



AGENDA
KERN REGIONAL
TRANSPORTATION MODELING COMMITTEE (TMC)

A sub-committee of Transportation Technical Advisory Committee (TTAC)
(merged with the Kern Climate Change Task Force in May 2010)

KERN COG BOARD ROOM
1401 19TH STREET, THIRD FLOOR
BAKERSFIELD, CALIFORNIA

WEDNESDAY
May 23, 2012
9:00 A.M.

WEB SITE: <http://www.kerncog.org/cms/agendas-minutes/transportation-modeling>

PARKING: All-day free parking in the unmarked spaces of the garage located at 19th and L Streets. This is an open meeting; local government planning, public works staffs are encouraged to attend.

DISCLAIMER: This agenda includes the proposed actions and activities, with respect to each agenda item, as of the date of posting. As such, it does not preclude the Committee from taking other actions on items on the agenda which are different or in addition to those recommended.

- I. Introductions/Sign-in Sheet
- II. Meeting Notes from April 26, 2012 – See *Attachment* – **Approve**
- III. Regional Planning Advisory Committee – Meeting notes from the May 2, 2012 RPAC See *Attachment*. – Information
- IV. Land Use Model Scenarios Discussion (Hightower)
- V. Land Use Urban/Built area update (Heimer) - Approve
- VI. Model Improvement Program Update – Status/Timeline/Process – (Hightower) Information
- VII. Kern COG Modeling Activity Report (Liu/Flickinger) – Information
- VIII. Regional Traffic Count Program (Heimer/Flickinger) – Information
- IX. Other Business/Schedule Next Meeting – **Wed., June 27, 2012 9:00AM** at Kern COG
- X. Adjourn



**Kern Regional Transportation Modeling Committee (TMC)
A Subcommittee of the Kern COG TTAC**

Meeting Notes
April 26, 2012

I. Members Present:

Brian Blacklock	County of Kern Roads
Warren Maxwell	County of Kern Roads
Steve Young	County of Kern Roads
Mike McCabe	City of Delano
Wayne Clausen	City of Shafter
Sue George	City of Taft
David Berggren	Caltrans
John Ussery	City of Bakersfield
Ed Murphy	City of Bakersfield
Karl Davisson	City of Bakersfield
Dave Domohowski	

Staff Present:

Vincent Liu	Kern Council of Governments
Troy Hightower	Kern Council of Governments
Ed Flickinger	Kern Council of Governments
Ben Raymond	Kern Council of Governments
Rochelle Invina	Kern Council of Governments
Michael Heimer	Kern Council of Governments

- II. Meeting Notes from March 28, 2012 – Approved.**
- III. Regional Planning Advisory Committee – Information.** Minutes from the April 4, 2012 meeting were available for committee review.
- IV. Land Use Model Scenarios Discussion –** Reviewed scenario worksheet and scenario summary sheets in more detail. Suggestions were made to do statistical analysis on the scenarios, and if staff can combine scenarios and create a combined scenarios worksheet. Discussed questions about the scenario comparisons. For land use testing, higher density was placed in transit corridor. Group asked staff to describe layers in detail sheets and Group discussed the infill areas and identified areas that needed to be reviewed and changed (Valley Plaza parking lot and park by BC). - Action – Want committee feedback about the scenario summary sheets. The committee requested Kern COG staff present this agenda item at the next RPAC meeting May 1, 2012.
- V. Model Improvement Program Update –** The updated model is still being recalibrated on Cube 6.01 to use new data supplied by Kern COG and to run on Cube 6.01. New conformity reported requirements have complicated the effort to complete the development of the model. – Information.
- VI. Kern COG Modeling Activity Report –** Testing model methods for SCS Scenario. - Information.
- VII. Regional Traffic Count Program –** Awaiting Control Station Data from the City of Bakersfield in proper format to upload to SQL database. Discussing improvement techniques for setting up the traffic counters. City of Bakersfield personnel planned to meet with traffic count consultant. - Information.
- VIII. Other Business/Schedule Next Meeting – Wed., May 23, 2012 9:00 AM at Kern COG.**

- IX.** Rochelle discussed the Sustainable Communities Strategies Success Stories which are stories that demonstrate what member agencies are already doing to help with SB 375 goals. She stated the success stories template is available on the Kern COG website, and asked the committee members to submit their agency's success stories by May 22, 2012.

