs and budget's
 - Helped us with our timeline for MS amendments
 - Our model is used for their budgets development, their budgets effect our plans
- Statewide IAC calls hosted by federal agencies- participants include MPOs. State agencies and neighboring state

IAC – Some challenges

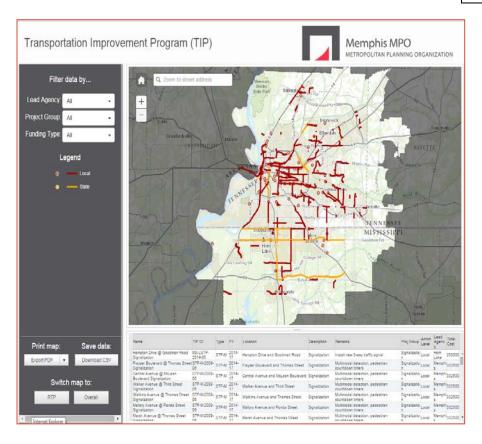
- Level of understanding varies
 - For Example- request for Project changes (scope/funding) and its impact on conformity
 - Misunderstanding of the time required by the process
- Additional dedicated staff time needed for coordination
- Timeline–
 - For example-interpretation of conformity status exempt vs non-exempt
- Project Delays due to review times involved

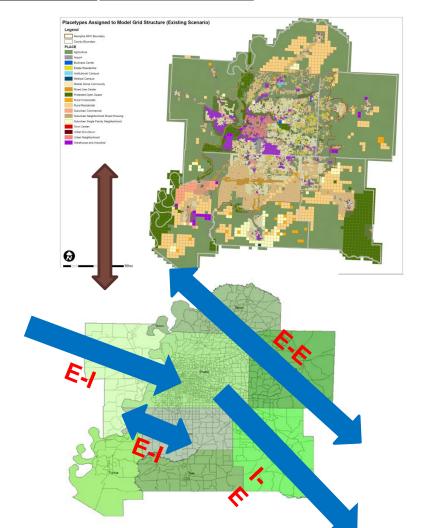
Benefits











Takeaways

- Read the SIP Be aware of changes that can impact schedule
- Timeline Have a good Idea of timeframe needed to complete tasks related to conformity
- Roles Have a clear idea regarding participants responsibilities. If needed have an MOU
- Data If possible, have same data used for conformity as well as SIP
- Education IAC Members have different backgrounds/levels of expertise
- Tracking Technical nature of air quality planning, document plan and amendment review, correspondence, etc.
- Communicate Keep everyone is informed, Emails, Conference Calls, etc.



Contact

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MPO Administrator

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www.memphismpo.org

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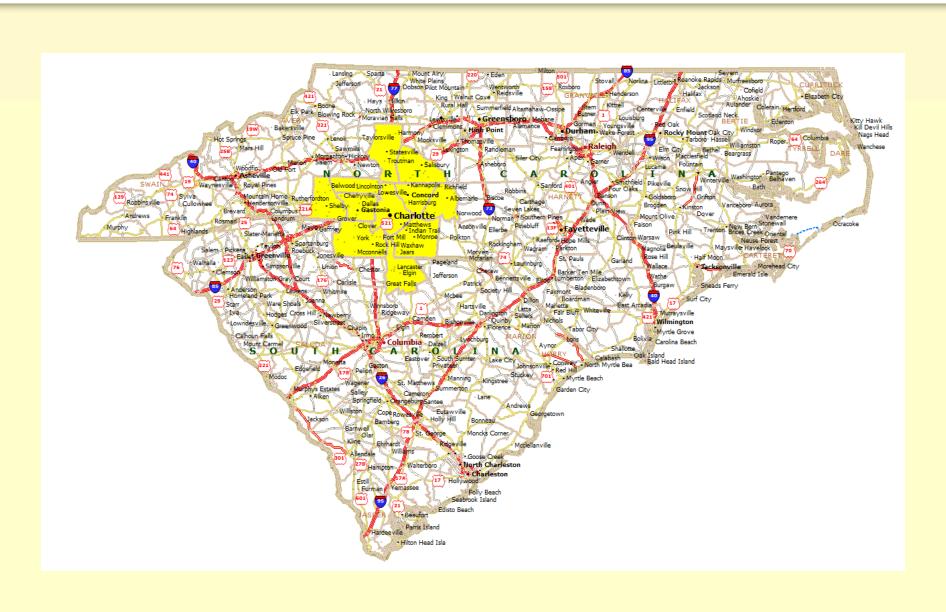


