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MEETING OF THE

TECHNICAL WORKING GROUP

***Thursday, September 19, 2019
10:00 a.m. – 12:30 p.m.***

SCAG OFFICES

**900 Wilshire Blvd., Ste. 1700
Room Policy B
Los Angeles, CA 90017
(213) 236-1800**

HOW TO PARTICIPATE IN MEETING ON NEXT PAGE

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In Person

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900 Wilshire Blvd., 17th Floor
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Videoconference

San Bernardino County

1170 West 3rd Street, Suite 140
San Bernardino, CA 92410
Telephone: (909) 806-3556

Imperial County

1405 North Imperial Ave, Suite 1
El Centro, CA 92443
Telephone: (760) 353-7800

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4001 Mission Oaks Blvd., Ste. L
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Web Meeting

Join from PC, Mac, Linux, iOS or Android:
<https://zoom.us/j/142774637>

Teleconference

Telephone:
Dial: 1-669 900 6833 or 1-646-558-8656
Meeting ID: 142 774 637



Technical Working Group

August 15, 2019

Attendees Los Angeles Office

Mark Yamarone **(Chair)**

Lori Huddleston

Deborah Diep

Warren Whiteaker

Stephanie Cadena

Miles Mitchell

Gail Shiomoto-Lohr

LA Metro

LA Metro

Center for Demographic Research, California State University Fullerton

OCTA

Gateway Cities COG

City of Los Angeles

Mission Viejo

Attendees Web Meeting/Teleconference

Marnie Primmer

Susan Kim

Caitlin Sims

Diana Chang

Nate Farnsworth

Valerie McFall

Ariana Briski

Lin Bai

Ilene T. Gallo

Jenny Chan

Josh Lee

Martha Masters

Bill Sadler

Cameron Brown

Angela Chang

Liku Abera

Katherine Stiegemeyer

OCCOG

City of Anaheim

SGVCOG

Culver City

Yorba Linda

Transportation Corridor Agencies

City of Los Angeles

City of Los Angeles

Caltrans

RCTC

SBCOG/SBCTA

RCTC

Public Health Alliance



Technical Working Group

September 19, 2019

10:00 a.m. – 12:30 p.m.

SCAG Downtown Office – Policy Room B

900 Wilshire Blvd., 17th Floor

Los Angeles 90017

Agenda

Introductions

Discussion Items

- | | | |
|---|------------------------------|------------|
| 1. Financial Plan | Annie Nam
Jaimee Lederman | 15 minutes |
| 2. Preferred Plan Growth Distribution/
Availability of Connect SoCal Subregional
Data | Kimberly Clark | 20 minutes |
| 3. Transit | Philip Law | 15 minutes |
| 4. Highways and Arterials | Nancy Lo | 15 minutes |

How to Unmute Phone

Press *6 to unmute your phone and speak

To return to mute *6



Technical Working Group

Agenda Item 1



Connect SoCal Financial Plan Update

Annie Nam

Goods Movement & Transportation Finance Department

October 3, 2019

www.scag.ca.gov



Key elements of a financial plan



- Federal RTP requirement
 - Estimate of funding needed over 20-years life of RTP to implement recommended improvements, operate and maintain the transportation system
 - Reasonably available revenue sources
 - Existing sources (federal, state, local, private, user charges)
 - New sources / innovative financing
 - Balance expected revenue sources versus estimated costs
 - Financial constraint
- Assumptions
 - Builds off of county transportation commissions, state forecasts, federal apportionments, and others

Key changes since last forecast

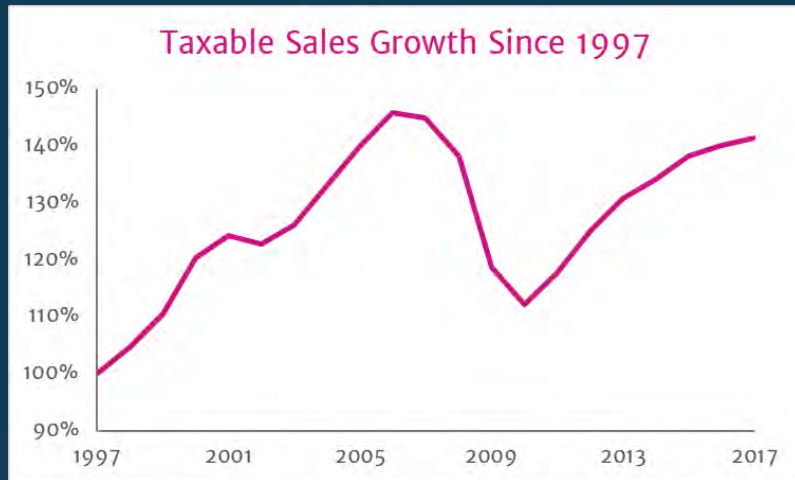


- Los Angeles County Measure M (although added into 2016 RTP/SCS in subsequent amendment)—providing LA County 4 effectively permanent local option sales tax measures
- Planning horizon (2045) extends beyond some local option sales tax measures
 - OC Measure M: 2041
 - RC Measure A: 2039
 - SBC Measure I: 2040
- Senate Bill 1
 - Provides new funds for SHOPP, State Transit Account, Road Maintenance and Rehabilitation Account

Market conditions impacting financial plan



With 8 transportation sales tax measures in SCAG region, changes in consumer behavior significantly impact available revenue for transportation investments



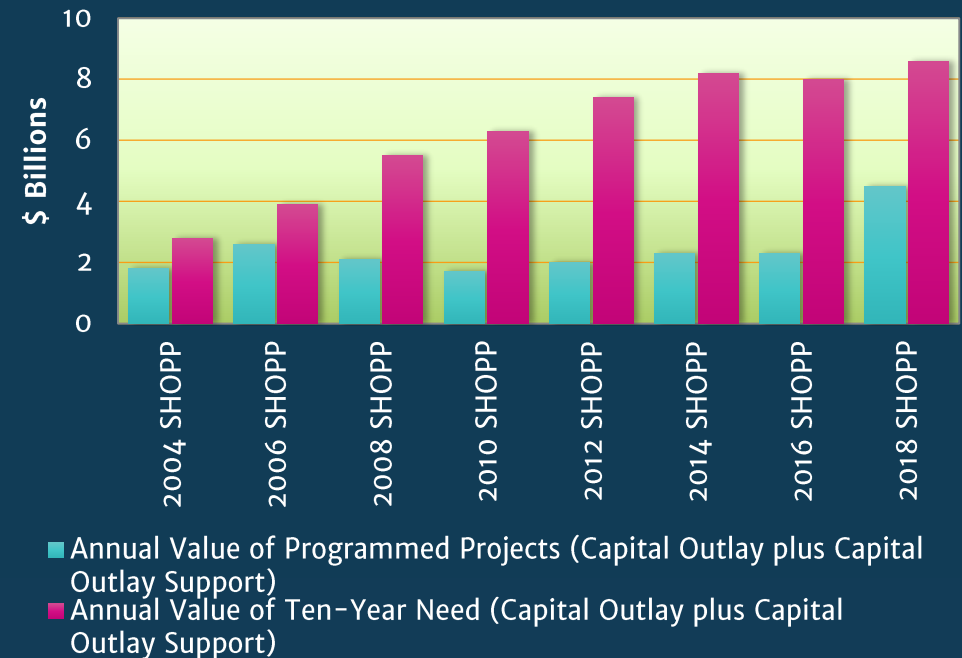
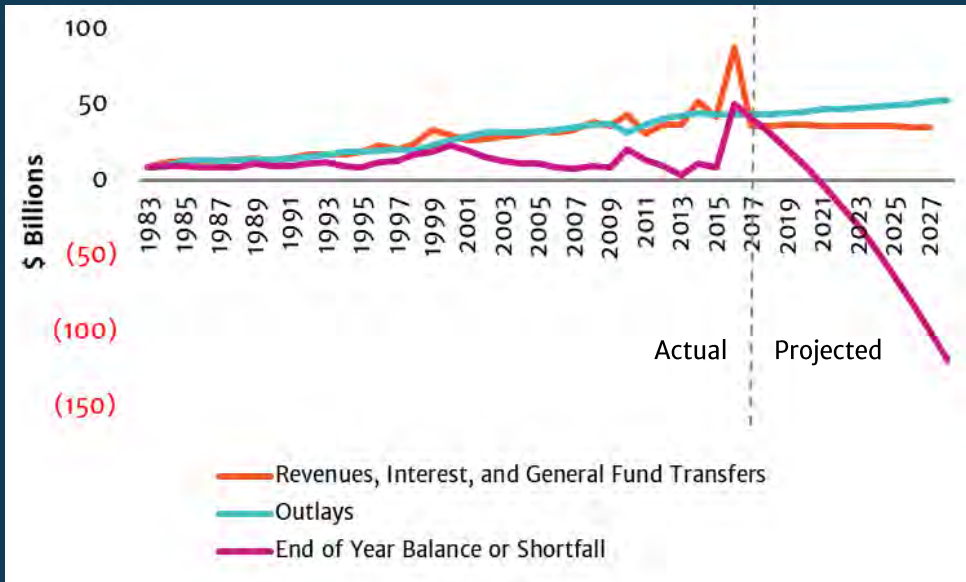
Long-term inflation is projected to grow at 2.2 percent annually, while capital costs are projected to grow at 4.5 percent—contributing to decline in purchasing power of transportation revenue sources