- X. Adjournment**

KERN COUNCIL OF GOVERNMENTS
REGIONAL PLANNING ADVISORY COMMITTEE

KERN COG CONFERENCE ROOM
1401 19TH STREET, THIRD FLOOR
BAKERSFIELD, CALIFORNIA

WEDNESDAY
May 2, 2012
1:30 P.M.

Chairman Clausen called the meeting to order at 1:34 p.m.

I. ROLL CALL

MEMBERS PRESENT:	Wayne Clausen	City of Shafter
	Mike McCabe	City of Delano
	Dennis McNamara	City of McFarland
	Paul Gorte	City of Taft
	David James	City of Tehachapi
	Rhonda Barnhard	City of Wasco
	Richard Rowe	Community Member
	Jeff Sorensen	Caltrans
	Rebecca Moore	LAFCO
STAFF:	Becky Napier	Kern COG
	Rob Ball	Kern COG
	Joe Stramaglia	Kern COG (telephone)
	Linda Urata	Kern COG
	Susanne Campbell	Kern COG
	Rochelle Invina	Kern COG
	Troy Hightower	Kern COG
OTHER:	Jeff Caton	ESA
	Bryce Dias	Great Valley Center
	Amy Jewel	KEMA

- II. PUBLIC COMMENTS:** This portion of the meeting is reserved for persons to address the Committee on any matter not on this agenda but under the jurisdiction of the Committee. Committee members may respond briefly to statements made or questions posed. They may ask a question for clarification; make a referral to staff for information or request staff to report to the Committee at a later meeting. **SPEAKERS ARE LIMITED TO TWO MINUTES. PLEASE STATE YOUR NAME AND ADDRESS FOR THE RECORD PRIOR TO MAKING A PRESENTATION.**

None

- III. APPROVAL OF DISCUSSION SUMMARIES:** Meeting of Wednesday, April 4, 2012.

Mr. Gorte made a motion to approve the discussion summary of Wednesday, April, 4, 2012, seconded by Mr. McNamara, motion carried.

IV. REGION ENERGY ACTION PLANS UPDATE:

Mr. Bryce Dias gave a brief update on the status of the data collection of the Green House Gas Inventories for the cities of Bakersfield, Arvin, Wasco and Taft.

Mr. Jeff Caton of ESA gave a brief update on the status of the data collection for the Region Energy Action Plans (REAP). A summary handout was provided to the Committee.

Ms. Linda Urata noted that the Energy Action Plan Strategy Selection Tool will be introduced to the cities then end of May.
This was an information item.

V. SUSTAINABLE COMMUNITY STRATEGY SUCCESS STORIES TEMPLATE (Invina)

Ms. Invina stated that this item was presented during the April 4th RPAC meeting, but the deadline has been extended from April 24th to May 22, 2012. Ms. Invina informed the Committee that the template is available on the Kern COG Website.

This item was for information.

VI. 2012-13 OVERALL WORK PROGRAM PRIORITIES (Phipps)

Mr. Ball gave a presentation of the Kern COG 2012-13 Overall Work Program.

This item was for information only.

VII. HIGH SPEED RAIL REVISED BUSINESS PLAN (Napier)

Ms. Napier stated that on November 1, 2012, the California High Speed Rail Authority released a Draft 2012 Business Plan for public review and comment. The Authority reviewed and considered comments from a broad range of interests, including several legislative hearings and public participation. The input along with further analysis by the Authority has resulted in significant changes which are presented in the Draft Revised 2012 Business Plan released on April 2, 2012.

This was an information item.

VIII. SUSTAINABLE COMMUNITIES STRATEGY SCENARIO DEVELOPMENT UPDATE (Hightower)

Mr. Hightower stated that SB 375 requires regions to analyze scenarios to reduce per capita greenhouse gas emissions (GHG) from passenger vehicle travel for use in development of the Sustainable Communities Strategy (SCS).

Mr. Hightower briefly detailed the tools and reports that will be used to analysis individual and combined scenario results.