Regional Cooperation in the Metrolina Region

August 25, 2015

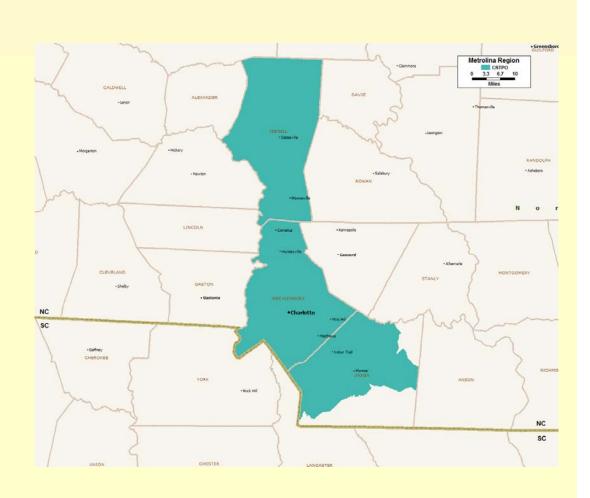


Metrolina Region



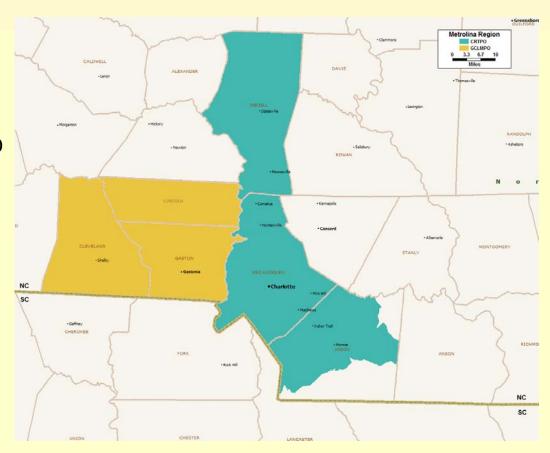


 Charlotte Regional TPO (CRTPO)



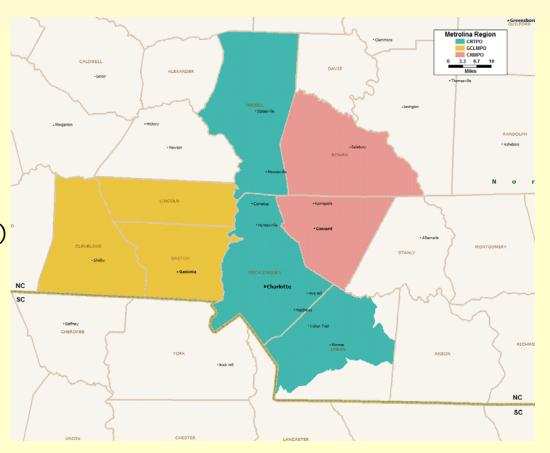


- Charlotte Regional TPO (CRTPO)
- Gaston-Cleveland-Lincoln MPO (GCLMPO)



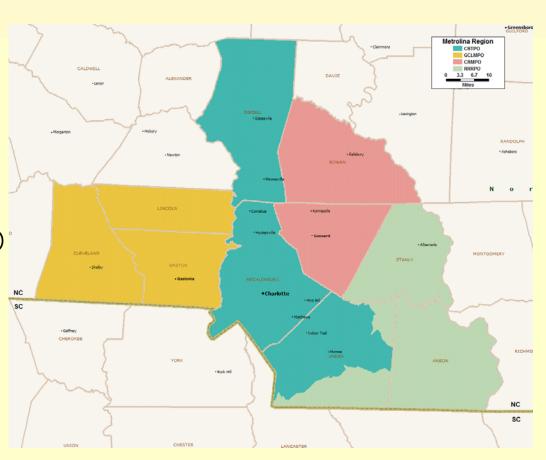


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- Cabarrus-Rowan MPO (CRMPO)[®]