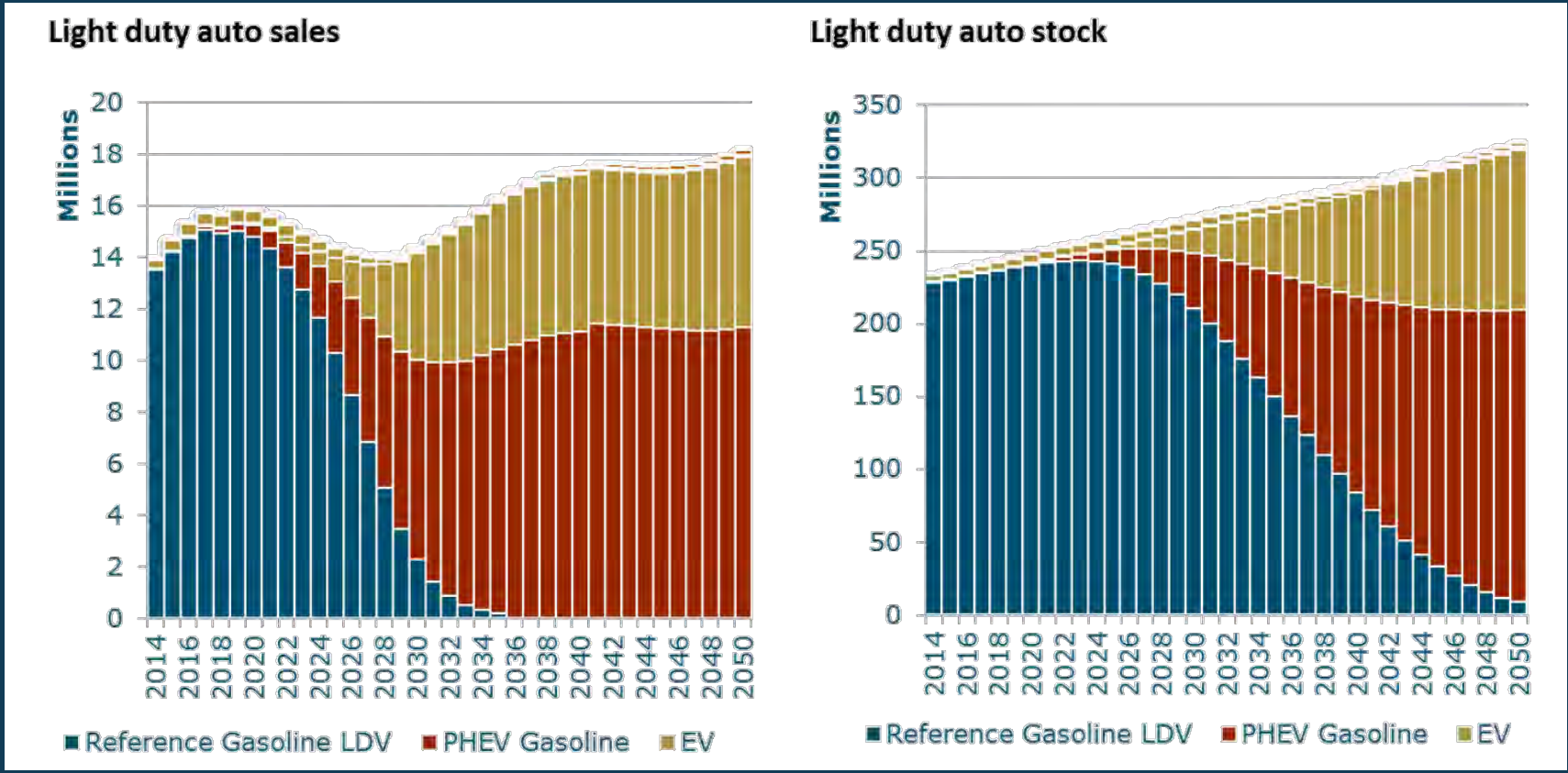
Shortfall of historic revenue sources

Since 2008, the Federal Highway Trust Fund has required over \$141 billion in General Fund transfers to remain solvent

Gas tax revenues remain the primary source of funding for the State Highway Operation and Protection Program (SHOPP), which funds projects to maintain the State Highway System. Previous levels of funding have been considerably less than actual needs.

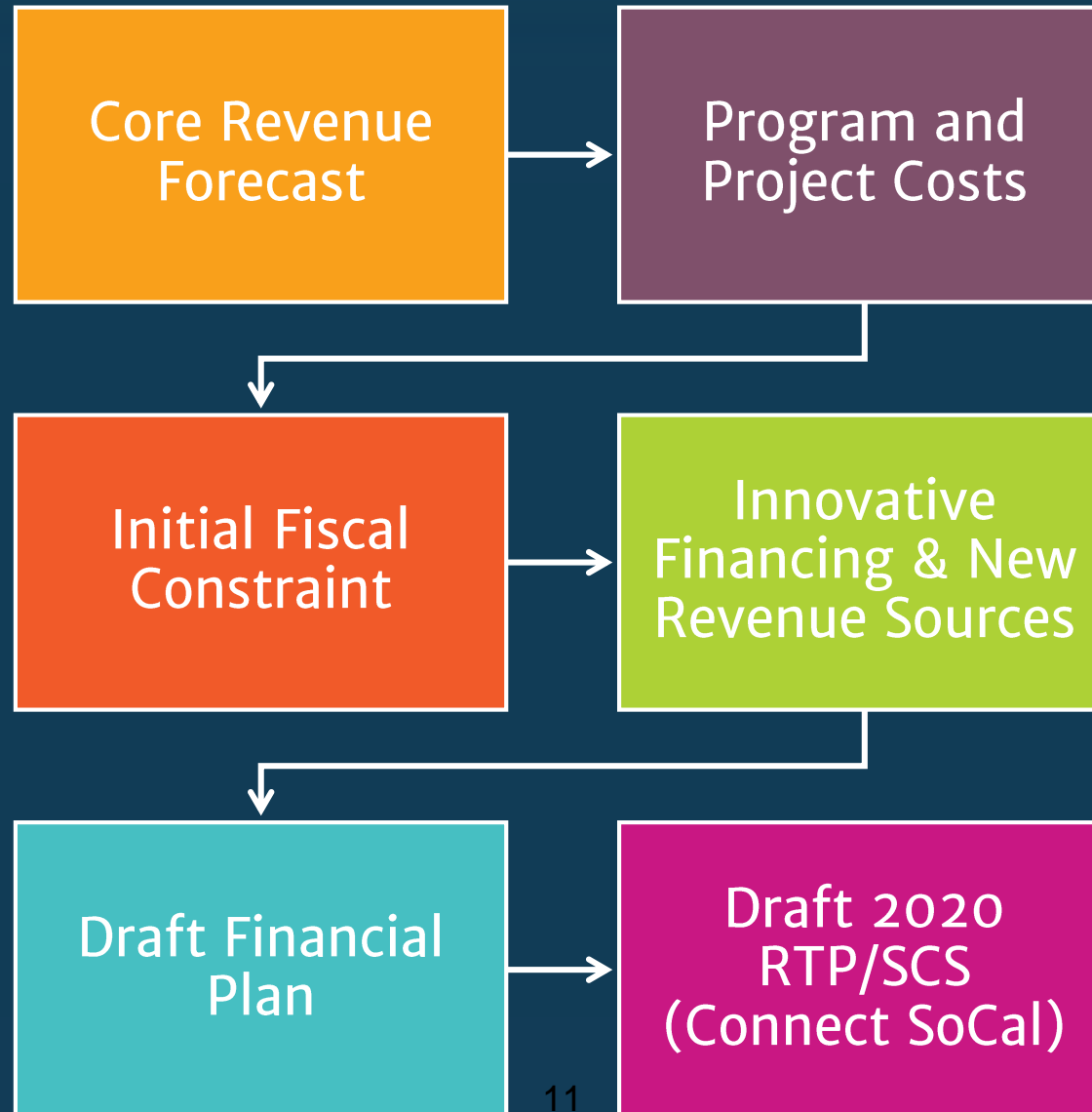


Changing Nature of U.S. Vehicle Fleet—New and Total Fleet Stock



Source: IDDRI, Pathways to deep de-carbonation in the USA, USA 2050 REPORT, California ARB Presentation, May 2015

Financial plan development process overview

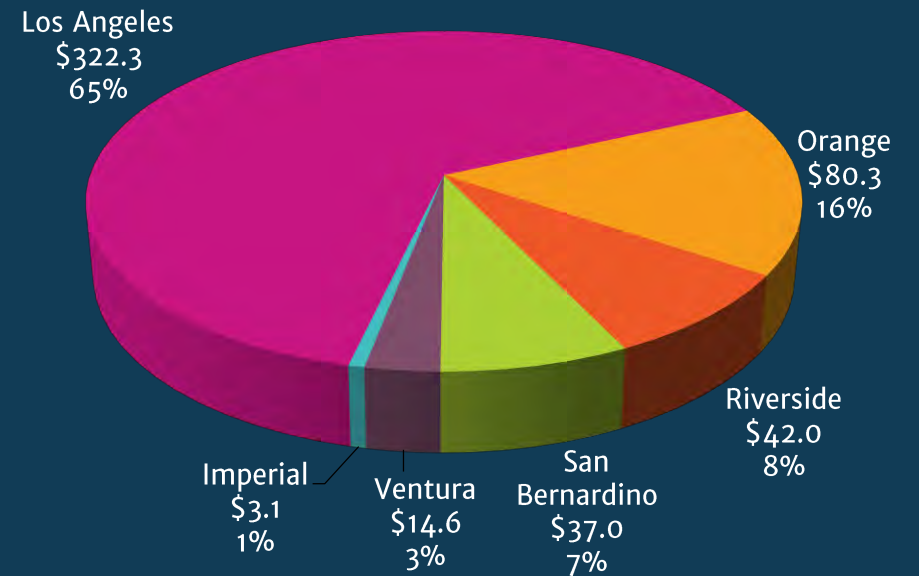
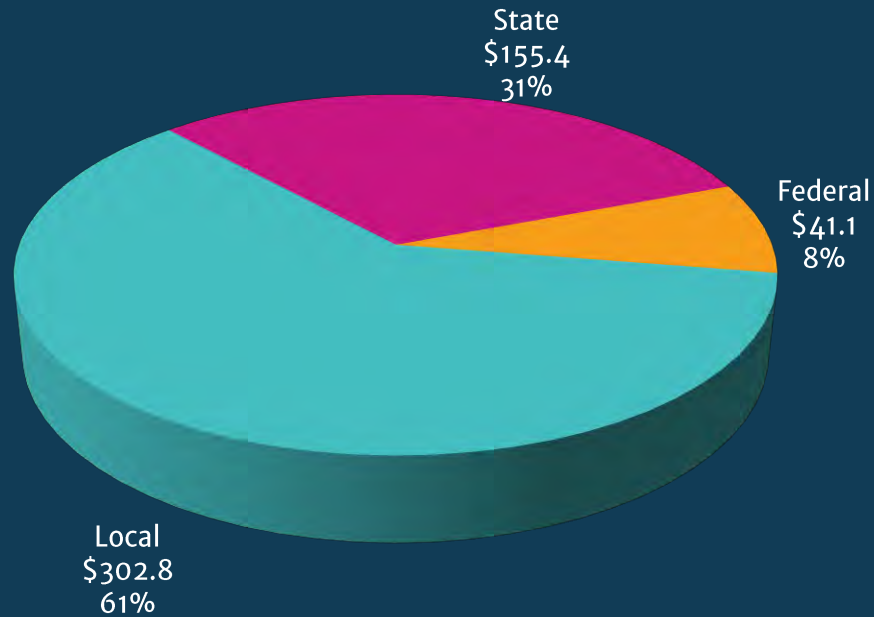