A detailed discussion followed among the Committee Members regarding the Scenario.

This item is for information only.

IX. REGIONAL ADVISORY COMMITTEE MEETING DATE FOR JULY 2012 (Napier)

Ms. Napier stated that the Regional Planning Advisory Committee (RPAC) meeting for July would normally fall on July 4, which is the Independence Day holiday.

The action requested is to make a motion to schedule the July RPAC meeting for Tuesday, July 3, 2012, at 1:30 p.m. Ms. Barnhard made the motion to schedule the July RPAC meeting for Tuesday July 3, 2012, at 1:30 p.m., seconded by Mr. Rowe, motion carried.

X. DISCUSSION SUMMARIES/MEETING UPDATES:

The Transportation Technical Advisory Committee Meeting Discussion Summary of April 4, 2012 was distributed to the Committee.

XI. INFORMATION/ANNOUNCEMENTS

a. Update from Transportation Modeling Committee

Mr. Hightower stated that he added a paragraph to his earlier staff report that was a review of what was covered in the Modeling Committee.

XII. MEMBER ITEMS

Ms. Napier stated that they have received the proposals for the Preliminary RTP SCS. Ms. Napier asked for volunteers to review the proposals. Mr. McNamara and Mr. Clausen volunteered to review the proposals.

Mr. Clausen stated Collins and Schoetler introduced themselves as the Valley Blueprint Integration Planning team. They have been contracted to help each community implement the Valley Blueprint. Mr. Clausen asked Collins and Associates to review some of the new publications that have come out about Sustainable Transportation Planning to gain ideas regarding focusing on transportation solutions to achieve SCS goals. Mr. Clausen asked this to put an item on June agenda pertaining to pooling resources of Collins & Schoetler.

XIII. ADJOURNMENT

Mr. McNamara made a motion to adjourn. Mr. James seconded the motion. The meeting was adjourned at 3:23 p.m.

The next meeting will be June 6, 2012 at 1:30 p.m.



May 23, 2012

TO: Kern Regional Transportation Modeling Committee (TMC)

FROM: Robert R. Ball
Interim Executive Director

BY: Troy Hightower, Planner II

SUBJECT: AGENDA ITEM: IV
Sustainable Communities Strategy Scenario Development Update

DESCRIPTION:

SB 375 requires regions to analyze scenarios to reduce per capita greenhouse gas emissions (GHG) from passenger vehicle travel for use in development of the Sustainable Communities Strategy (SCS).

DISCUSSION:

An initial list of scenarios, based on guidance from California Air Resources Board (ARB) was first reviewed by the Kern Regional Planning Advisory Committee at its meeting on January 4, 2011 and again at the TMC February 22, 2012 meeting. The table is a guide that will be updated and presented at future meetings.

The following table contains core policy variables that ARB associated with key land use and transportation-related components associated with GHG reductions. These variables and factors are consistent with those qualitatively assessed in the 18 Metropolitan Planning Organizations (MPOs) model sensitivity analysis during the target setting process. While ARB staff believes this list includes the most important variables for analysis, ARB staff realizes it may not be appropriate for an MPO to do a sensitivity test on each one, given the MPO's unique SCS, complexity, and resources.

Table 1 – Potential Kern SCS Modeling Scenarios to Evaluate Core Policy Variables

Tool Used			
Travel Model	Land Use Model	ARB Modeling Variable	Scenario Status
		1. Land Use:	
x	x	a. Modify distribution of households, population, jobs or other variables (infill along major transit corridor consistent with GP)	Draft
x	x	b. Rebalance the mix of land uses (housing/employment ratios)	Testing
x	x	c. Increase the level of density (housing demand shift)	Draft
x	x	d. Improve the pedestrian environment (walk distance to transit)	MIP(future)