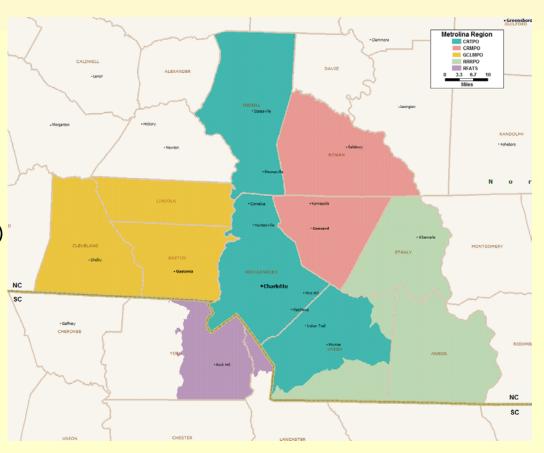


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- Cabarrus-Rowan MPO (CRMPO)[®]
- Rocky River RPO (RRRPO)



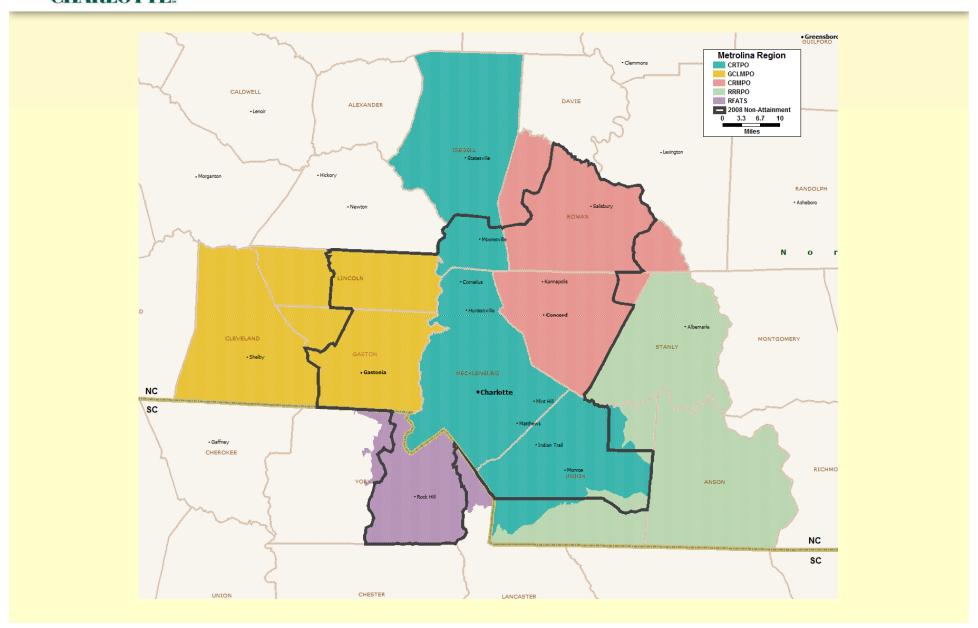


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- Cabarrus-Rowan MPO (CRMPO)[®]
- Rocky River RPO (RRRPO)
- Rock Hill Fort Mill Area Transportation Study (RFATS)