Core revenue forecast



Core revenues (in nominal dollars):
\$499.3 billion

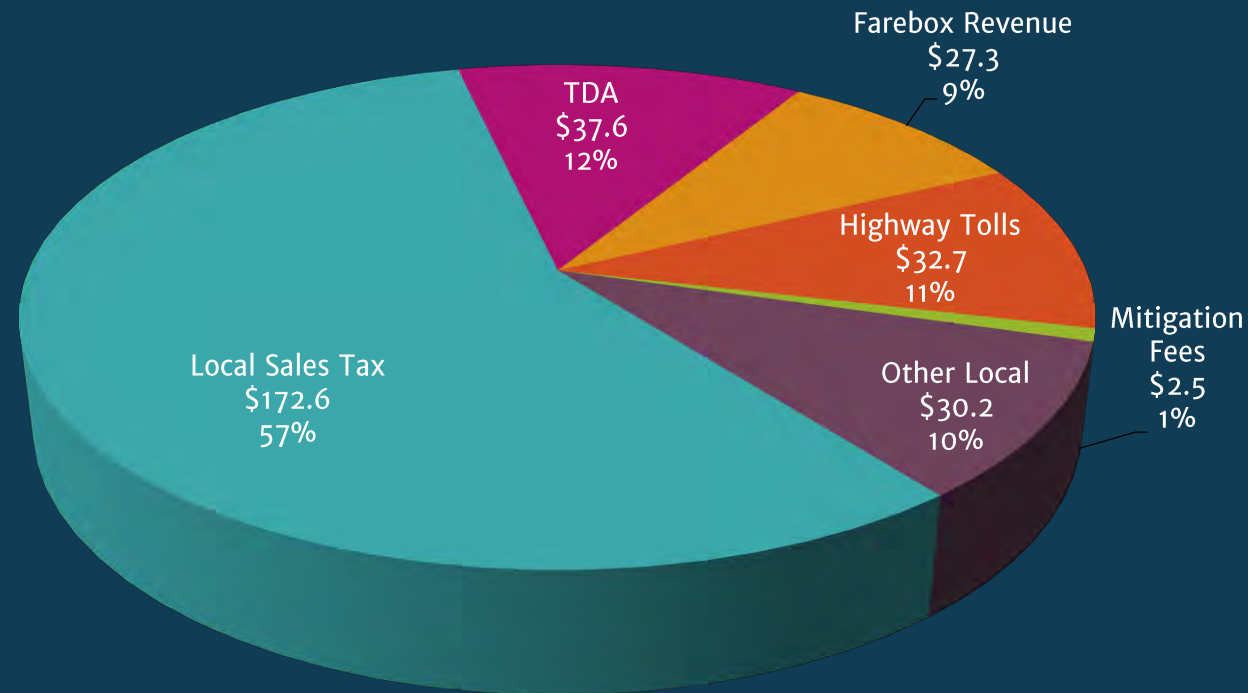
Core revenues by county (in nominal dollars): \$499.3 billion



Numbers may not sum to total due to rounding

Core revenue forecast: local sources

Core revenues, local sources (in nominal dollars): \$302.8 billion

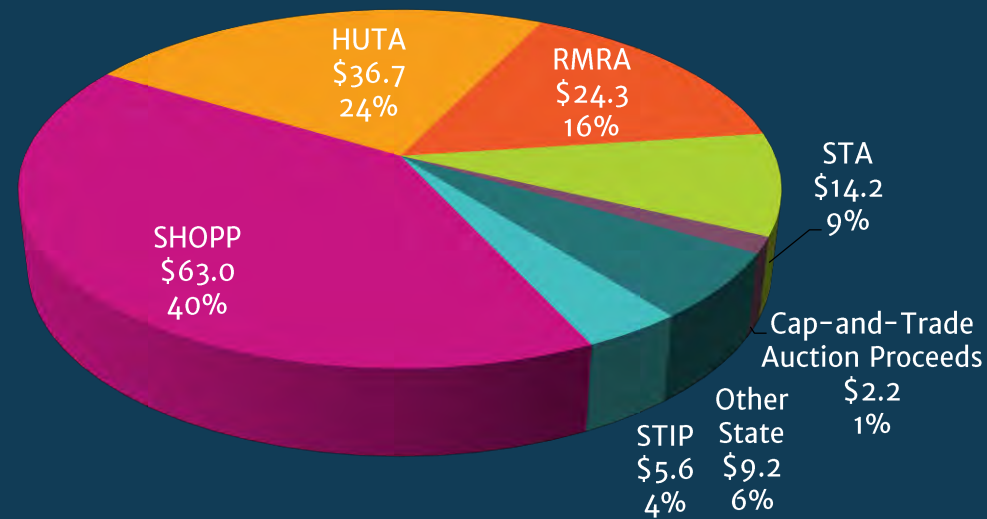


Note: Numbers may not sum to total due to rounding

Core revenue forecast: state sources



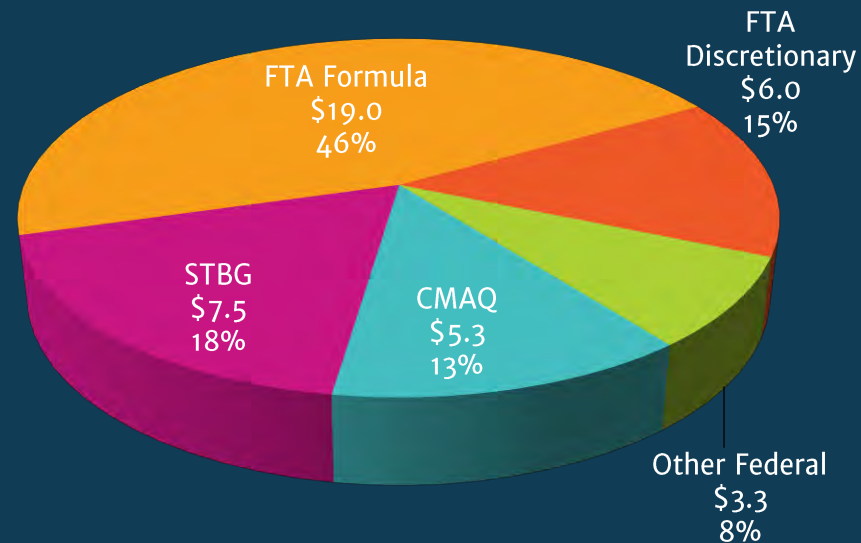
Core revenues, state sources (in nominal dollars): \$155.4 billion



Numbers may not sum to total due to rounding

Core revenue forecast: federal sources

Core revenues, federal sources (in nominal dollars): \$41.1 billion

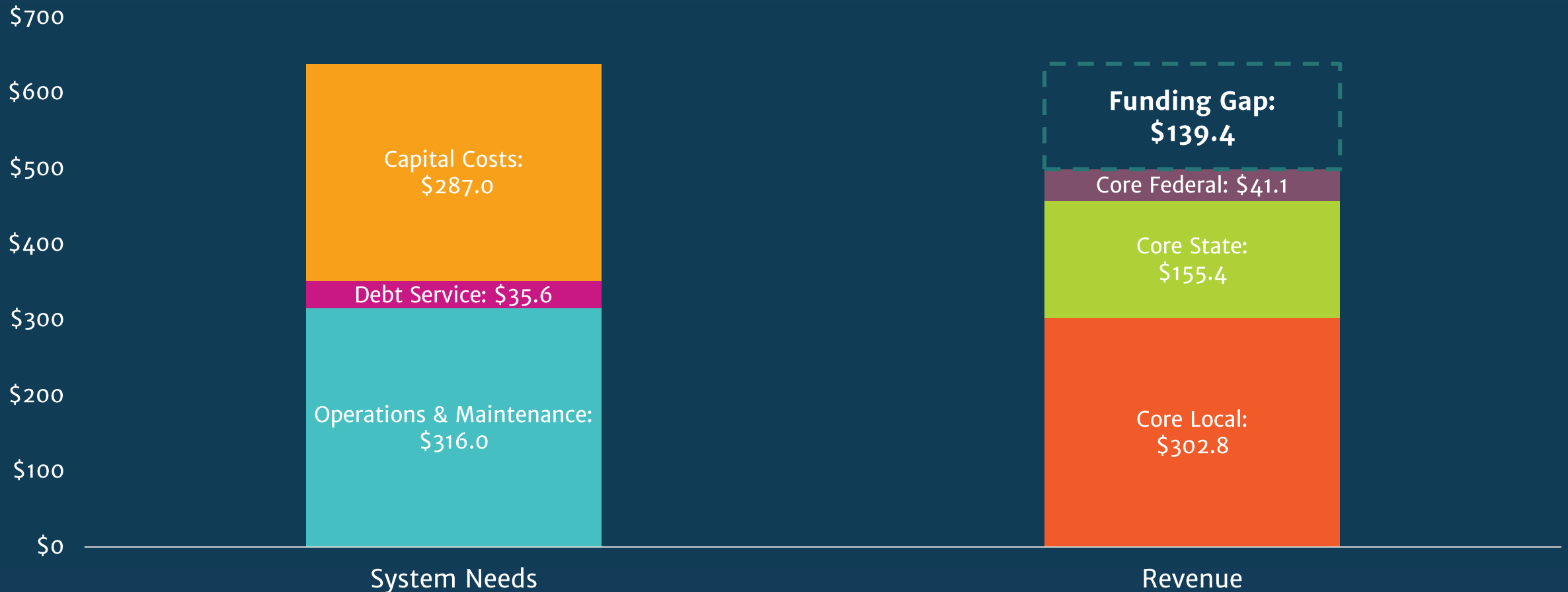


Numbers may not sum to total due to rounding

Insufficient core revenues to meet system needs



Draft total SCAG region system needs: \$638.6 billion
(in nominal dollars)



Note: Numbers may not sum to total due to rounding

Reasonably available revenue: \$139.4 billion

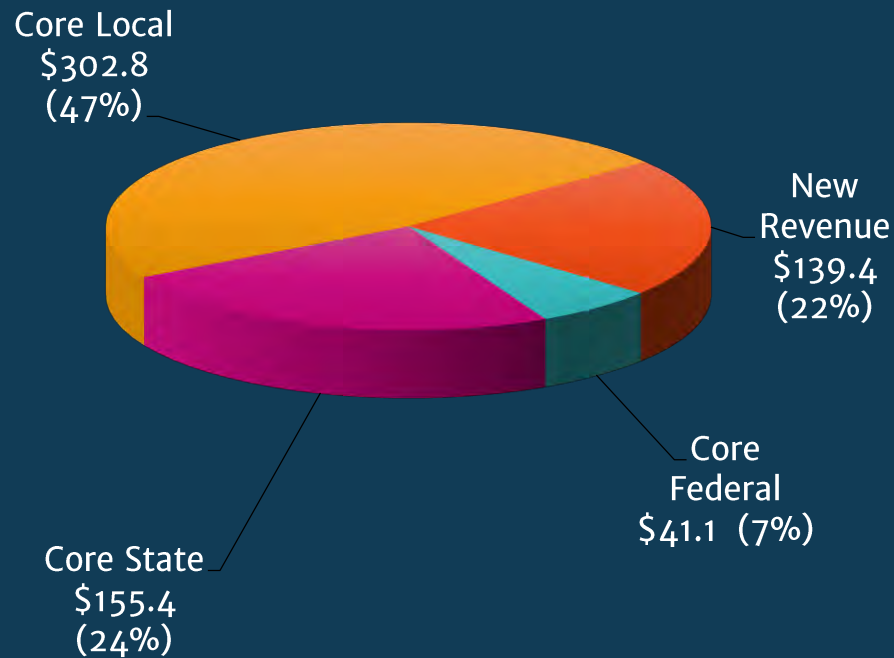


Revenue Source	Description	Amount (In billions \$, nominal)
Federal Gas Excise Tax Adjustment to Maintain Historical Purchasing Power	Additional \$0.10 per gallon gasoline tax imposed at the federal level starting in 2025 to 2029—to maintain purchasing power.	\$2.7
Mileage-Based User Fee (Replacement)	Mileage-based user fees would be implemented to replace gas taxes (both state and federal)—estimated at about \$0.025 (in 2019 dollars) per mile starting in 2030 and indexed to maintain purchasing power.	\$42.7 (est. increment only)
Federal Credit Assistance; Bond Proceeds	TIFIA/RRIF credit assistance and other bond financing assumed for regional initiatives, pledging new local mileage based road charge program funding.	\$2.2
Private Equity Participation	Virgin Trains USA, formerly XpressWest, to construct and operate high speed rail service from Victorville to Las Vegas along the I-15 corridor; also, private sources assumed for some key freight investments.	\$6.3
Local Road Charge Program	Local road charge program assumes a \$0.015 (in 2019 dollars) per mile charge regionally (can be implemented on a county basis). This can be adjusted by time-of-day and location with congestion pricing and/or parking pricing at major activity centers. For analysis, assumed congestion pricing (peak period charges) in parts of Los Angeles, along with increases in parking pricing at major job centers as a part of the regional job centers strategy.	\$77.8
Value Capture Strategies	Assumed the use of Enhanced Infrastructure Financing Districts and tax increment financing to support investment in transit supportive housing infrastructure needs.	\$3.0
Transportation Network Company (TNC) Mileage Based Fee	User fees on TNC mileage — estimated at about \$0.05 (in 2019 dollars) per mile starting in 2030	\$4.7