Tool Used			
Travel Model	Land Use Model	ARB Modeling Variable	Scenario Status
		2. Road Projects:	
x		a. Add HOV lanes	HOV Study
x		b. Implement Intelligent Transportation Systems (ITS)/Traffic management (e.g., change auto travel times, change highway free-flow speed)	Off Model
x		c. Add general purpose roadway lanes (e.g., change highway capacities)	Draft
		3. Transit:	
x		a. Construct new transit lines	GET Plan
x		b. Increase service (e.g., change transit headways, increase network connectivity)	<i>Draft Combined with 3c</i>
x		c. Upgrade transit service (e.g., change from bus to light rail)	GET Plan
x	x	d. Improve accessibility (e.g., change bike/walk access distance to transit stations, change auto access distance to transit stations)	<i>Draft combined with 3b</i>
		4. Pricing:	
x		a. Develop tolls and toll roads	HOV Study
x		b. Implement HOT lanes	HOV Study
x		c. Increase the cost of parking	Draft
x		d. Change in transit fares	MIP(future)
X		e. Change in auto operation cost	MIP(future)
		5. Transportation Demand Management:	
X		a. Promote carpooling, vanpooling, telecommuting and teleconferencing	Off Model
X	x	b. Promote walking and biking	Testing
X		c. Implement employer-based trip reduction strategies and Indirect Source Rule	Off Model

Source: Adapted from ARB SCS Review Methodology 7/21 (www.arb.ca.gov/cc/sb375/scs_review_methodology.pdf)

Table 1 indicates the scenarios Kern COG currently can model with the existing Land Use and Travel models. Current Kern COG modeling capabilities include: 1) the new Model Improvement Program (MIP) model currently undergoing initial testing; 2) the Travel model updates related to the GET Long-range Transit Plan; 3) the High Occupancy Vehicle (HOV) study modeling scenarios; 4) the current travel model and improvements to the travel model as part of the MIP; and 5) an off-model process to adjust modeling results to reflect ITS and other traffic management strategies.

The last column was renamed to “Scenario Status” to indicate current status for each of the scenarios under development.

Scenario Development

Kern COG staff made adjustments to the SCS Scenario Development Worksheet based on the comments made by the TMC and the RPAC at its April 4th meeting. (See attachment 1) The worksheet is a tool to compare the results between different scenarios and assist the committee with providing direction to staff in the ongoing effort to develop the SCS. The worksheet will be updated as new scenarios are developed. New columns have been added to report the results of combined scenarios.

Kern COG staff has developed a Scenario Detail Sheet as an attachment to the SCS Development Worksheet. The Scenario Detail Sheet contains more detailed information on the inputs and assumptions used for a specific scenario listed on the worksheet. A sample is attached. As scenarios are more fully development the scenario detail sheets will be updated.

Both the table above and the SCS development worksheet were developed from templates provided by ARB for SCS development. You may find out more information by downloading ARB report "Sustainable Communities Strategy Review Methodology" from July 2011 at: http://www.arb.ca.gov/cc/sb375/scs_review_methodology.pdf

Off Model Strategies from the Big 4-MPOs

In addition to these variables or scenarios, the 4 biggest MPOs prepared a memo about "off- model" strategies that would be used adjust their GHG emissions forecast. The following is a list of those strategies from last year. SACOG took credit for an additional 1-2% points in per capita reduction using their off model methodology. See attachment 3 (Table 6 from the following memo).

<http://www.arb.ca.gov/cc/sb375/mpo/prelimreport.mtc.sacog.sandag.scag.pdf>

Kern SB 375 Framework: Compliance With Core Values

In February 2012 the Kern COG Board adopted 4 core values and 13 core actions to help govern Kern COG's activity related to SB 375 target setting and SCS development. Staff is using these values and actions to guide its activity for the effort. The following is a brief summary of Kern COG's activities related to the 4 core values:

- 1) The Sustainable Community Strategy relies on the existing and planned circulation networks and land use designations for Kern County and its eleven (11) incorporated cities.

Related COG Activities: Updated circulation networks and land use designations using latest general plans as of Summer/Fall 2011.

- 2) The Sustainable Communities Strategy shall not hinder the local land use authority of Kern County and its eleven (11) incorporated cities.

Related COG Activities: Added disclaimer to maps to refer users to local general plans for latest local planning information.

- 3) The Sustainable Community Strategy shall allow Kern County and its eleven (11) incorporated cities to continue the pursuit and promotion of a diversified economic base.

