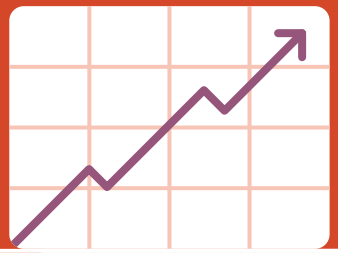
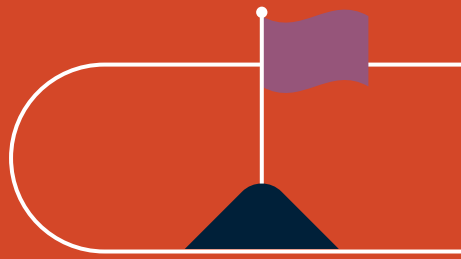
5

Measuring Our Progress





In order for the Plan to help us reach our goals, we must collectively make progress toward implementation and understand our impact over time. But how do we measure that progress? We use different measurements to monitor performance over time—and into the future.

5.1 Performance Outcomes

The Connect SoCal performance measurement and monitoring process will objectively assess how well this comprehensive program of regional investments, strategies and policies perform relative to the overall goals for the SCAG region. The mobility, community, environmental and economic goals in the Plan are accompanied by corresponding performance measures.

The Connect SoCal 2024 performance monitoring program integrates federal transportation system performance management and Equity/ Environmental Justice measures and metrics specific to a set of federal transportation conformity planning, reporting requirements for designated criteria air pollutants and to support the achievement of regional greenhouse gas emissions reduction targets established by the California Air Resources Board.

PLAN MEASUREMENT

Federal Requirements

The federal transportation performance management program, introduced by MAP-21 in 2012, requires states and metropolitan planning organizations to establish performance targets focused on outcomes that align with seven key national transportation goals. These national performance goals are related to transportation investment efficiency:

- Transportation system safety
- Transportation infrastructure condition
- Congestion reduction
- System reliability
- Freight movement and economic vitality
- Environmental sustainability
- Reduced project delivery delay

The Federal Highway Administration (FHWA) established rules for implementing transportation system performance management planning at a national level. Rulemaking in support of the federal performance management program established specific transportation system performance measures and provided target-setting and reporting guidance through three performance management (PM) packages:

- Transportation System Safety (PM 1)
- National Highway System Pavement and Bridge Condition (PM 2)
- National Highway System, Freight Movement and Congestion Mitigation and Air Quality (CMAQ) Program Performance (PM 3)

In addition to these packages, federal performance measures and reporting requirements were established for Transit Asset Management (TAM) and Transit System Safety. Performance metrics for TAM focus on maintaining our regional transit system in a state of good repair. Transit assets to be monitored under this provision include non-revenue support equipment and maintenance vehicles; transit vehicles (rolling stock); rail infrastructure, including tracks, signals and guidance systems; and transit facilities, including stations, parking structures and administrative offices. Transit system safety performance monitoring is focused on assessment of the number of transit incidents that result in fatalities or serious injuries and on transit system reliability.

Each of the performance management packages feature a corresponding set of specific performance measures for which statewide and regional performance targets must be set, monitored and reported. A comprehensive federal System Performance Report is included in the Performance Monitoring Technical Report providing details regarding the federal transportation performance management program, the specific measures established for each program element, and the associated statewide and regional targets.

The federal transportation performance management program includes the requirement that each update of the RTP must include a System Performance Report describing the federal program, the applicable performance measures, and specific targets established for the state and for the region.

Federal performance reporting requirements also include the assessment of disproportionate impacts on environmental justice communities and the completion of a comprehensive transportation air quality conformity process to ensure that the Plan does not exacerbate regional air pollution. Statewide performance assessment requirements include the monitoring of regional GHG emissions to ensure that the Plan facilitates achievement of GHG reduction targets.

Overall, these requirements guide SCAG's planning process and the early stages of Plan development by guiding the key project attributes collected during the Federal Transportation Improvement Program (FTIP) process, helping to understand whether or not the region is on track to meet its goals and indicating what Regional Strategic Investments are needed to fill the gap.

Performance Monitoring

The monitoring of local and regional progress is key to understanding which projects, programs and strategies are proving successful in meeting the regional goals established by Connect SoCal—and which ones may require modification or reconsideration. Progress toward regional objectives is made through implementation at the local level. SCAG tracks this progress as projects are programmed into the FTIP by collecting key project attributes, with a focus on how they impact achievement of Connect SoCal goals and federal performance measures. The ongoing monitoring of regional performance serves to guide future planning efforts and support local and regional transportation system investment decision-making. The assessment of regional performance over time allows us to set meaningful performance targets and milestones so that progress and setbacks may be effectively evaluated and addressed in a timely manner. Ongoing performance monitoring also helps identify emerging trends in the region that might need to be accounted for in interim planning activities as well as to inform development of the next Connect SoCal.

LET'S GET TECHNICAL

The Connect SoCal 2024 System Performance Report is included in the Performance Monitoring Technical Report.

Plan Performance

SCAG relies on a suite of tools, including the Activity Based Model (ABM), the Scenario Planning Model (SPM) and REMI (economic model) to evaluate how well the projects and policies included in Connect SoCal perform relative to SCAG's regional goals and targets.