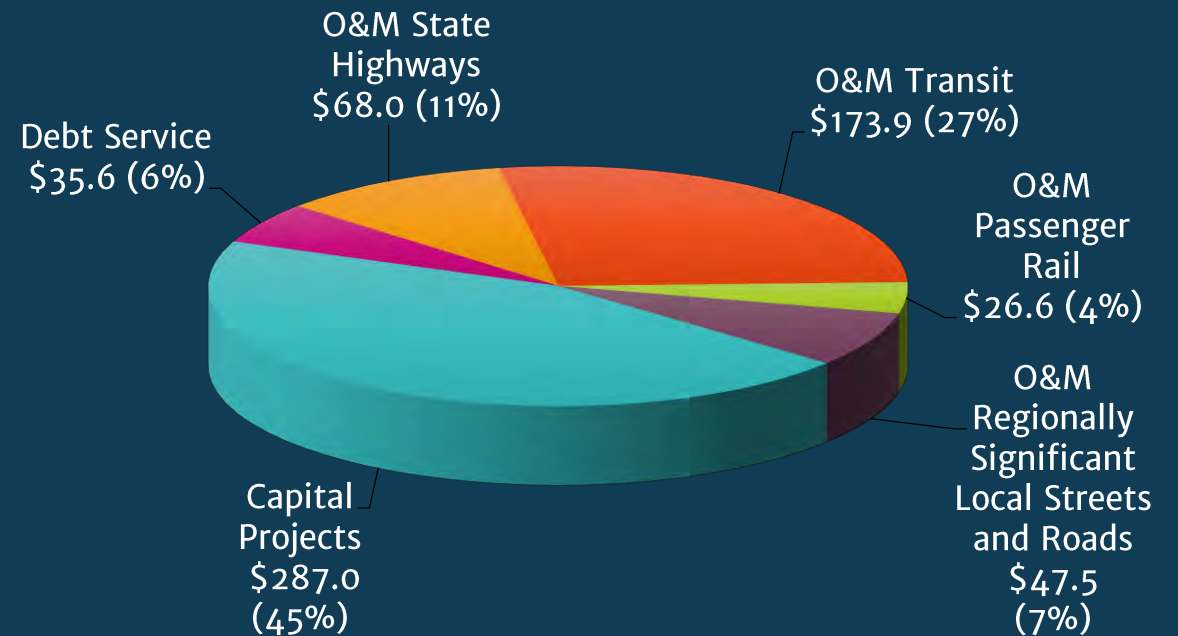
FY2021-FY2045 RTP/SCS Revenues and Expenditures



RTP/SCS Revenues: \$638.6 Billion



RTP/SCS Expenditures: \$638.6 Billion





Thank you

Annie Nam

nam@scag.ca.gov

213-236-1827

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Technical Working Group

Agenda Item 2

**DRAFT Summary of Transportation Analysis Zones (TAZs) with Entitlements Showing Housing Unit Growth
in Excess of SCAG's Locally Informed Household Growth Forecast with SCS Strategies ("Draft Connect SoCal Scenario")**
September 18, 2019

County	Jurisdiction	TAZ	Dwelling Unit Growth Identified in Entitlement (A)	Household Growth in Draft Connect SoCal Scenario (2016 to 2045) (B)	Difference (B - A)
Imperial	Unincorporated	14049100	991	916	-75
Imperial	Unincorporated	14085100	43	42	-1
Imperial	Unincorporated	14049100	25	23	-2
Imperial	Unincorporated	14085100	1,223	1,184	-39
Orange	Anaheim	32626600	1,302	1,299	-3
Orange	Anaheim	32630200	1,315	1,311	-4
Orange	Anaheim	32630400	1,006	1,003	-3
Orange	Anaheim	32876400	178	177	-1
Orange	Irvine	32753300	512	504	-8
Orange	Irvine	32773100	1,442	1,400	-42
Orange	Irvine	33111300	394	381	-13
Orange	Irvine	33112200	1,855	1,810	-45
Orange	Irvine	33112400	2,539	2,455	-84
Orange	Laguna Niguel	32838100	835	807	-28
Orange	Laguna Niguel	32838100	94	90	-4
Orange	Lake Forest	33024400	409	47	-362
Orange	Lake Forest	33041100	4	2	-2
Orange	Lake Forest	33050500	214	112	-102
Orange	Lake Forest	33050500	45	24	-21
Orange	Newport Beach	32770100	276	272	-4
Orange	Tustin	33095300	238	236	-2
Orange	Unincorporated	33025100	82	32	-50
Orange	Unincorporated	33036100	117	113	-4
Orange	Unincorporated	33109400	757	732	-25
Orange	Unincorporated	33109600	477	461	-16
Orange	Unincorporated	33118100	3	2	-1
Orange	Unincorporated	33025100	674	266	-408
Orange	Unincorporated	33118100	914	616	-298
Orange	Unincorporated	33072200	2	0	-2
Orange	Unincorporated	33065500	10	0	-10
Orange	Unincorporated	33065700	4	2	-2
Orange	Unincorporated	32903400	363	0	-363
Orange	Unincorporated	32903600	549	40	-509
Orange	Unincorporated	33036100	623	602	-21
Orange	Unincorporated	33065100	452	0	-452
Orange	Unincorporated	33065500	338	0	-338
Orange	Unincorporated	33065700	36	20	-16
Orange	Unincorporated	33070100	1,014	147	-867
Orange	Unincorporated	33070200	972	0	-972
Orange	Unincorporated	33072200	191	0	-191
Orange	Unincorporated	33073600	1,795	1,780	-15
Orange	Unincorporated	33109600	438	424	-14
Orange	Unincorporated	33115100	96	93	-3
Orange	Unincorporated	33118100	4,170	2,810	-1,360
San Bernardino	Highland	53831400	510	487	-23
San Bernardino	Highland	53831400	290	277	-13
San Bernardino	Upland	53622300	849	847	-2
Ventura	Santa Paula	60052200	227	152	-75
Ventura	Santa Paula	60052200	1,273	855	-418
Total			32,167	24,853	-7,314

Note: Entitlements were factored into Tier 2 TAZ level growth to the extent possible given the constraints of local jurisdictions' general plan capacity and locally identified jurisdictional growth totals. SCAG is seeking feedback on the best approach for including these entitlements in the final Connect SoCal Scenario

DRAFT Projected Growth in Priority and Constraint Areas - Connect SoCal
September 18, 2019

	Growth 2008 to 2016					A - Local Input Growth Forecast (Delta 2016 to 2045)					B - Local Input w/SCS Strategies ("Draft Connect SoCal Scenario") (Delta 2016 - 2045)					Difference Between A and B (B-A)				
	Households	Employment	Population	Single Family Dwelling Units	Multifamily Dwelling Units	Households	Employment	Population	Single Family Dwelling Units	Multifamily Dwelling Units	Households	Employment	Population	Single Family Dwelling Units	Multifamily Dwelling Units	Households	Employment	Population	Single Family Dwelling Units	Multifamily Dwelling Units
Growth Priority Areas	134,575	502,918	605,920	50,139	84,436	1,022,287	1,124,072	2,262,918	376,433	647,268	1,240,733	1,382,240	2,781,356	283,741	956,992	218,446	258,168	518,438	(92,692)	309,724
High Quality Transit Areas ¹	98,847	287,436	416,645	34,982	63,865	724,887	767,929	1,558,174	231,795	494,786	881,518	1,102,905	1,914,754	136,192	745,326	156,631	334,976	356,580	(95,603)	250,539
Transit Priority Areas (TPA) ¹	55,476	124,608	185,958	16,255	39,221	418,474	403,906	863,726	138,898	281,358	562,065	766,010	1,140,255	52,349	509,716	143,591	362,104	276,530	(86,549)	228,357
Specific Plans	43,114	173,261	196,913	16,441	26,673	369,535	396,886	879,664	165,386	207,892	453,813	459,240	1,041,317	137,914	315,900	84,278	62,355	161,652	(27,473)	108,008
Specific Plan / TPA ²	15,220	58,204	66,810	2,313	12,907	127,657	122,486	277,903	42,276	87,752	199,847	270,287	409,179	33,264	166,583	72,189	147,801	131,276	(9,012)	78,831
Job Centers	41,183	182,913	129,444	(277)	41,461	261,592	362,225	546,913	110,561	154,214	387,621	486,112	866,454	91,395	296,227	126,029	123,887	319,541	(19,166)	142,013
Neighborhood Mobility Areas	62,482	155,888	221,919	17,960	44,522	407,427	333,588	809,882	136,249	271,100	532,935	586,187	1,087,221	44,176	488,759	125,508	252,600	277,339	(92,073)	217,659
Livable Corridors ³	86,854	325,033	357,934	26,852	60,003	664,492	667,490	1,421,355	223,997	443,543	806,139	879,572	1,740,800	126,624	679,515	141,647	212,082	319,445	(97,373)	235,973
Constraint Areas⁴	11,652	30,983	43,388	9,524	2,129	167,964	140,577	399,966	92,247	75,506	151,185	108,126	348,841	69,410	81,775	(16,779)	(32,451)	(51,126)	(22,837)	6,269
Open Space ⁵	7,412	7,480	25,567	4,611	2,801	104,601	87,693	250,221	58,913	45,553	99,274	73,579	236,465	46,121	53,154	(5,326)	(14,114)	(13,756)	(12,792)	7,601
Farmland ⁶	11,047	12,524	46,440	10,177	870	260,403	228,009	666,241	162,989	97,376	182,488	135,475	443,959	116,424	66,064	(77,915)	(92,534)	(222,282)	(46,565)	(31,312)
Flood Hazard Areas ⁷	26,666	111,760	169,597	17,290	9,376	291,142	346,645	689,688	113,791	177,333	295,886	398,779	706,883	104,855	191,031	4,743	52,134	17,195	(8,936)	13,697
High Risk of Wildfire ⁸	22,088	96,331	103,351	14,542	7,546	307,115	227,193	725,238	189,606	117,241	265,514	200,555	623,791	139,079	126,435	(41,601)	(26,639)	(101,447)	(50,528)	9,194
Sphere of Influence ⁹	14,979	42,720	84,390	15,205	(226)	137,262	80,449	287,618	70,106	67,133	150,337	58,610	301,601	52,604	97,734	13,075	(21,839)	13,983	(17,503)	30,600
SCAG Total	197,922	650,783	940,909	93,504	104,418	1,626,961	1,659,857	3,674,770	732,386	894,575	1,626,961	1,659,857	3,674,727	509,481	1,117,480	0	0	-43	-222,905	222,905