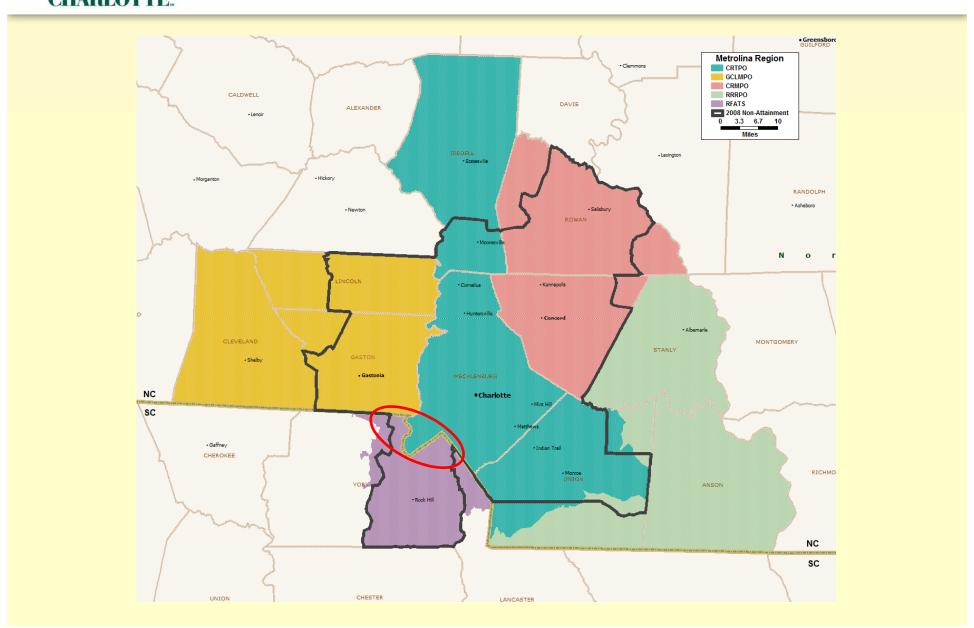


Charlotte Non-Attainment Area



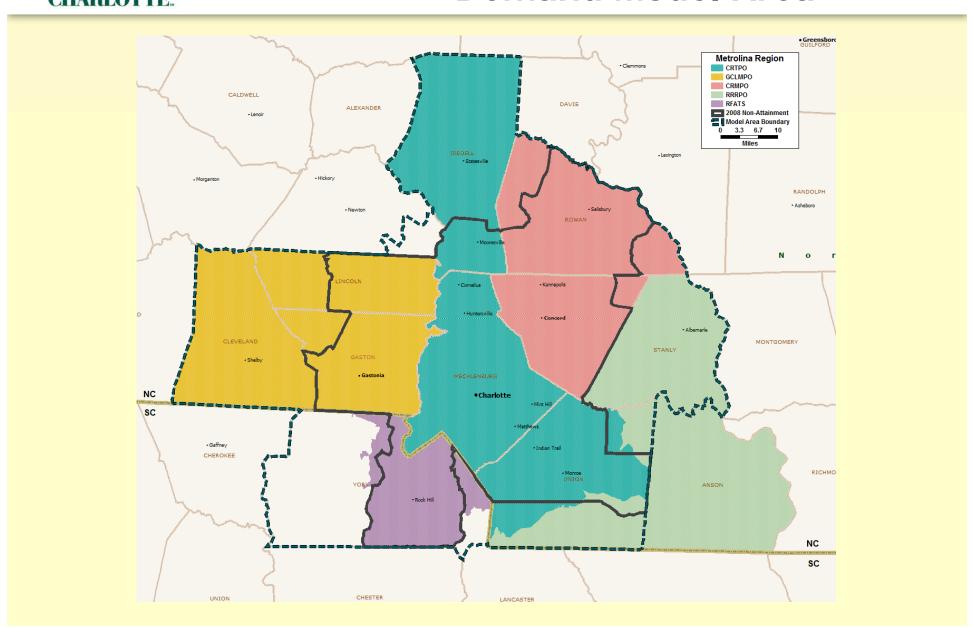


Charlotte Non-Attainment Area





Metrolina Regional Travel Demand Model Area





Regional Partners

- Charlotte Regional TPO (CRTPO)
- Gaston-Cleveland-Lincoln MPO (GCLMPO)
- Cabarrus-Rowan MPO (CRMPO)
- Rocky River RPO (RRRPO)
- Rock Hill Fort Mill Transportation Study (RFATS)
- Charlotte Department of Transportation (CDOT)
- Centralina Council of Governments
- Catawba Council of Governments

- NC Department of Transportation (NCDOT)
- SC Department of Transportation (SCDOT)
- NC Department of Environment and Natural Resources (NCDENR)
- SC Department of Health and Environmental Control (SCDEHC)
- Federal Highway Administration (FHWA)
- Environmental Protection Agency (EPA)

- MPO and RPO Technical and Policy Committees
- Charlotte Regional Alliance for Transportation (CRAFT)
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- Metrolina Regional Travel Demand Model Technical and Policy Committees
- Interagency Consultation Process