The specific performance measures are aligned with each of the four defined Connect SoCal 2024 goal areas of Mobility, Communities, Environment and Economy. Each metric helps us better understand how well we are integrating our transportation network and land use pattern to achieve the regional vision established by Connect SoCal.

Mobility: Will our region become more connected and accessible?

Communities: Will we grow in ways that promote livability, resilience and equity?

Environment: Will people and our environment become healthier?

Economy: Will our economy function well for all?

To evaluate performance of the Plan, SCAG conducts a "Plan" vs "No Plan" (or "Baseline") analysis, which compares how the region would perform in the future with and without implementation of Connect SoCal. Plan performance is modeled using sets of planning assumptions specific to each of the two scenarios to generate projected values for each of the Plan performance measures for the year 2050. This process allows SCAG to quantify the impact of Connect SoCal relative to the achievement of the regional goals versus not implementing the Plan. Both scenarios are assessed relative to existing (base year) regional conditions. Each of the Connect SoCal planning scenarios provide the foundation of the Plan assessment process and help ensure that the comprehensive set of investments and strategies included in Connect SoCal effectively facilitate achievement of the regional goals and performance objectives defined in the Plan.

Base Year: The base year represents the existing conditions of the regional transportation system and is used as the comparative basis for future projected performance. The base year for Connect SoCal is 2019.[1]

Baseline: The baseline scenario represents the projected future (2050) regional transportation system that will result from the continuation of current programs, including projects currently under construction or undergoing right-of-way acquisition, transportation plans and projects programmed and committed to in the 2023 Federal Transportation Improvement Program (FTIP), and/or transportation projects that have already received environmental clearance.

Plan: The Plan scenario represents future regional transportation system conditions projected in 2050 when the Plan is fully implemented.

1 Typically, the base year for a plan is the year that data collection begins or the prior plan adoption year. However, given the transportation behavior anomalies experienced during the COVID-19 pandemic, it was not tenable to compare the 20+ year horizon of an RTP/SCS to such an outlier of a base year. Therefore, the plan performance is measured against the more typical performance of 2019.

Specific performance measures in the Plan are aligned with each of the four defined Connect SoCal 2024 goal areas: Mobility, Communities, Environment and Economy. Each metric helps us better understand how well we are integrating our transportation network and land use pattern to achieve the regional vision established by Connect SoCal.

CONNECT SOCAL PERFORMANCE PROFILE

Location Efficiency

Share of Regional Housing in Priority Development Areas

57.0% Baseline

61.2% Plan

4.2%

Share of Regional Employment in Priority Development Areas

64.1% Baseline

64.9% Plan

0.9%

Rural Land Consumption

78.0 sq. miles Baseline

40.6 sq. miles Plan

-48.0%

Less Time Spent Driving

Daily Miles Driven
per capita

20.8 mi Baseline

19.5 mi Plan

-6.4%

Daily Traffic Delay
per capita

8.4 mins Baseline

6.2 mins Plan

-26.2%

Heavy Duty Truck Delay
Highway

137,404 hrs Baseline

113,037 hrs Plan

-17.7%

Heavy Duty Truck Delay
Arterial

28,973 hrs Baseline

23,127 hrs Plan

-20.2%

Improved Accessibility

Annual Transit Boardings
per capita

32.7 Baseline

59.0 Plan

80.4%

Average Commute Travel Time

27.6 mins Baseline

27.1 mins Plan

-1.8%

Transit Mode Share
Work Trips

3.1% Baseline

5.9% Plan

2.8%

Active Transportation Mode Share
Work Trips

5.9% Baseline

7.7% Plan

1.8%

Economic Opportunity

Benefit/Cost Ratio

$1.00 < $2.00

INVESTMENT BENEFIT

$754

Annual Transportation Cost Savings per Household

277,800

Annual New Jobs from Transportation Investments

480,100

Annual New Jobs from Transportation Investments and Increased Competitiveness

CONNECT SOCAL PERFORMANCE RESULTS

Daily Vehicle Miles Traveled (VMT)*

per capita

2019 BASE YEAR	2050 BASELINE	2050 PLAN
22.0 MILES	20.8 MILES	19.5 MILES

Baseline to Plan Comparison **-6.3%**

Base Year to Plan Comparison **-11.4%**

Daily Minutes of Person Delay

per capita

2019 BASE YEAR	2050 BASELINE	2050 PLAN
8.9 MINUTES	8.4 MINUTES	6.2 MINUTES

Baseline to Plan Comparison **-26.2%**

Base Year to Plan Comparison **-30.3%**

**VMT per capita refers to automobiles and light trucks only*

Note: Base Year: 2019 Existing Conditions; Baseline: Continuation of current trends without Plan; Plan: Full implementation of Connect SoCal