1. Extracted from draft 2045 plan year data of the Connect SoCal, 2020-2045 RTP/SCS
2. Overlaps between specific plan boundaries and the 2045 Transit Priority Areas (TPA)
3. Using 0.5 mile buffers from the Livable Corridors
4. Including open space, military installations, and tribal lands
5. Including the California Protected Areas Database (CPAD) and the California Conservation Easement Database (CCED). Please note CPAD does not include: military lands used primarily for military purposes, tribal lands, private golf courses, and public lands not intended for open space.
6. Including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance and Grazing lands
7. Including the 100-year (1% annual chance of occurring) and 500-year (0.2% annual chance of occurring) flood zones
8. Including 'High' and 'Very High' wildfire hazard classifications
9. Based on SCAG's 2016 sphere of influence boundaries

DRAFT Comparison of SCAG's Entitlements Database to SCAG's Locally Informed Jurisdictional Growth Projections
September 18, 2019

Jurisdiction	SCAG's Entitlements Database (A)		SCAG's Locally Informed Jurisdictional Growth Projections (B)		Difference (B - A)*	
	Dwelling Units	Employment	Households	Employment	Households	Employment
Brawley	2,964	0	9,399	10,523	6,435	10,523
Calexico	0	0	21,366	20,773	21,366	20,773
Calipatria	0	0	1,031	840	1,031	840
El Centro	0	0	19,956	46,533	19,956	46,533
Holtville	0	0	901	1,618	901	1,618
Imperial	0	0	7,314	9,111	7,314	9,111
Unincorporated	3,581	0	32,166	40,588	28,585	40,588
Westmorland	0	0	350	173	350	173
Imperial County Total	6,545	0	92,483	130,159	85,938	130,159
Agoura Hills	0	0	7,040	14,735	7,040	14,735
Alhambra	0	0	32,029	40,700	32,029	40,700
Arcadia	3	0	23,072	34,744	23,069	34,744
Artesia	0	0	4,936	6,511	4,936	6,511
Azusa	0	0	15,090	18,721	15,090	18,721
Baldwin Park	0	0	19,150	24,915	19,150	24,915
Bell	0	0	9,447	12,719	9,447	12,719
Bell Gardens	0	0	10,104	10,127	10,104	10,127
Bellflower	0	0	23,372	18,279	23,372	18,279
Beverly Hills	273	0	15,810	81,308	15,537	81,308
Bradbury	0	0	583	370	583	370
Burbank	0	0	48,545	138,476	48,545	138,476
Calabasas	0	0	7,819	20,027	7,819	20,027
Carson	0	0	30,530	68,719	30,530	68,719
Cerritos	0	0	15,667	39,292	15,667	39,292
Claremont	2	0	13,885	20,702	13,883	20,702
Commerce	0	0	3,853	55,686	3,853	55,686
Compton	0	0	25,251	29,378	25,251	29,378
Covina	0	0	17,146	27,890	17,146	27,890
Cudahy	0	0	6,121	3,174	6,121	3,174
Culver City	0	0	18,034	63,604	18,034	63,604
Diamond Bar	0	0	18,042	15,015	18,042	15,015
Downey	0	0	34,221	45,973	34,221	45,973
Duarte	0	0	7,999	15,418	7,999	15,418
El Monte	0	0	35,256	37,422	35,256	37,422
El Segundo	0	0	7,872	51,472	7,872	51,472
Gardena	0	0	23,567	31,917	23,567	31,917
Glendale	0	0	82,210	125,772	82,210	125,772
Glendora	0	0	20,173	23,460	20,173	23,460
Hawaiian Gardens	0	0	3,821	8,276	3,821	8,276
Hawthorne	0	0	31,879	31,236	31,879	31,236
Hermosa Beach	0	0	9,854	10,449	9,854	10,449
Hidden Hills	0	0	477	1,914	477	1,914
Huntington Park	0	0	16,937	17,450	16,937	17,450
Industry	0	0	4,946	69,889	4,946	69,889
Inglewood	0	0	48,563	45,804	48,563	45,804
Irwindale	0	0	872	20,812	872	20,812
La Canada Flintridge	0	0	7,537	8,581	7,537	8,581
La Habra Heights	1	0	2,430	1,225	2,429	1,225
La Mirada	1	0	16,153	19,846	16,152	19,846
La Puente	0	0	9,849	7,125	9,849	7,125
La Verne	0	0	11,945	17,710	11,945	17,710
Lakewood	0	0	28,721	22,537	28,721	22,537
Lancaster	0	0	74,873	65,394	74,873	65,394
Lawndale	0	0	10,109	8,331	10,109	8,331
Lomita	1	0	8,262	6,060	8,261	6,060
Long Beach	0	0	199,009	188,635	199,009	188,635

Jurisdiction	SCAG's Entitlements Database (A)		SCAG's Locally Informed Jurisdictional Growth Projections (B)		Difference (B - A)*	
	Dwelling Units	Employment	Households	Employment	Households	Employment
Los Angeles	2	0	1,791,069	2,137,192	1,791,067	2,137,192
Lynwood	0	0	16,435	12,896	16,435	12,896
Malibu	0	0	4,085	9,899	4,085	9,899
Manhattan Beach	0	0	14,006	23,580	14,006	23,580
Maywood	0	0	6,732	4,102	6,732	4,102
Monrovia	0	0	16,907	23,346	16,907	23,346
Montebello	0	0	21,047	31,340	21,047	31,340
Monterey Park	0	0	22,589	48,180	22,589	48,180
Norwalk	0	0	27,260	28,407	27,260	28,407
Palmdale	0	0	60,728	45,267	60,728	45,267
Palos Verdes Estates	4	0	5,385	3,311	5,381	3,311
Paramount	31	0	14,519	22,925	14,488	22,925
Pasadena	0	0	65,924	139,998	65,924	139,998
Pico Rivera	0	0	18,888	28,394	18,888	28,394
Pomona	0	0	52,555	63,215	52,555	63,215
Rancho Palos Verdes	0	0	15,754	12,131	15,754	12,131
Redondo Beach	0	0	31,041	28,340	31,041	28,340
Rolling Hills	0	0	744	115	744	115
Rolling Hills Estates	0	0	3,768	3,563	3,768	3,563
Rosemead	0	0	16,321	16,212	16,321	16,212
San Dimas	0	0	11,958	13,967	11,958	13,967
San Fernando	0	0	7,118	12,379	7,118	12,379
San Gabriel	0	0	15,467	15,827	15,467	15,827
San Marino	0	0	4,438	4,841	4,438	4,841
Santa Clarita	77	0	92,109	100,200	92,032	100,200
Santa Fe Springs	0	0	7,321	58,480	7,321	58,480
Santa Monica	0	0	51,334	105,680	51,334	105,680
Sierra Madre	0	0	5,014	2,405	5,014	2,405
Signal Hill	0	0	4,785	17,907	4,785	17,907
South El Monte	0	0	4,958	13,489	4,958	13,489
South Gate	0	0	30,606	24,336	30,606	24,336
South Pasadena	0	0	11,183	12,053	11,183	12,053
Temple City	99	0	15,040	9,963	14,941	9,963
Torrance	622	0	57,229	133,746	56,607	133,746
Unincorporated	49,884	23,675	425,752	363,430	375,868	339,755
Vernon	0	0	192	44,757	192	44,757
Walnut	0	0	9,262	9,816	9,262	9,816
West Covina	0	0	34,314	32,531	34,314	32,531
West Hollywood	86	0	30,183	38,349	30,097	38,349
Westlake Village	0	0	3,251	16,461	3,251	16,461
Whittier	0	0	32,149	38,375	32,149	38,375
Los Angeles County Total	51,085	23,675	4,122,481	5,379,205	4,071,396	5,355,530
Aliso Viejo	357	0	18,953	24,488	18,596	24,488
Anaheim	8,163	47,821	122,057	245,461	113,894	197,640
Brea	2,501	0	15,424	49,303	12,923	49,303
Buena Park	3	0	28,799	39,092	28,796	39,092
Costa Mesa	1,632	6,199	44,105	103,627	42,473	97,428
Cypress	0	0	16,574	29,777	16,574	29,777
Dana Point	1	0	14,954	13,463	14,953	13,463
Fountain Valley	165	0	18,885	32,289	18,720	32,289
Fullerton	1,283	0	53,015	87,320	51,732	87,320
Garden Grove	192	0	49,896	66,912	49,704	66,912
Huntington Beach	0	0	78,319	88,572	78,319	88,572
Irvine	29,632	13,556	120,151	324,141	90,519	310,585
La Habra	625	0	20,148	21,322	19,523	21,322
La Palma	0	0	4,777	15,264	4,777	15,264
Laguna Beach	1	0	9,965	5,539	9,964	5,539
Laguna Hills	2,649	0	12,609	20,508	9,960	20,508
Laguna Niguel	1,536	0	25,100	19,696	23,564	19,696

Jurisdiction	SCAG's Entitlements Database (A)		SCAG's Locally Informed Jurisdictional Growth Projections (B)		Difference (B - A)*	
	Dwelling Units	Employment	Households	Employment	Households	Employment
Laguna Woods	0	0	10,947	6,640	10,947	6,640
Lake Forest	4,578	1,076	27,920	48,864	23,342	47,788
Los Alamitos	1	0	4,798	16,159	4,797	16,159
Mission Viejo	956	171	32,994	38,568	32,038	38,397
Newport Beach	1,252	0	41,147	85,231	39,895	85,231
Orange	674	246	48,681	129,308	48,007	129,062
Placentia	655	2,145	19,044	24,919	18,389	22,774
Rancho Santa Margarita	384	1	17,047	18,717	16,663	18,716
San Clemente	339	94	24,344	30,673	24,005	30,579
San Juan Capistrano	1,228	12	13,896	19,610	12,668	19,598
Santa Ana	3,281	23	80,445	168,971	77,164	168,948
Seal Beach	1	0	12,796	11,444	12,795	11,444
Stanton	226	0	11,115	11,425	10,889	11,425
Tustin	364	150	31,175	75,539	30,811	75,389
Unincorporated	32,447	23,746	70,364	57,018	37,917	33,272
Villa Park	0	0	2,034	2,245	2,034	2,245
Westminster	265	0	29,521	29,188	29,256	29,188
Yorba Linda	360	26	22,038	18,813	21,678	18,787
Orange County Total	95,751	95,266	1,154,037	1,980,106	1,058,286	1,884,840
Banning	0	0	15,707	11,279	15,707	11,279
Beaumont	0	0	24,233	15,499	24,233	15,499
Blythe	0	0	4,308	3,828	4,308	3,828
Calimesa	0	0	10,339	4,057	10,339	4,057
Canyon Lake	0	0	4,034	1,252	4,034	1,252
Cathedral City	0	0	28,189	17,850	28,189	17,850
Coachella	0	0	36,097	22,959	36,097	22,959
Corona	0	0	52,062	93,043	52,062	93,043
Desert Hot Springs	0	0	24,082	8,763	24,082	8,763
Eastvale	256	0	18,936	21,650	18,680	21,650
Hemet	7,411	0	49,713	40,148	42,302	40,148
Indian Wells	0	0	3,776	10,136	3,776	10,136
Indio	0	0	36,659	38,889	36,659	38,889
Jurupa Valley	0	0	31,931	31,218	31,931	31,218
La Quinta	0	0	18,538	17,511	18,538	17,511
Lake Elsinore	14	0	38,055	25,450	38,041	25,450
Menifee	0	0	49,952	29,200	49,952	29,200
Moreno Valley	0	0	75,282	63,516	75,282	63,516
Murrieta	102	0	42,295	51,972	42,193	51,972
Norco	0	0	7,347	21,276	7,347	21,276
Palm Desert	1,091	0	31,635	51,130	30,544	51,130
Palm Springs	0	0	31,047	43,061	31,047	43,061
Perris	256	0	34,713	26,200	34,457	26,200
Rancho Mirage	0	0	13,362	21,293	13,362	21,293
Riverside	0	0	114,249	190,980	114,249	190,980
San Jacinto	105	0	23,912	12,893	23,807	12,893
Temecula	0	0	44,295	69,496	44,295	69,496
Unincorporated	11,477	11	202,491	146,705	191,014	146,694
Wildomar	2,438	0	18,926	11,085	16,488	11,085
Riverside County Total	23,150	11	1,086,165	1,102,339	1,063,015	1,102,328
Adelanto	0	0	18,697	9,894	18,697	9,894
Apple Valley	19	0	35,986	29,199	35,967	29,199
Barstow	0	0	12,782	19,967	12,782	19,967
Big Bear Lake	0	0	2,734	5,562	2,734	5,562
Chino	0	0	32,216	56,495	32,216	56,495
Chino Hills	2	0	27,780	18,805	27,778	18,805
Colton	0	0	21,676	29,728	21,676	29,728
Fontana	4,680	0	76,004	74,301	71,324	74,301
Grand Terrace	0	0	5,401	5,547	5,401	5,547