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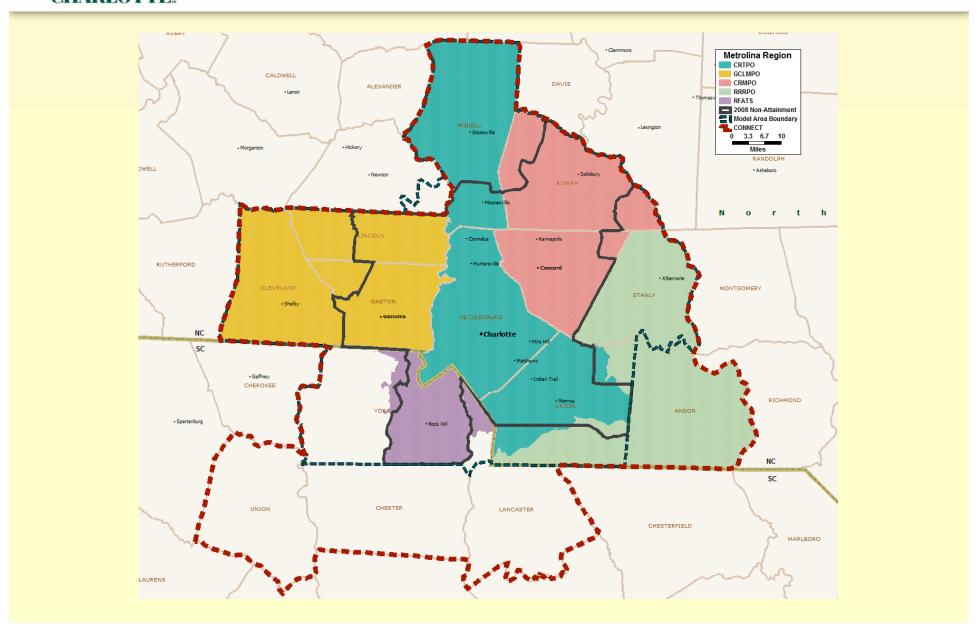
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CONNECT Our Future





Challenges



Sheer Number of Entities

"Voluntary" Participation



Benefits



Saves Time and Money

Consistency

Opportunities for Regional Initiatives

Share Information / Data Seamlessly

Quick Response

Better Results

Contact Information

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(704) 336-8034



Overview...



- ▶ The Basics
- Air QualityDesignations
- Why Coordinate
- Example of Coordination
- Other Coordinated Efforts

The Basics...



Who Are The Partners?



DOT: State and Federal

Air Quality Designations....

PM10 Standard – Maintenance
1997 PM2.5 Standards – Nonattainment
2006 24-Hour PM2.5 Standards – Nonattainment
2012 Annual PM2.5 Standards – Nonattainment
8-Hour Ozone Standard – Nonattainment
Carbon Monoxide – Maintenance (Select Urban Areas)

Why Coordinate Planning Efforts?



- 1. It Takes All 8 For 1 To Conform
- 2. Same Requirements
- 3. Provides a Coordinated Voice
- 4. Reduces Risk
- 5. Effective Decision Making
- 6. Resource Sharing
- 7. Increased Efficiencies
- 8. Cost Savings
- Facilitates Coordination on Other Mutual Interests

Coordination Example...

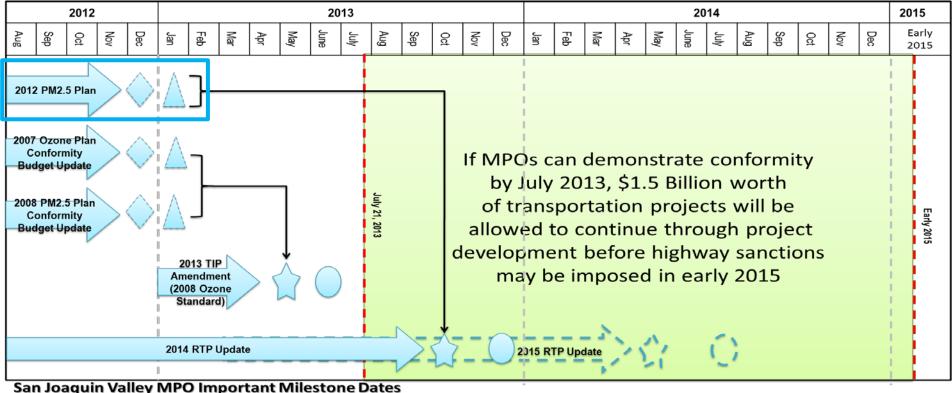
- New Emissions Model EMFAC2011
 - As a Result, the MPOs Anticipated a Need for Updated 1997 PM2.5 and 1997 8-Hour Ozone Standard Conformity Budgets to Conform Plans and TIPS
 - Updating the Budgets Required A Minimum 90-Day EPA Adequacy Process
 - Budgets Needed to Be Updated Prior to MPO Adoption of 2008 Ozone Conformity Demonstration
- EPA required All 8 MPOs Demonstrate Conformity to the 2008 8-Hour Ozone Standard by July 21, 2013

Coordination Example Cont...