		2019 BASE YEAR	2050 BASELINE	2050 PLAN
Imperial County	DAILY VMT per capita	33.0 MILES	35.6 MILES	34.3 MILES
	DAILY DELAY per capita	3.2 MINUTES	6.6 MINUTES	4.1 MINUTES
Los Angeles County	DAILY VMT per capita	20.6 MILES	19.3 MILES	17.6 MILES
	DAILY DELAY per capita	11.4 MINUTES	10.0 MINUTES	8.3 MINUTES
Orange County	DAILY VMT per capita	22.6 MILES	21.2 MILES	20.3 MILES
	DAILY DELAY per capita	8.0 MINUTES	6.9 MINUTES	4.6 MINUTES
Riverside County	DAILY VMT per capita	22.7 MILES	21.6 MILES	21.0 MILES
	DAILY DELAY per capita	4.4 MINUTES	5.6 MINUTES	3.7 MINUTES
San Bernardino County	DAILY VMT per capita	26.3 MILES	25.2 MILES	23.5 MILES
	DAILY DELAY per capita	5.6 MINUTES	7.8 MINUTES	3.7 MINUTES
Ventura County	DAILY VMT per capita	20.6 MILES	19.4 MILES	18.4 MILES
	DAILY DELAY per capita	5.6 MINUTES	4.6 MINUTES	2.7 MINUTES

TABLE 5.1 Connect SoCal 2024 Performance Measures

PERFORMANCE MEASURE	CONNECT SOCAL GOAL AREA	DESCRIPTION	2050 PERFORMANCE RESULTS		
			BASELINE	CONNECT SOCAL	TREND
Average Trip Distance (all modes)	Mobility	Average distance traveled for work trips (miles)	16.2	15.9	-1.9%
		Average distance traveled for non-work trips (miles)	6.1	6.1	0.0%
		Share of all trips 10 miles or less	46.8%	47.3%	+0.5
		Share of all trips 25 miles or less	80.1%	80.5%	+0.4
Travel Mode Share (SOV)	Mobility	Share of work trips by single occupancy vehicle (SOV)	67.1%	62.3%	-5.2
		Share of all trips by single occupancy vehicle (SOV)	37.6%	34.6%	-3.0
Travel Mode Share (HOV)	Mobility	Share of work trips by high occupancy vehicle (HOV)	23.9%	24.0%	+0.1
		Share of all trips by high occupancy vehicle (HOV)	48.8%	48.6%	-0.2
Travel Mode Share (Transit)	Mobility	Share of work trips by transit	3.1%	5.9%	+2.8
		Share of all trips by transit	3.2%	4.5%	+1.3
Travel Mode Share (Walk)	Mobility	Work trips	3.4%	4.1%	+0.7
		All trips	8.3%	9.4%	+1.1
Travel Mode Share (Bike)	Mobility	Work trips	2.5%	3.6%	+1.1
		All trips	2.0%	2.9%	+0.9
Person Hours of Delay by Facility Type	Mobility	Highways	1,268,475	980,882	-22.7%
		High Occupancy Vehicle (HOV)	88,821	17,135	-80.7%
		Arterials	1,284,609	966,808	-24.7%
		All facilities	2,908,568	2,151,874	-26.0%
Person Delay Per Capita	Mobility	Daily minutes of delay experienced per capita	8.4	6.2	-26.2%
Truck Delay by Facility Type (Hours)	Mobility	Highways	137,404	113,037	-17.7%
		Arterials	28,973	23,127	-20.2%
		All facilities	170,705	138,748	-18.7%
Average Commute Travel Time (Minutes)	Mobility	Average travel time to work (all modes)	27.6	27.1	-1.8%

TABLE 5.1 Continued Connect SoCal 2024 Performance Measures

PERFORMANCE MEASURE	CONNECT SOCAL GOAL AREA	DESCRIPTION	2050 PERFORMANCE RESULTS		
			BASELINE	CONNECT SOCAL	TREND
Transit Boardings Per Capita	Mobility	Annual number of transit boardings per capita (all trips)	32.7	59.0	+80.4%
Access to Jobs	Mobility	Share of jobs accessible within 30 mins by auto	11.8%	12.4%	+0.6
		Share of jobs accessible within 45 mins by transit	1.8%	2.4%	+0.6
Major Destination Accessibility	Mobility	Share of shopping destinations accessible within 15 mins by auto	4.1%	4.4%	+0.3
		Share of shopping destinations accessible within 30 mins by transit	0.4%	0.6%	+0.2
		Share of educational destinations accessible within 30 mins by auto	11.7%	12.4%	+0.7
		Share of educational destinations accessible within 30 mins by transit	0.2%	0.3%	+0.1
		Share of healthcare destinations accessible within 30 mins by auto	16.4%	17.7%	+1.3
		Share of healthcare destinations accessible within 30 mins by transit	0.3%	0.5%	+0.2
Percent of Trips Less than Three Miles	Communities	Work trips	16.4%	16.7%	+0.3
		Non-work trips	41.9%	42.6%	+0.7
Share of Regional Housing in PDAs	Communities	Percent of regional housing units located within designated Priority Development Areas (PDAs)	57.0%	61.2%	+4.2
Park Accessibility	Communities	Share of population able to reach a park within 30 mins by auto	99.7%	99.6%	-0.1
		Share of population able to reach a park within 30 mins by transit	57.8%	62.4%	+4.6
VMT Per Capita	Environment	Daily vehicle miles traveled (VMT) per capita	20.8	19.5	-6.4%
Land Conversion to Urban Purposes	Environment	Total square miles of greenfield and rural lands converted to urban use	78.0	40.6	-48.0%
Energy Consumption	Environment	Energy (electricity, natural gas, vehicle fuel) consumption per household (million BTUs)	45.9	44.6	-2.7%
Water Consumption	Environment	Urban water consumption per household (thousand gallons)	75.2	74.7	-0.6%
Share of Regional Employment in PDAs	Economy	Percent of total regional jobs located within designated Priority Development Areas (PDAs)	64.1%	64.9%	+0.8

5.2 Regional Benefits

Connect SoCal can enable the region to become more healthy, prosperous, accessible and connected to improve equity and resilience.