Jurisdiction	SCAG's Entitlements Database (A)		SCAG's Locally Informed Jurisdictional Growth Projections (B)		Difference (B - A)*	
	Dwelling Units	Employment	Households	Employment	Households	Employment
Hesperia	2	0	45,761	39,680	45,759	39,680
Highland	510	0	19,117	8,848	18,607	8,848
Loma Linda	0	0	11,090	28,822	11,090	28,822
Montclair	4	0	11,365	21,277	11,361	21,277
Needles	0	0	1,379	1,717	1,379	1,717
Ontario	6,891	0	74,215	168,738	67,324	168,738
Rancho Cucamonga	2,650	0	65,670	104,900	63,020	104,900
Redlands	290	0	31,493	57,265	31,203	57,265
Rialto	1,242	13,714	39,874	33,741	38,632	20,027
San Bernardino	0	0	75,395	125,287	75,395	125,287
Twentynine Palms	0	0	8,979	6,597	8,979	6,597
Unincorporated	200	217	126,530	86,790	126,330	86,573
Upland	849	0	32,871	42,076	32,022	42,076
Victorville	0	0	62,366	60,779	62,366	60,779
Yucaipa	0	0	25,265	17,318	25,265	17,318
Yucca Valley	0	0	9,988	10,892	9,988	10,892
San Bernardino County Total	17,340	13,932	874,634	1,064,225	857,294	1,050,293
Camarillo	0	0	27,489	36,152	27,489	36,152
Fillmore	0	0	4,821	4,364	4,821	4,364
Moorpark	0	0	11,474	14,292	11,474	14,292
Ojai	0	0	2,833	4,889	2,833	4,889
Oxnard	0	0	59,764	75,065	59,764	75,065
Port Hueneme	0	0	7,261	4,114	7,261	4,114
San Buenaventura	0	0	42,723	61,992	42,723	61,992
Santa Paula	227	0	8,844	9,631	8,617	9,631
Simi Valley	0	0	44,315	47,261	44,315	47,261
Thousand Oaks	0	0	51,309	80,133	51,309	80,133
Unincorporated	1,395	0	45,714	51,811	44,319	51,811
Ventura County Total	1,622	0	306,547	389,704	304,925	389,704
SCAG Regional Total	195,493	132,884	7,636,347	10,045,738	7,440,854	9,912,854

* Note for this calculation, dwelling units are subtracted from households. Also, positive numbers indicate that entitlements are encompassed in jurisdictional growth projections. There are no negative numbers in this data - meaning that all entitlements are included.

**DRAFT Summary of Transportation Analysis Zones (TAZs) with Entitlements Showing Housing Unit Growth
in Excess of SCAG's Locally Informed Household Growth Forecast with SCS Strategies ("Draft Connect SoCal Scenario")**

September 18, 2019

County	Jurisdiction	TAZ	Employment Growth Identified in Entitlement (A)	Employment Growth in Draft Connect SoCal Scenario (B)	Difference (B - A)
Imperial	Unincorporated	14049100	991	916	-75
Imperial	Unincorporated	14085100	43	42	-1
Imperial	Unincorporated	14049100	25	23	-2
Imperial	Unincorporated	14085100	1,223	1,184	-39
Orange	Anaheim	32626600	1,302	1,299	-3
Orange	Anaheim	32630200	1,315	1,311	-4
Orange	Anaheim	32630400	1,006	1,003	-3
Orange	Anaheim	32876400	178	177	-1
Orange	Irvine	32753300	512	504	-8
Orange	Irvine	32773100	1,442	1,400	-42
Orange	Irvine	33111300	394	381	-13
Orange	Irvine	33112200	1,855	1,810	-45
Orange	Irvine	33112400	2,539	2,455	-84
Orange	Laguna Niguel	32838100	835	807	-28
Orange	Laguna Niguel	32838100	94	90	-4
Orange	Lake Forest	33024400	409	47	-362
Orange	Lake Forest	33041100	4	2	-2
Orange	Lake Forest	33050500	214	112	-102
Orange	Lake Forest	33050500	45	24	-21
Orange	Newport Beach	32770100	276	272	-4
Orange	Tustin	33095300	238	236	-2
Orange	Unincorporated	33025100	82	32	-50
Orange	Unincorporated	33036100	117	113	-4
Orange	Unincorporated	33109400	757	732	-25
Orange	Unincorporated	33109600	477	461	-16
Orange	Unincorporated	33118100	3	2	-1
Orange	Unincorporated	33025100	674	266	-408
Orange	Unincorporated	33118100	914	616	-298
Orange	Unincorporated	33072200	2	0	-2
Orange	Unincorporated	33065500	10	0	-10
Orange	Unincorporated	33065700	4	2	-2
Orange	Unincorporated	32903400	363	0	-363
Orange	Unincorporated	32903600	549	40	-509
Orange	Unincorporated	33036100	623	602	-21
Orange	Unincorporated	33065100	452	0	-452
Orange	Unincorporated	33065500	338	0	-338
Orange	Unincorporated	33065700	36	20	-16
Orange	Unincorporated	33070100	1,014	147	-867
Orange	Unincorporated	33070200	972	0	-972
Orange	Unincorporated	33072200	191	0	-191
Orange	Unincorporated	33073600	1,795	1,780	-15
Orange	Unincorporated	33109600	438	424	-14
Orange	Unincorporated	33115100	96	93	-3
Orange	Unincorporated	33118100	4,170	2,810	-1,360
San Bernardino	Highland	53831400	510	487	-23
San Bernardino	Highland	53831400	290	277	-13
San Bernardino	Upland	53622300	849	847	-2
Ventura	Santa Paula	60052200	227	152	-75
Ventura	Santa Paula	60052200	1,273	855	-418
Total			32,167	24,853	-7,314

Note: Entitlements were factored into Tier 2 TAZ level growth to the extent possible given the constraints of local jurisdictions' general plan capacity and locally identified jurisdictional growth totals. SCAG is seeking feedback on the best approach for including these entitlements in the final Connect SoCal Scenario

**DRAFT Summary of Transportation Analysis Zones (TAZs) with Entitlements Showing Employment Growth
in Excess of SCAG's Locally Informed Growth Forecast with SCS Strategies ("Draft Connect SoCal Scenario")**

September 18, 2019

County	Jurisdiction	TAZ	Employment Growth Identified in Entitlement (A)	Employment Growth in Draft Connect SoCal Scenario (B)	Difference (B - A)
Los Angeles	Unincorporated	20280100	19,919	12,782	-7,137
Los Angeles	Unincorporated	20281100	3,756	2,795	-961
Orange	Anaheim	32635100	2,590	2,271	-319
Orange	Anaheim	32876400	7,158	6,452	-706
Orange	Anaheim	32890200	642	640	-2
Orange	Anaheim	32635100	107	94	-13
Orange	Anaheim	32635100	251	220	-31
Orange	Unincorporated	33109400	891	880	-11
Orange	Unincorporated	33109600	561	340	-221
Orange	Unincorporated	33115100	27	5	-22
Orange	Unincorporated	33116100	776	658	-118
Orange	Unincorporated	33117100	829	806	-23
Orange	Unincorporated	33065500	12	0	-12
Orange	Unincorporated	33065600	6	0	-6
Orange	Unincorporated	33065700	5	1	-4
Orange	Unincorporated	33046800	1	0	-1
Orange	Unincorporated	32903100	282	0	-282
Orange	Unincorporated	32903300	67	0	-67
Orange	Unincorporated	32903400	441	0	-441
Orange	Unincorporated	32903500	312	0	-312
Orange	Unincorporated	32903600	667	9	-658
Orange	Unincorporated	32903700	160	1	-159
Orange	Unincorporated	33046800	361	53	-308
Orange	Unincorporated	33046900	28	0	-28
Orange	Unincorporated	33056200	399	0	-399
Orange	Unincorporated	33056300	21	7	-14
Orange	Unincorporated	33056400	57	0	-57
Orange	Unincorporated	33057600	181	0	-181
Orange	Unincorporated	33065100	550	18	-532
Orange	Unincorporated	33065200	460	252	-208
Orange	Unincorporated	33065300	693	382	-311
Orange	Unincorporated	33065400	288	0	-288
Orange	Unincorporated	33065500	411	12	-399
Orange	Unincorporated	33065600	281	6	-275
Orange	Unincorporated	33065700	44	4	-40
Orange	Unincorporated	33070300	94	1	-93
Orange	Unincorporated	33072200	113	0	-113
Orange	Unincorporated	33073100	608	0	-608
Orange	Unincorporated	33075100	37	0	-37
Orange	Unincorporated	33109600	516	312	-204
Orange	Unincorporated	33115100	113	22	-91
Orange	Unincorporated	33116100	213	181	-32
Orange	Unincorporated	33119200	23	1	-22
San Bernardino	Rialto	53735500	6,860	6,739	-121
San Bernardino	Rialto	53745300	6,600	4,013	-2,587
San Bernardino	Rialto	53745300	217	132	-85
Total			58,408	39,957	-18,451

Note: Entitlements were factored into Tier 2 TAZ level growth to the extent possible given the constraints of local jurisdictions' general plan capacity and locally identified jurisdictional growth totals. SCAG is seeking feedback on the best approach for including these entitlements in the final Connect SoCal Scenario