- Federal Approval (FHWA and FTA) of All 8 MPO Conformity Analyses was Required at the Same Time and No Later Than July 21, 2013 to Prevent A Lapse
- The SJV 2012 PM2.5 Plan Needed to Be Submitted By December 14, 2012 to Prevent the Imposition of Highway Sanctions (Anticipated in Early 2015)
- RTP Updates Underway for All 8 MPOs
- Coordination of Conformity Budget Updates for the 1997 Ozone and 1997 PM2.5 Standard Vital to Success







san soaquin valley ivir o importan

2012 PM2.5 Plan

- Required to address the 2006 PM2.5 Standard.
- Must be submitted to EPA by December 14, 2012 or 2 year highway sanction clock begins (after EPA publication in Federal Register)
- Highway Sanctions anticipated early 2015
 Identifies conformity budgets MPOs must meet to expend money on regionally significant transportation projects.

2007 Ozone and 2008 PM2.5 Plan Conformity Budget Update

- MPOs are anticipated to need updated conformity budgets to demonstrate conformity by July 2013 due to updates to the ARB EMFAC model used to estimate emissions
- Note: The need to update these conformity budgets is dependent on the impact of the PM2.5 plan conformity budget quantification methodology. Update may be unnecessary.

2013 TIP Amendment

- Needed to demonstrate conformity to the 2008 8-hour Ozone Standard
- 8 Valley MPOs need to adopt new conformity analysis
- If one MPO is unable to adopt a new conformity analysis all 8 lapse
 - Regionally significant projects cannot advance beyond the phase of work they are currently in (e.g. projects in ROW cannot advance to construction).

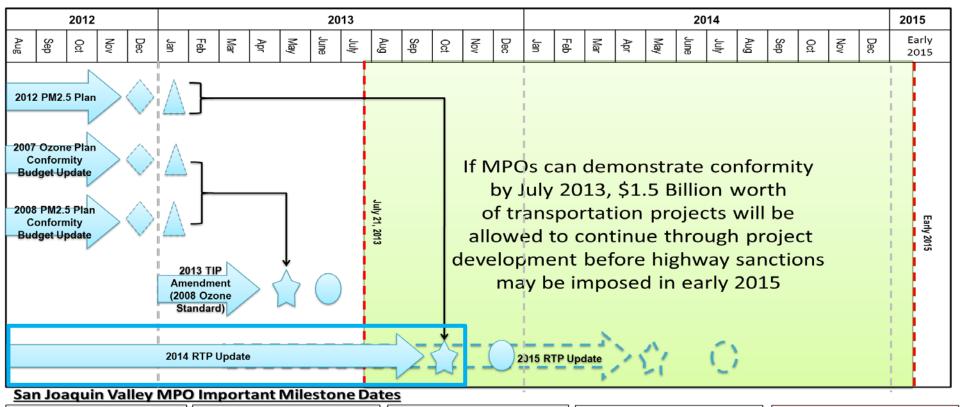
July 2013 and/or Early 2015

- July 21, 2013 If MPOs unable to demonstrate conformity, all 8 MPOs lapse
- If MPOs lapse approximately \$20.5 billion would be at risk of loss or delay
- If MPOs do not lapse in July 2013, but lapse in early 2015, approximately \$1.5 billion worth of transportation projects can proceed through project delivery.
- Early 2015 If PM2.5 Plan not submitted/approved by EPA prior to this date, MPOs lapse.

LAPSE

- During a lapse regionally significant projects cannot proceed beyond the phase of work for which they have received federal or state approval
- Exempt projects can proceed through construction (examples include bus operations, bus procurements, turn lanes)
- Federal approval = Authorization to proceed (E-76)
- State approval = CTC Action, Caltrans Action