While the Plan and its measurement primarily focus on the core areas of mobility, communities, environment and economy—SCAG also looks at co-benefits of Plan implementation. Improving the region's mobility and enabling more sustainable development can provide a myriad of co-benefits, including reduced energy and water use.

MAKING PROGRESS

Connected and Accessible

Will our region become more connected and accessible?
Implementation of the Plan would result in a regional transportation system that provides improved travel conditions and better air quality, while also ensuring an equitable distribution of benefits among the various communities that comprise the SCAG region. With Connect SoCal, trips to work, schools and other key destinations would be faster and more efficient. Connect SoCal improves the integration of multiple transportation modes, leading to an increase in carpooling, demand for transit and use of active transportation modes (bicycle and pedestrian) for work trips and for other trips made throughout the day.

Resilient and Equitable

Will we grow in ways that promote livability, resilience and equity?
Connect SoCal provides substantial regional benefits and cost savings that extend beyond the performance variables used to evaluate the Plan. Most of these benefits are a result of more compact future development that would serve to reduce municipal expenditures on infrastructure operations and maintenance, reduce residential energy and water use and reduce dependency on single occupancy vehicle travel.

The cost for maintaining existing transportation infrastructure is significantly lower than for constructing new urban facilities. Focusing new growth in designated Priority Development Areas will reduce the costs associated with developing and operating new infrastructure. Residential water use is a function of both indoor and outdoor water needs, with outdoor use (landscape irrigation) accounting for much of the difference among housing types. Because homes with larger yards require more water for landscape irrigation, lot size is correlated to a household's overall water consumption. The development of more compact and well-connected communities will promote the conservation and efficient use of water and energy resources. A livable community is defined by a cohesive, active and engaged population. The availability of a wide range of mobility options as alternatives to driving alone in an automobile for reaching daily destinations is essential to promoting community livability. These options provide more opportunities for social interaction, engagement in physical activity, and enjoyment of the benefits of cleaner air and less time stuck in traffic.

Plan implementation would result in a regional transportation system with improved travel conditions and better air quality, and an equitable distribution of benefits among communities in the SCAG region.

TABLE 5.2 Connect SoCal 2024 Co-Benefits

BENEFIT CATEGORY	COMPARATIVE BENEFIT PERFORMANCE			
	2050 BASELINE	CONNECT SOCAL	SAVINGS	% SAVINGS
Local Infrastructure and Services Costs: Capital, operations and maintenance costs to support new growth: 2019–2050	$37.7 billion	$34.9 billion	$2.8 billion	7.5%
Household Costs: Annual transportation and home energy/water use: 2050	$13,401	$12,617	$784	5.8%
Land Consumption: New (greenfield) land consumed to accommodate new growth: 2019–2050	78 square miles	41 square miles	37 square miles	48.0%
Building Energy Use: Residential and commercial buildings: 2019–2050 (BTU)	25,858 trillion	25,609 trillion	248 trillion	1.0%
Building Energy Costs: Residential and commercial buildings: 2019–2050	$764.4 billion	$757.9 billion	$6.4 billion	0.8%
Building Water Use: Residential and commercial buildings: 2019–2050 (acre feet)	90.1 million	89.8 million	0.4 million	0.4%
Building Water Costs: Residential and commercial buildings: 2019–2050	$97.8 billion	$97.3 billion	$379.9 million	0.4%
Annual Vehicle Miles Traveled (VMT): 2050 (Autos and light-duty trucks)	435.2 million	407.1 million	28.1 million	6.5%

Healthy

Will people and our environments become healthier? Cleaner fuels and emergent vehicle technologies will significantly reduce many of the pollutants that contribute to smog and other airborne contaminants that impact public health in the SCAG region.

Connect SoCal prioritizes the attainment of all applicable federal requirements. As documented in the Transportation Conformity Analysis Technical Report, Connect SoCal meets all federal regulatory requirements for transportation conformity as defined under the federal Clean Air Act (CAA). Pursuant to the CAA, the U.S. EPA establishes and regularly updates the National Ambient Air Quality Standards (NAAQS), along with a set of planning and reporting requirements for designated criteria air pollutants. The primary purpose of NAAQS is to protect people's health.

Transportation conformity regulations apply to areas designated by the U.S. EPA as being in non-attainment or maintenance for the transportation-related criteria air pollutants, which are carbon monoxide (CO), nitrogen dioxide (NO2), ozone and particulate matter (PM2.5 and PM10). Under the U.S. Department of Transportation's Metropolitan Planning Regulations and the U.S. EPA's Transportation Conformity Regulations, Connect SoCal is required to pass the following four conformity tests to demonstrate transportation conformity:

1. Regional Emissions Analysis
2. Financial Constraint
3. Timely Implementation of Transportation Control Measures
4. Interagency Consultation and Public Involvement

Connect SoCal has passed the required tests for transportation conformity and therefore demonstrates positive transportation conformity. The Regional Council will adopt the initial Connect SoCal transportation conformity determination as part of the Final Connect SoCal, while the FHWA and the Federal Transit Administration (FTA) will approve the final transportation conformity determination.