Technical Working Group

Agenda Item 3



Connect SoCal – Transit and Rail

Philip Law

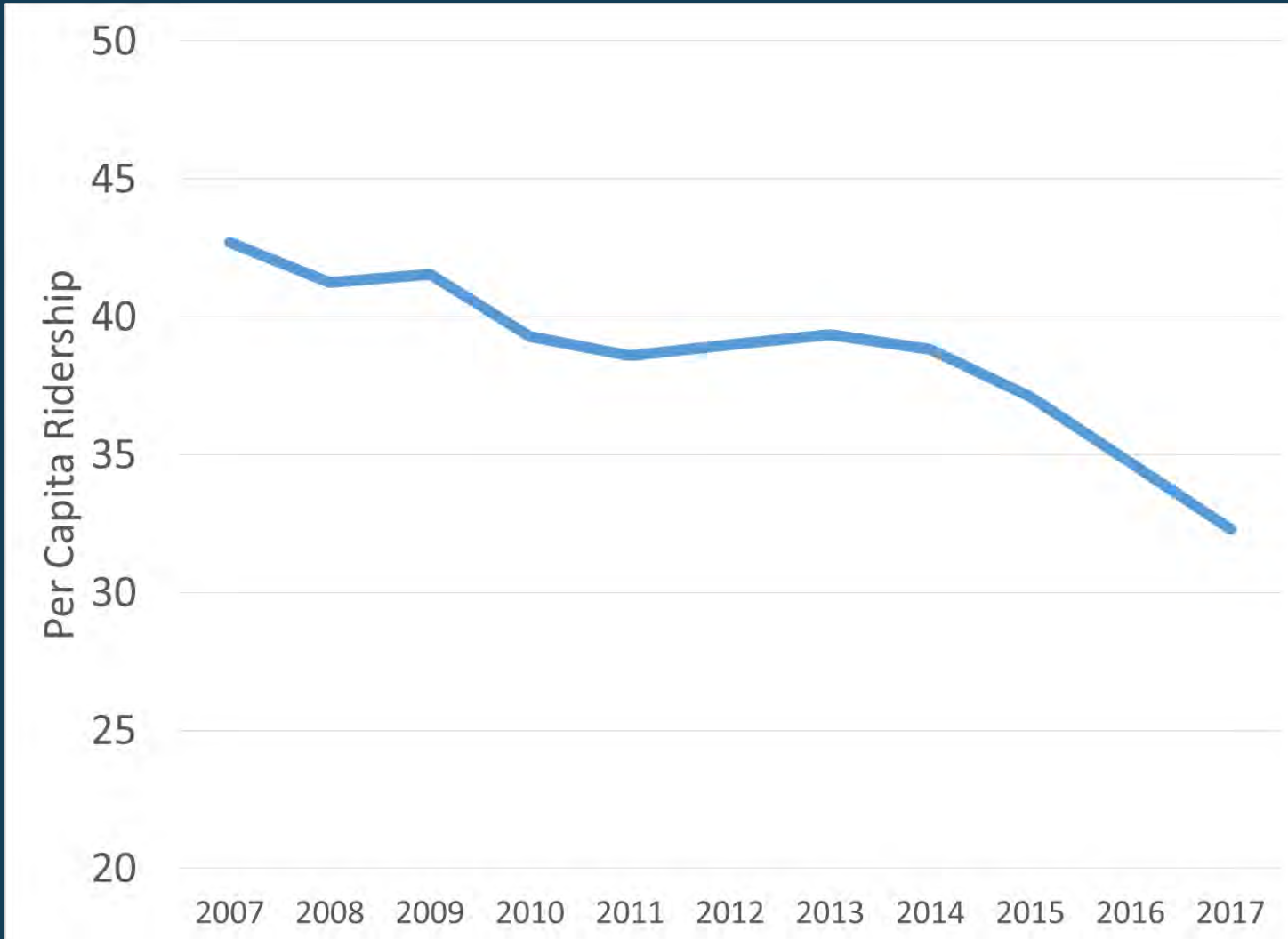
Transit/Rail Manager

September 19, 2019

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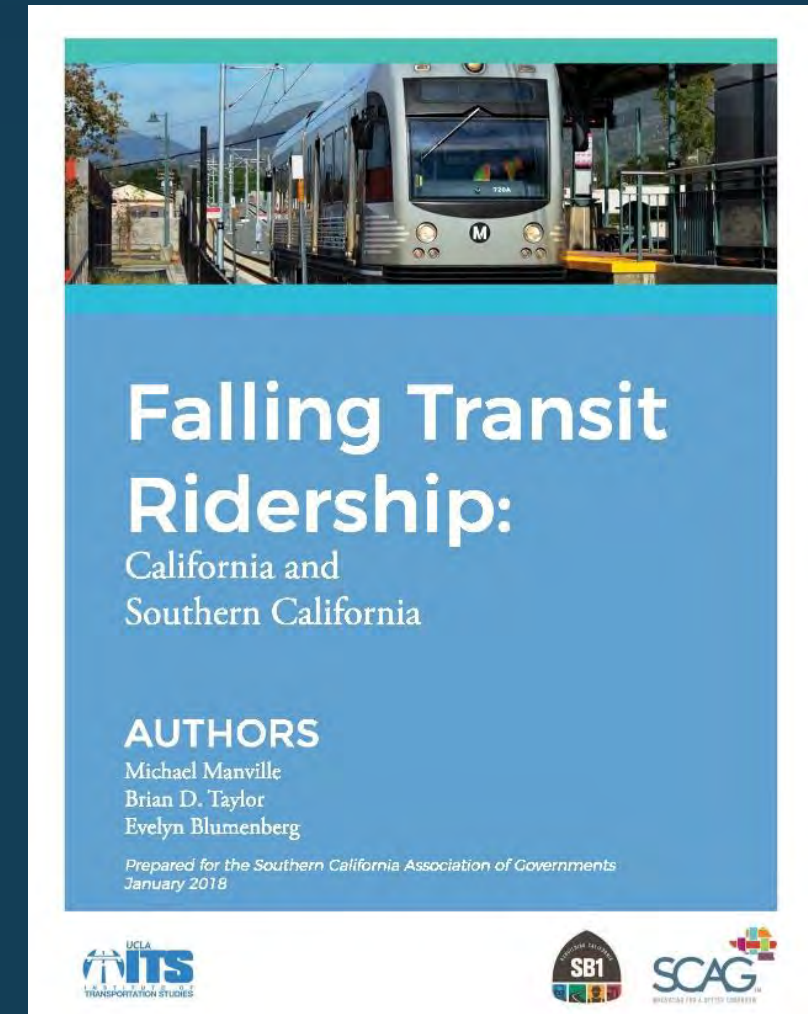
SCAG Region Per Capita Ridership Down Since 2007



- Preliminary data for 2018 suggests the decline is continuing
- Rate of decline for bus ridership may be slowing
- Metro data show decline in total Metro Rail ridership in 2018
 - Ridership “bump” from Expo Line and Foothill Gold Line extensions has disappeared

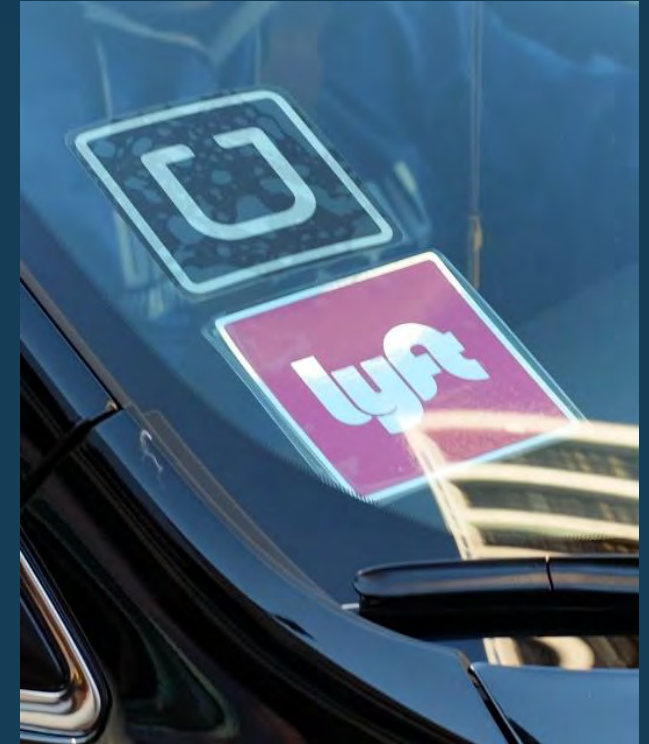
SCAG & UCLA Identify Rising Vehicle Ownership as Cause

- 2000 to 2015 – SCAG region added 2.3 million people & 2.1 million cars, or 0.95 vehicles/new resident (4X the rate of the 1990s)
- Vehicle ownership increased disproportionately among groups most likely to take transit
- The regional pool of transit users is changing
 - Fewer heavy-use “transit dependents” over time
 - More “discretionary riders” with access to cars
- No easy answers
 - Broaden the base of occasional riders
 - Manage automobile use



Impact of Transportation Network Companies (TNCs)

- San Francisco County Transportation Authority found that TNCs accounted for roughly 50% of the increase in traffic congestion between 2010 and 2016
- Various studies report that between 43% and 61% of TNC trips substitute for transit, walk or bike travel, or would not have been made at all
- University of Kentucky found Uber and Lyft decrease rail ridership by 1.3% per year and bus ridership by 1.7% per year



Strategies: Adjust to Market Demand and Changing Needs

- Support transit operator efforts to re-design the regional bus system to better support travelers' needs
 - Metro NextGen Bus Study
 - OC Bus 360 and OCTA Transit Master Plan
 - Long Beach Transit – Systemwide Transit Analysis & Reassessment
- Address critical gaps in networks and services
 - Airport Metro Connector
 - Riverside Transit Agency First and Last Mile Mobility Plan



Strategies: Leverage Technology

- Ensure technology innovations support regional goals by partnering with private providers to complement and support fixed route transit service
 - Improve first/last mile connections
 - Provide shared on-demand service where/when fixed route transit isn't cost-effective
 - Share best practices and promote regional coordination and consistency



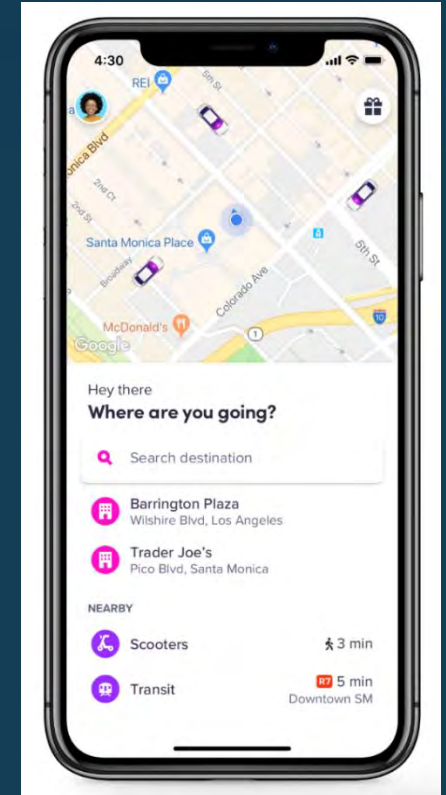
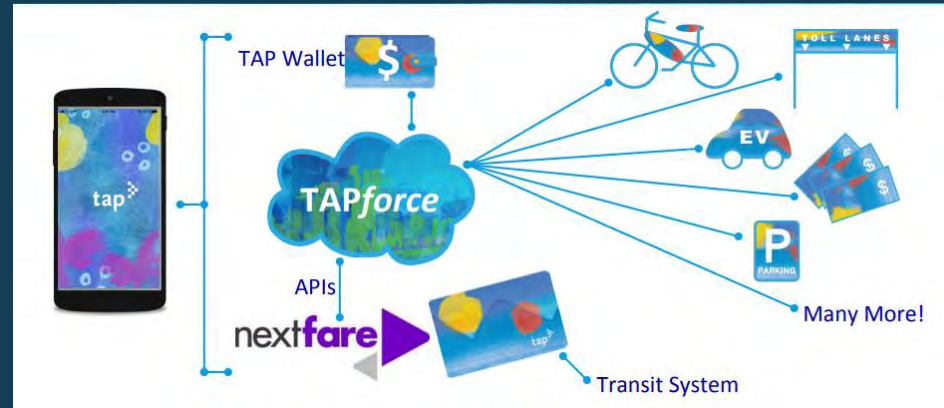
Source: Via