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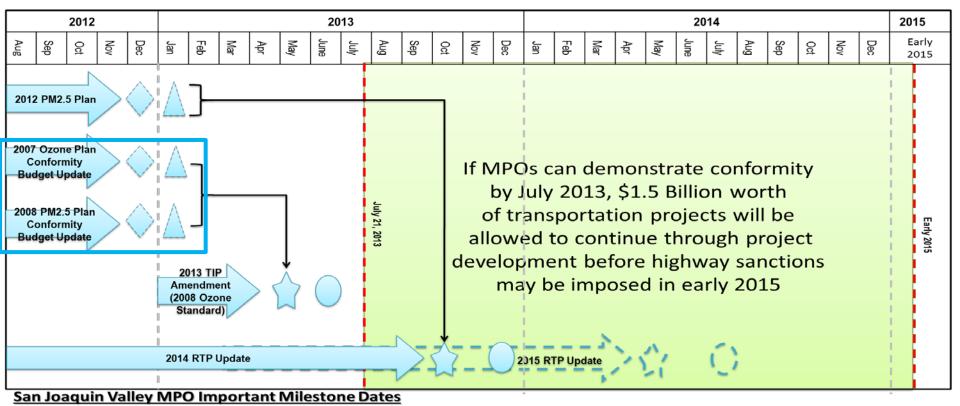
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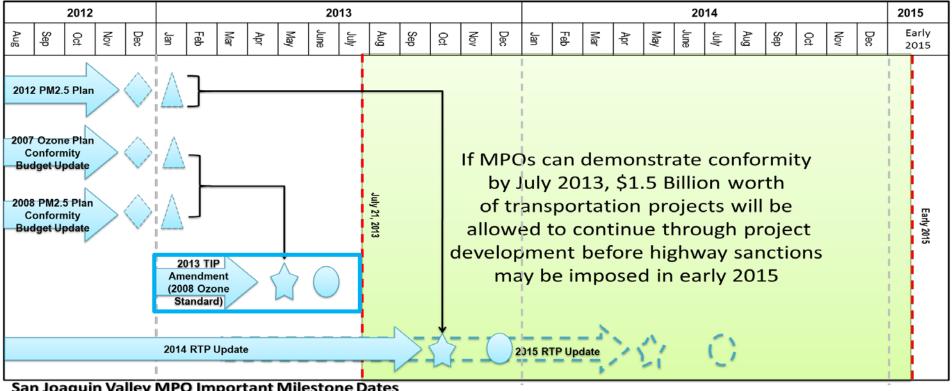
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San Joaquin Valley MPO Important Milestone Dates

2012 PM2.5 Plan

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2007 Ozone and 2008 PM2.5 Plan Conformity **Budget Update**

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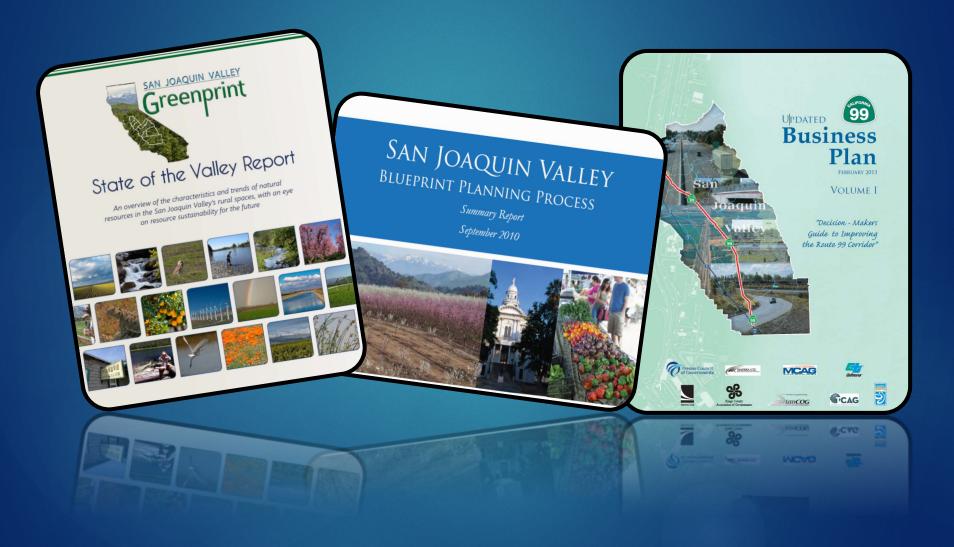
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Other Coordinated Efforts...



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Questions?

- Please enter your questions into the Q&A Pod on your screen
 - The moderator will direct your question to the appropriate presenter.
 - Slides from today' presentation are available in the download pod
- For more information on the Regional Models of Cooperation initiative, please visit:

http://www.fhwa.dot.gov/planning/regional_models/



Thank You!

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• Contact:

Jody McCullough, FHWA Office of Planning jody.mccullough@dot.gov (202) 366-5001