Achieving SCAG's GHG Emission Reduction Target

Under Senate Bill (SB) 375, SCAG is responsible for developing a Plan that reduces GHG emissions in the region by eight percent from 2005 levels by 2020 and by 2035. SCAG relies on a broad range of strategies to achieve this reduction. Some GHG emission reductions come from factors outside of SCAG's control, such as increases in auto operating costs or demographic changes. The most significant and impactful strategies that are within the decision-making influence of the region include land use, user fees/pricing, transit/shared mobility and active transportation.

Although transportation conformity is a federal requirement and the reduction of GHG emissions is a state mandate, both requirements are highly interrelated. First, the same policies, strategies, programs and projects that support achievement of state GHG emissions reduction targets also contribute to meeting federal transportation conformity requirements. In addition, transportation conformity addresses emissions of federally designated criteria pollutants and their precursors, which originate from the same source as GHG emissions: the combustion of fossil fuels in motor vehicles. The reduction or elimination of fossil-fuel use in motor vehicles will help the region meet both federal transportation conformity requirements and state GHG emission reduction targets.

LET'S GET TECHNICAL

The transportation conformity analysis and findings are described in detail in the Connect SoCal Transportation Conformity Analysis Technical Report.

Overall, achievement of SCAG's GHG emissions reduction target will be more dependent on policies and programs than on capital projects. This reinforces the Plan priority to manage our current system and support communities to evolve in ways that enable integration with the existing transportation network.

As part of complying with Sustainable Community Strategy (SCS) requirements, SCAG evaluated whether it achieved the 2020 target achievement of 8 percent emission reduction from 2005 levels by 2020. Based on analysis of observed data, SCAG did achieve this target. However, decreased travel during the COVID-19 pandemic most likely helped the achievement of the 2020 target, so continued effort will be necessary to sustain progress and Plan implementation to reach the 2035 target.

LET'S GET TECHNICAL

The GHG emission reduction strategies and 2020 target achievement is discussed in detail in the Connect SoCal Performance Measures Technical Report.

Some GHG emission reductions come from factors outside of our control, such as increases in auto operating costs or demographic changes. The most significant and impactful strategies within the decision-making influence of the region include land use, pricing/user fees and transit/shared mobility.

TAKE A CLOSER LOOK

Achieving the Target

SCAG is required to reduce greenhouse gas (GHG) emissions from passenger vehicles. This can be done through strategies like transitioning to cleaner vehicles or reducing driving by making it easier to take alternative modes of travel. There are other factors that influence how much people in the region drive that are often outside of our control, like demographics changes and our increasingly aging population. With a suite of strategies to support reduced GHG emissions combined with other factors, Connect SoCal meets its GHG emission reduction target of 19 percent by the year 2035.

2035 GHG Emission Reductions

How did we get here?

Land Use:
Local land use plans enable development in places where people can take shorter trips and access alternative modes of transportation.

Pricing/User Fees:
User fees like road user charges, cordon pricing and parking generate revenues but must be designed with policies to address fairness and equity concerns.

Transit and Shared Mobility:
Expansion and enhancement of the regional transit system as well as shared mobility options allow for more convenient and accessible travel options throughout the region.

Active Transportation:
New bike lanes and improvements to pedestrian infrastructure within communities across the region provide more options for short trips.

Other:
Other strategies that contribute to lesser, but important, reductions in GHG emissions include electric vehicle incentives, parking deregulation and car share.

This Plan relies on many strategies to reduce GHGs. Many strategies, like land use and transit enhancements, also work to improve the region's accessibility.

Prosperous

Will our economy function well for all? Expenditures on Connect SoCal transportation projects create jobs and output in the region from direct investment in the design, construction, maintenance and operation of the region's transportation infrastructure. This investment increases transportation network efficiency, making our region a more attractive place to live and do business. Moreover, these investments lead to additional economic benefits from improved environmental quality and public health outcomes.

Over this FY2025–FY2050 planning period and across the six-county SCAG region, the $750.1 billion in Plan investments will generate an annual average of 277,800 new jobs and increase regional Gross Domestic Product (GDP) by an annual average of $19.4 billion (2023 constant dollars). The increased competitiveness and improved economic performance induced by these expenditures will generate an additional 202,300 jobs per year due to enhanced network efficiency.