**SUPPORTING
YOUNG-AT-HEART SENIORS
BY MAKING YOUR TRAVEL
EASIER, FASTER, AND MORE CONVENIENT!**

Strategies: Mobility as a Service

- Develop integrated multi-modal trip planning and payment systems, laying groundwork for “mobility as a service” with transit as backbone
 - Metro TAP system upgrade
 - California Integrated Travel Project



Strategies: Beyond Transit

- Be bold with policy levers including parking management and congestion pricing
- Support local jurisdictions in planning for curb space management, dedicated transit lanes
- Plan for growth near transit investments including high quality transit areas
- Support investments in clean transportation fueling infrastructure and accelerate deployment of zero emission vehicles

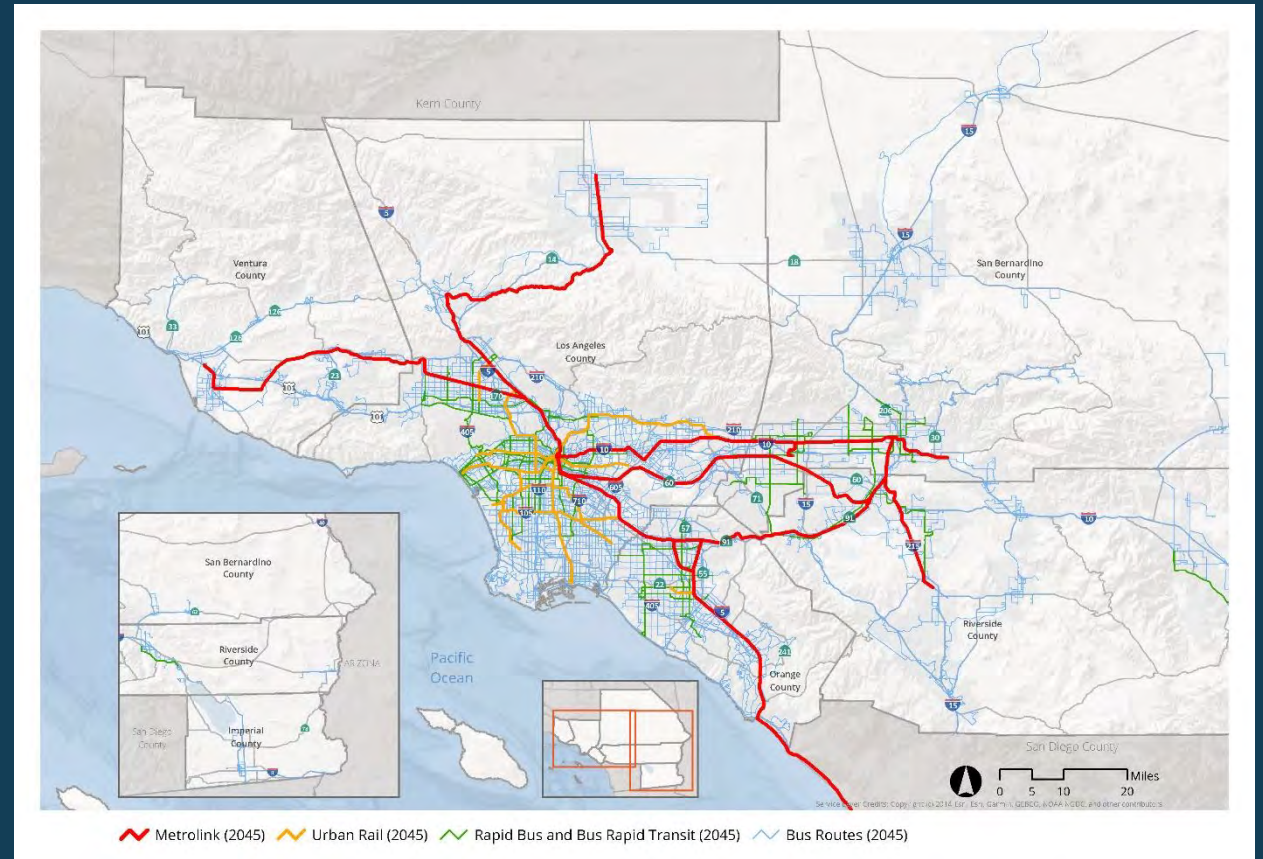


Photo by Terry Pierson, The Press-Enterprise/SCNG



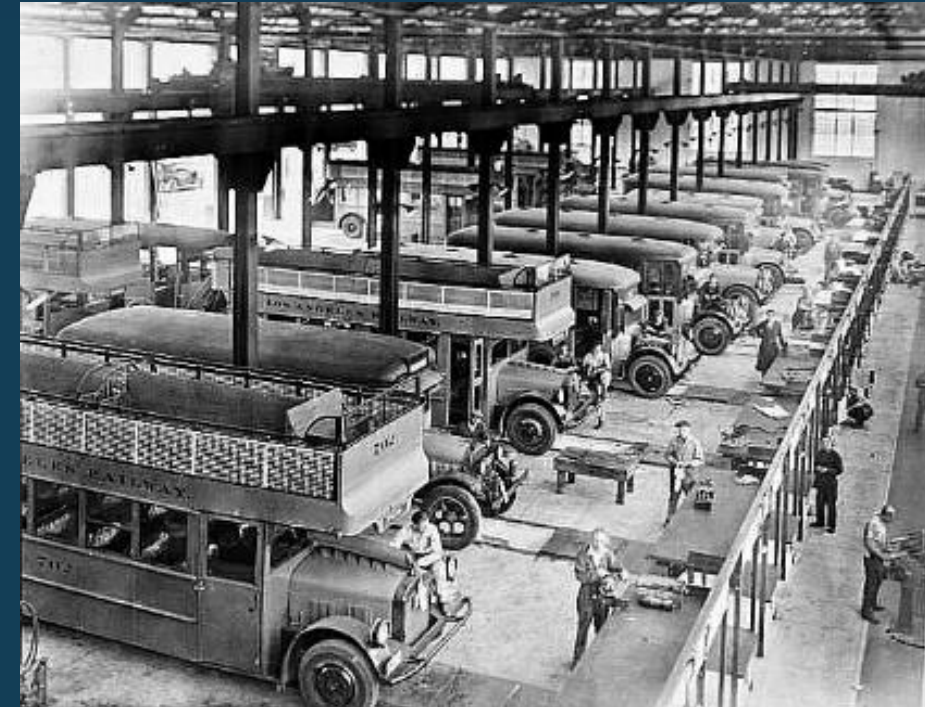
Major Capital Projects

- Bus Rapid Transit and High Quality Transit Corridors
- Urban Rail Expansion and Fixed Guideway Gap Closures
 - Metro Rail Expansion (extensions and new lines)
 - OC Streetcar
 - Arrow / Redlands Rail
- Metrolink – Southern California Optimized Rail Expansion (SCORE)



Transit Asset Management (TAM)

- In 2012, Congress established performance-based planning requirements, including for TAM
- In 2016, the TAM Final Rule became effective, requiring transit operators to develop TAM plans, establish annual targets, and report on performance
- In July 2017, the Regional Council established initial regional targets and directed staff to work with transit operators to:
 - Obtain the operator TAM plans (due Oct. 2018) and associated data
 - Update the target methodology
 - Develop regional targets for the 2020 RTP update



Los Angeles Railway (LARy), 16th Street Bus Repair Area (interior), 1928
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TAM Target Setting – Next Steps

- Continue coordination with transit operators to refine targets
- Return to TC with final TAM targets prior to April 2020 Connect SoCal adoption
- Continue to improve methodology, data collection and analysis for future RTP updates
- Report on progress towards meeting targets in future RTPs and Federal Transportation Improvement Programs (FTIPs)



Division 12 Pacific Electric at Fairbanks Yard
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Thank You

Philip Law
law@scag.ca.gov
213-236-1841
www.scag.ca.gov





Technical Working Group

Agenda Item 4



Highways & Arterials Elements in RTP/SCS

Connect SoCal

Nancy Lo

Transportation Planning & Programming

Technical Working Group – September 19, 2019

www.scag.ca.gov



Agenda



1. Highway System Overview
2. System Management Framework
3. Overview of Investments
4. What to Expect in the 2020 RTP/SCS

Highway and Arterial System Overview

- Over 73,000 regionally significant lane miles
- Serves 63 million trips on average weekday
- Our region's arterial and local roads accounts for more than 80% of the total road network



Highway and Arterial System Overview



Connect SoCal investment estimates:

- \$44.7 Billion for Highway and Arterials Capital Investments
- \$115.5 Billion for Operation & Maintenance

Challenges

- Critical gaps and congestion chokepoints
- Roadway expansion is more challenging due to costs, environmental, and community concerns
- Need for preservation maintenance, rehabilitation treatment, and ensuring resiliency



Guiding Principles

- Protect & Preserve what we have
- Support continued system preservation funding
- Focus on achieving maximum productivity through strategic investments in Transportation System Management and Demand Management Strategies
- Support policies and system improvements that will encourage seamless operation from user perspective
- Support Complete Street opportunities where feasible and practice

Guiding Principles

- Focus on adding capacity to:
 - Close gaps in the system
 - Improve access, where needed
- Focus on addressing non-recurring congestion with new technology
- Any new roadway capacity project must be developed with consideration and incorporation of congestion management strategies

System Management Framework



Connect SoCal's Investments Toward System Preservation



\$68 Billion for Operation & Maintenance toward preservation of the State Highway System

Connect SoCal's Investments Toward TDM Strategies



\$7.3 Billion allocated for Transportation Demand Management (TDM) to reduce single occupancy vehicle trip demand and traffic congestion

Connect SoCal's Investments Toward TSM Strategies



13.7 Billion allocated for Transportation System Management (TSM) to increase productivity of the existing transportation system

Connect SoCal's Investments Toward Strategic Multi-modal Expansion of the system



\$248.1 Billion allocated toward multi-modal capital projects

What to Expect in the 2020 RTP/SCS

- Continued emphasis on importance of system preservation and added focus on resilience from potential disasters
- Continue to support:
 - Projects that are already underway and identified in the current RTP/SCS
 - Projects that will close gaps in the system
 - Projects that will improve access where currently inadequate
 - Projects that will achieve maximum productivity through TSM and TDM strategies
 - Complete Street opportunities where feasible and practical



Thank you!

Nancy Lo
Transportation Planning & Programming

www.scag.ca.gov