Related COG Activities: Development of modeling that supports an ambitious and achievable target for Kern that avoids the need for creation of an Alternative Planning Strategy (APS).

Some consider the APS a source of potential challenges to future economic projects in the region.

- 4) Kern County shall continue to discuss cooperation and coordination with the seven (7) other counties located in the Central San Joaquin Valley to develop a regional Sustainable Community Strategy that recognizes the both shared and unique characteristics of each of the eight (8) counties.

Related COG Activities: COG Staff and Kern COG's representatives on the Regional Planning Advisory Committee are participating in the 8 county SCS coordination efforts. COG staff is developing a set of modeling tools that differ from the other 7 counties to better reflect our unique characteristics.

Attachments

1. SCS Scenario Development Worksheet May 2012.
2. Sample Scenario Detail Sheets (will be provided during the meeting)

ACTION: Information/Discussion

Attachment 1

SCS Development Worksheet – April 2012

Kern COG Draft SCS Scenario Development - Indicator Comparison Table As of May 16, 2012

DRAFT Worksheet

Category	Scenario Title	Spreadsheet Based Data			Land Use Model Data (Uplan Runs)				Travel Model				Off Model	Land Use + Travel Model		
		Target Setting Process 2010			Adjusted Base Model	Redistribution	Rebalance	Increased Density	Road Projects		Combined Transit	Pricing	Pricing	Combined MIP/Off Model	1a. Infill R05 Transit Areas	
	Indicators and Measures	2005 Backcast from 2006 model base year	Proposed Kern 2035 Target	Updated 2035 Base	M24	1a. Infill R05 Transit Areas	1b. Housing Employment Ratios	1c. Housing Demand Shift	2a. Add HOV Lanes	2c. Roadway Lanes Hageman Flyover	3b. Increase Service + 3d. Accessibility	4c. Downtown Parking Cost	4e. Increase Auto Costs	1d Improve Walkability 5b. Walking Biking	3b. Increase Service	
DEMOGRAPHIC DATA	Household Population	765,750	1,264,100	1,264,100	1,264,100	1,264,100	1,264,100	1,264,100		1,264,100	1,264,100	1,264,100	1,264,100	1,264,100	1,264,100	1,264,100
	Households	260,700	417,200	417,102	417,115	417,105		414,171		417,115	417,115	417,115		417,115		
	Jobs	286,432	460,730	460,882	460,483	460,681		460,212		460,483	460,483	460,483		460,483		
LAND USE DATA (Growth Only)	Households 2010 - 2035		156,750	156,652	156,665	156,655		154,004		156,665	156,665	156,665		156,665		
	Residential Acreage Developed	--	--	--	60,037	60,019		37,760		60,037	60,037	60,037		60,037		
	Households per Acreage Developed	--	--	--	2.61	2.61		4.08		2.61	2.61	2.61		2.61		
	Population within a 1/4 mile of a Transit Stop	142183*	173,661	176,008	159,890	161,254		161,254								
	Residential High (acres)				680	680		1,550		680	680	680		680		
	Residential Medium				1,958	1,958		3,202		1,958	1,958	1,958		1,958		
	Residential Low				31,280	31,259		26,678		31,280	31,280	31,280		31,280		
	Residential Very Low				26,119	26,122		6,330		26,119	26,119	26,119		26,119		
MODEL OUTPUT DATA - Passenger Travel Mode Shares - All Trips (%VMT)	SOV															
	HOV															
	Public Transit (Boarding)	22028*		29,919	26,861	27,189				26,861	55,021	28,522		26,861		
	Bike+Walk (Non-Motorized)															
MODEL OUTPUT DATA - CO2 and Vehicle Miles Traveled	Per Capita SB 375 CO2 Emissions by Passenger Vehicles per Weekday (lbs)	14.79	16.17	16.32	15.96	15.88					15.22	15.27				
	Per Capita SB 375 CO2 Emissions by Passenger Vehicles per Weekday (lbs) - Pavley															
	Difference between Scenarios and 2005 Base Per Capita CO2 14.79 lbs (0% reduction below 2005 Base. Increases in red)	0.0%	9.3%	10.3%	7.9%	7.4%					2.9%	3.2%				
	Difference between Scenarios and Per Capita CO2 target of 13.31 lbs (10% reduction below 2005 Base. Increases in red)	10.0%	17.7%	18.4%	16.6%	16.2%					12.5%	12.8%				
	Total VMT per Weekday (Miles, in Thousands)	22,619	41,750	41,751	40,588	40,464	0				40,456	40,582	0	39,615		0
	Total SB 375 VMT by Passenger Vehicles per Weekday (-XX,-50% IXXI, Miles, in Thousands)			27,760	26,707	26,591										