LET'S GET TECHNICAL

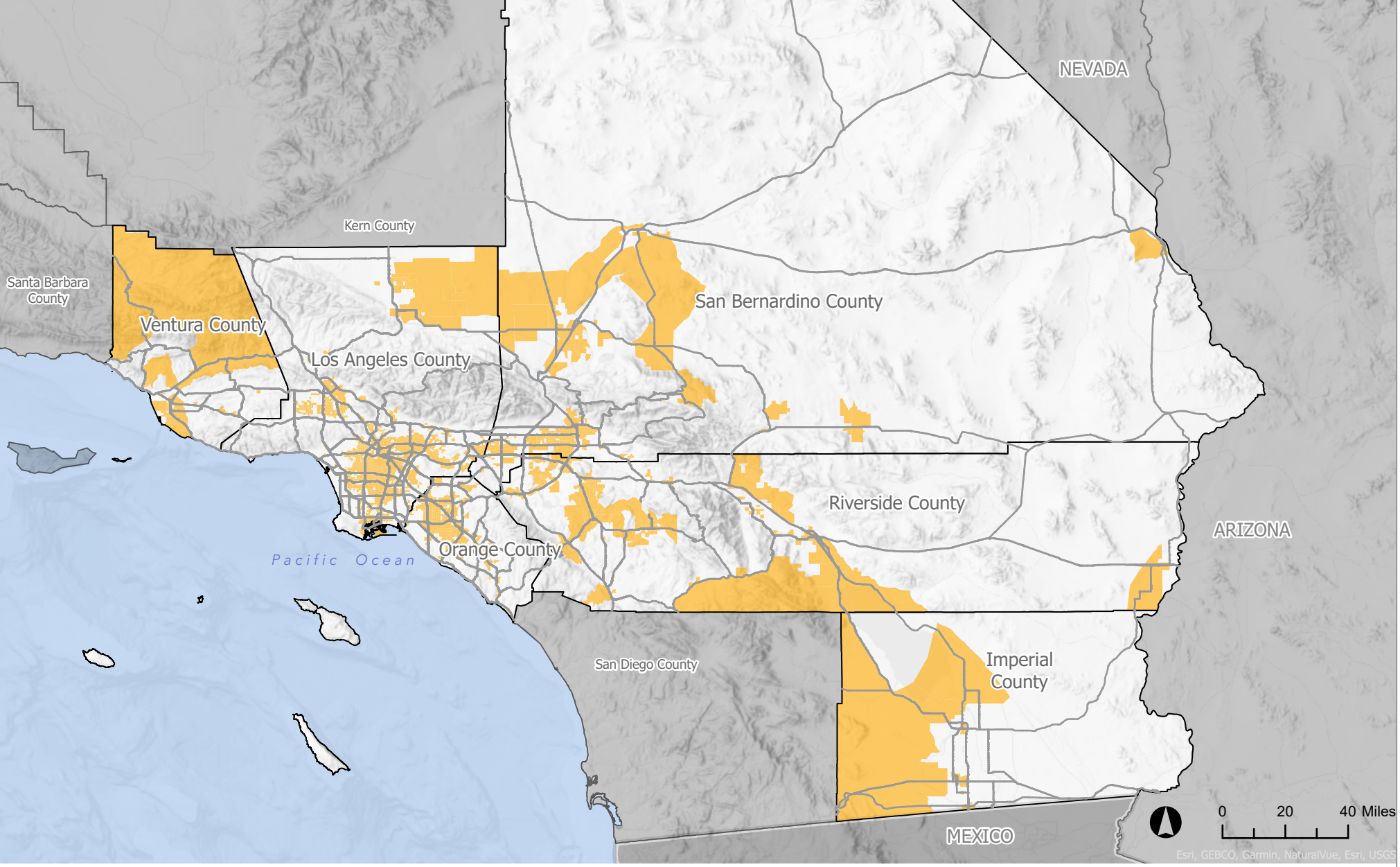
Review the Economic Impact Analysis Technical Report for more details.

Equity and Environmental Justice

Will the future be more equitable? As one of SCAG's most impactful planning efforts, Connect SoCal 2024 must follow through on the established vision for a more equitable future. The purpose of the Equity Analysis is to evaluate the potential impacts of the implementation of the Plan on communities, including both protected populations, as defined by federal regulation, and priority communities, as identified by SCAG and regional stakeholders. The preparation of the report relied heavily on the input gathered through public workshops, events, surveys and meetings, along with extensive research. Feedback from residents and staff of community-based organizations and local agencies provided a robust and complex picture of our region's outlook and an understanding of what an equitable future looks like and how we get there.

Priority Equity Communities

One method SCAG used to determine if the Plan caused disproportionate and adverse impacts to historically marginalized and disadvantaged communities is through the identification and assessment of Priority Equity Communities. SCAG defines Priority Equity Communities as census tracts in the SCAG region that have a greater concentration of populations that have been historically marginalized and are susceptible to inequitable outcomes based on several socioeconomic factors. A number of equity performance measures compare outcomes between Priority Equity Communities and the region to determine if the pattern of disparate outcomes is expected to be upheld by the policies and projects included within the Plan. Priority Equity Communities replace the need for multiple equity area definitions, including SB 535 Disadvantaged Communities, Environmental Justice Areas and Communities of Concern. For more detail on the methodology used to develop Priority Equity Communities, see the Equity Analysis.



MAP 5.1 SCAG Priority Equity Communities

Freeway

SCAG Region

Priority Equity Communities

Source: SCAG 2023

Environmental Justice

Prior to 2020, SCAG's equity efforts were concentrated in its environmental justice (EJ) program, which has long focused on public outreach, engagement, early and meaningful participation of EJ communities in the decision-making process, and equal and fair access to a healthy environment. SCAG has prepared an EJ Technical Report for each RTP/SCS since 1998 to ensure that its programs and plans do not create disproportionate adverse impacts for low-income communities and people of color in the region. Because past EJ Technical Reports continued to widen the scope of analysis and the direct connection between planning and the environment, there was a natural shift into a more comprehensive regional equity analysis, inclusive of EJ and extending beyond federal EJ and Title VI reporting requirements.

Environmental justice (EJ) is a federal and state mandate designed to help ensure social equity in the transportation planning and decision-making process—with the goal of protecting people of color and low-income communities from incurring a disproportionate share of adverse impacts produced by regional transportation projects and plans. SCAG adheres to all federal and state EJ directives. All public agencies that use federal funding must make EJ part of their mission and adhere to three fundamental EJ principles:

- To avoid, minimize or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on people of color and low-income populations
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process
- To prevent the denial of, reduction in or significant delay in the receipt of benefits by people of color and low-income populations

Building on previous EJ Technical Reports, SCAG identified equity performance measures and assessed the impacts of the Plan on priority populations in the region and, specifically, in Priority Equity Communities. In response to these questions, performance measures are organized under Connect SoCal 2024's four main goals: mobility, communities, environment and economy. This report includes:

- Plan evaluation measures that use modeling data to forecast regional performance with and without the implementation of the Plan
- Ongoing regional performance monitoring measures that assess progress being made over time
- Existing conditions measures that provide the latest available data on indicators from SCAG's Racial Equity Baseline Conditions reports

Table 5.3 summarizes the results of the equity performance measures included in this analysis.

LET'S GET TECHNICAL

Review the Equity Analysis Technical Report for more details.

TABLE 5.3 Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Mobility		
Share of Transportation System Usage	Comparison of transportation system usage by mode for low-income households and people of color relative to each group's regional population share	This analysis confirmed typical patterns of higher income transit riders tend to ride the train, while lower income transit riders tend to ride the bus. Black travelers had the lowest automobile mode share, while Hispanic/Latino and Asian travelers had the highest. Multiracial travelers reported the highest walking and biking mode shares.
Travel Time and Travel Distance Savings	Change in distance traveled by all transit, local transit and auto modes by race and ethnicity and income quintiles	Results anticipate increases in miles traveled on transit and decreases in miles traveled by auto in accordance with the integrated transportation and land use strategies proposed in Connect SoCal. There are slightly greater decreases in person miles traveled for lower income quintiles and for Black and Asian travelers.
	Change in hours traveled by all transit, local transit and auto modes by race and ethnicity and income quintiles	Results anticipate increases in time spent on transit and decreases in time spent traveling by auto in accordance with the integrated transportation and land use strategies proposed in Connect SoCal. There are slightly greater decreases in person hours traveled for higher income quintiles and for Hispanic/Latino and White travelers.
Access to Everyday Destinations	Number of employments reachable within 15/30 minutes by automobile and 15/45 minutes by transit during morning peak period (6 a.m.–9 a.m.), plus 0.5- 0.75-, and 1-mile walksheds and 1-, 3- and 5-mile bikesheds	Access to jobs is expected to improve for the overall population in the region and in Priority Equity Communities, however, there are several decreases in auto access to jobs for specific populations in Priority Equity Communities, including Black, Hispanic/Latino, the two lowest income quintiles and households below the Federal Poverty Level, limited-English proficiency population and zero-vehicle households.
	Number of retail establishments reachable within 15/30 minutes by automobile and 15/30 minutes by transit during the midday period (9 a.m.–3 p.m.), plus 0.5- 0.75-, and 1-mile walksheds and 1-, 3- and 5-mile bikesheds	Access to shopping is expected to improve for the overall population in the region and in Priority Equity Communities, however, there are slight decreases in auto access for the Black population and in bicycle access for the Hispanic/Latino population in Priority Equity Communities.

TABLE 5.3 Continued Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Access to Everyday Destinations (continued)	Percent of population that can reach a park location within 15/30 minutes by automobile and 15/30 minutes by transit during the midday period (9 a.m.–3 p.m.), plus 0.5- 0.75-, and 1-mile walksheds and 1-, 3- and 5-mile bikesheds	Access to parks is expected to improve for the overall population in Priority Equity Communities, even though there is a slight decrease at the regional level. Transit access to parks is expected to improve for all populations, however, several decreases are seen for other modes. The largest decreases are for Hawaiian-Pacific Islander and Native American populations where the decrease in auto access in Priority Equity Communities exceeds the regional change; and for the Native American population where the decrease in bicycle access in the region exceeds the decrease in Priority Equity Communities.
	Number of schools within 15/30 minutes by automobile and 15/30 minutes by transit during morning peak period (6 a.m.–9 a.m.), plus 0.5- 0.75-, and 1-mile walksheds and 1-, 3- and 5-mile bikesheds	Access to schools is expected to improve for the overall population in the region and in Priority Equity Communities, however, access with walking and biking modes decreases (less than 0.01 percent) for several populations in both Priority Equity Communities and the region, while transit access decreases for Black people and zero-vehicle households in the region but increases for the same populations in Priority Equity Communities.
	Number of health care facilities within 15/30 minutes by automobile and 15/30 minutes by transit during the midday period (9 a.m.–3 p.m.), plus 0.5- 0.75-, and 1-mile walksheds and 1-, 3- and 5-mile bikesheds	Access to healthcare is expected to improve for the overall population in the region and in Priority Equity Communities except for auto decreases for Black and Hispanic/Latino populations, all but the highest income quintile, and all other priority populations analyzed in Priority Equity Communities, despite increases at the regional level.
Bicycle and Pedestrian Collisions	Percent of Bicycle/Pedestrian High Injury Networks (HIN) located within Priority Equity Communities	Approximately 72 percent of the Bicycle HIN and 80 percent of the Pedestrian HIN are within or adjacent to Priority Equity Communities.
	Safety projects on bicycle and pedestrian HIN	While only 13 percent of bicycle and pedestrian modal networks of the Regional High Injury Network may experience improvement from planned safety projects included in the Plan, over 75 percent of those projects are located in Priority Equity Communities.