Kern SB 375 Scenario Development - Notes and Assumptions (See Scenario Detail Sheets for more information)

This is a modified version of the spreadsheet compiled by ARB staff after the MPO baseline information gathering effort. The purpose of this spreadsheet is to facilitate scenario data review and development.

Backcast from Kern 2006 base model to 2005 model required by ARB.

Population projections are based on Kern COG Growth Forecast adopted in Oct 2009 without Group Quarters. Updated 2035 Base with 2010 Census data.

Travel model is used for all scenarios unless noted otherwise.

Land Use Scenarios do not change General Plan densities or areas.

* 2006 Boardings

Adjusted 2035 M24 Base using network with Hageman minus two lanes

(rewdcu)

DRAFT



May 23, 2012

TO: Kern Regional Transportation Modeling Committee (TMC)
FROM: Robert R. Ball
Interim Executive Director
BY: Michael Heimer, Planner III
SUBJECT: AGENDA ITEM: V
Land Use Urban/Built Area Update

DESCRIPTION:

Updated versions of the 2005 and 2010 urban/build area for the UPlan land use model have been created.

DISCUSSION:

Kern COG staff has also developed versions of the urban/built areas for the years 2005 and 2010 for use with both infill and no-infill scenarios.

The 2005 layers used the 2006 Farmland Mapping and Monitoring Program (FMMP) Urban and Built-up Land classification as a base. Non-urban areas such as holding ponds and agricultural storage yards were removed using 2006 aerial imagery as a reference. The resulting layer is the “2005 Urban/Built” layer. Using a combination of aerial imagery and assessor’s parcel information, vacant lots were removed from the “2005 Urban/Built” layer to form the “2005 Urban/Built Infill” layer.

The 2010 layers used the 2010 FMMP Urban and Built-up Land classification as a base. Non-urban areas such as holding ponds and agricultural storage yards were removed using 2010 aerial imagery as a reference. Areas from the 2008 Urban/Built layer (Urban10) that were added using parcel information were added to the 2010 layer for consistency with previous models. The resulting layer is the “2010 Urban/Built” layer. Using a combination of aerial imagery and assessor’s parcel information, vacant lots were removed from the “2010 Urban/Built” layer to form the “2010 Urban/Built Infill” layer.

Electronic versions of the urban/built layers and maps can be found at:
<http://kerncog.org/cms/agendas-minutes/transportation-modeling>.

Attachments (copies of attachments and layers are available on the Kern COG website)

1. Urban/Built Area Maps

ACTION: Approve Urban/Built Areas



May 23, 2012

TO: Kern Regional Technical Modeling Committee (TMC)

FROM: Robert R. Ball
Interim Executive Director

BY: Ed Flickinger, Regional Planner III

SUBJECT: AGENDA ITEM: VIII
Regional Traffic Count Contract

DESCRIPTION:

On April 27th, City of Bakersfield staff met with the traffic count consultant at Kern COG to discuss improvement techniques for the traffic counters. An extension to the contract will be considered by the Kern COG Board on June 21st.

DISCUSSION:

During the April 25th TMC meeting, improvement techniques and concerns for setting up the traffic counters were identified by the City of Bakersfield. These concerns included the locations of several counters were too close to intersections and the need for extra taping of the hoses. The consultant, Pacific Traffic Data, agreed to address these concerns at the April 27th meeting with the City of Bakersfield. In addition, the consultant suggested that street sweepers avoid running over traffic counter hoses.

An extension to the contract will be considered by the Kern COG Board on June 21st. Please contact staff if you have additional comments regarding this contract.

ACTION: Information. Pacific Traffic Data will be available to answer any questions.