TABLE 5.3 Continued Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Communities		
Jobs-Housing Imbalance	Comparison of median earnings for intra-county vs intercounty commuters for each county; analysis of relative housing affordability and jobs throughout the region	This analysis found that jobs-housing fit increased between 2010 and 2019, while low wage jobs-housing fit decreased during the same period. Additionally, coastal counties have a substantial concentration of low-wage jobs, but lack an adequate number of affordable rental units, while inland counties have a substantial concentration of affordable rental units and workers, relative to the number of low-wage jobs that match their skills.
Neighborhood Change and Displacement	Examination of demographic changes within gentrifying neighborhoods	Gentrification is more pronounced in neighborhoods with a higher concentration of immigrants and renters as well as communities of color. While gentrifying neighborhoods did not experience a pronounced change in income, they did become more culturally and racially diverse.
	Examination of eviction filings and households threatened with eviction within gentrifying neighborhoods	Gentrifying neighborhoods and those with high eviction filings had higher percentages of Black and Hispanic/Latino people and a lower share of non-Hispanic White people compared to the region, but despite sharing such demographic similarities, most gentrifying neighborhoods were not identified as places with high eviction filings.
Rail-Related Impacts	Demographic analysis for areas in close proximity to rail corridors, including intermodal facilities	In the base year, there is a higher concentration of low-income and some people of color in areas adjacent to railroads and railyards, and it is expected that this concentration could grow in the Baseline and Plan scenarios. SCAG anticipates nominal Plan impact, and that population changes would generally follow that of the SCAG region.
	Demographic analysis for areas in close proximity to planned grade separations	Hispanic/Latino people, people with limited-English proficiency, foreign born populations, vulnerable ages, people with disabilities, and households with incomes in the lower three income quintiles are expected to experience an increase in concentration with implementation of the Plan.

TABLE 5.3 Continued Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Environment		
Resilience and Climate Vulnerabilities	Assessment of overlay between Priority Equity Communities and Climate Risk Areas, including flood hazard zones, sea level rise, wildfire risk, substandard housing, extreme heat, drought and earthquake hazard zones	The forecasted growth patterns included in the Plan reduced risks for Asian households in earthquake zones, nominal changes to existing exposures to sea level rise, wildfires, extreme heat, drought and earthquake hazards. Although impacts from climate-related hazards are not always geographically isolated, overall White populations reside disproportionately in climate hazard zones.
Emissions Impacts Analysis	Examination of change in air pollutant emissions regionwide as a result of the Plan in region and Priority Equity Communities	SCAG expects improvements in CO2 and PM2.5 emissions in the region and Priority Equity Communities as a result of the implementation of the Plan. However, people of color and lower income households are slightly underrepresented in areas of improving emissions and slightly overrepresented in areas of worsening emission, though the pattern is less pronounced or non-existent in Priority Equity Communities.
	Examination of change in air pollutant emissions, focusing on demographics of areas in close proximity to freeways and highly traveled corridors, as a result of the Plan in region and Priority Equity Communities	In 2019, most priority population groups show higher concentrations in freeway-adjacent areas compared to the greater region. In 2050, Asian and foreign-born populations are expected to grow in freeway-adjacent areas, though there are no significant differences with the Plan. Emissions reductions in freeway-adjacent areas are significant compared to the share of the region's total land area, but the Plan impact is still expected to be more pronounced in the region, compared to the freeway-adjacent areas, including areas that overlap with Priority Development Areas. Black and Hispanic/Latino people, youth and households in the higher income quintiles are expected to be overrepresented in areas with worsening emissions, while higher income quintiles are underrepresented in areas where emissions improve.

TABLE 5.3 Continued Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Noise Impacts	Qualitative assessment of the disproportionate impacts of aviation noise impacts and the policies, programs and plans to address project-level impacts	Increased air passenger demand itself has not resulted in increased aviation noise exposure, as increased air passenger activity but reduced aircraft operations have resulted in reduced aircraft noise. Additionally, newer planes and technology, aided by policy, have improved noise emissions significantly.
	Qualitative assessment of the disproportionate impacts of roadway noise impacts and the policies, programs and plans to address project-level impacts	As found in the Emissions Impact Analysis, there are no significant differences in the share of population groups living near freeways and highly traveled roads that may experience higher noise impacts between the Baseline and the Plan. Several state and local strategies, like soundwalls and land use planning, can help reduce existing disparities in relation to roadway noise.
Economy		
Geographic Distribution of Transportation Investments	Evaluation of Connect SoCal transit, roadway and active transportation infrastructure investments in various communities throughout the region	The Plan is expected to invest 34 percent of all highway projects, 50 percent of all transit projects and 62 percent of new bike lane miles in Priority Equity Communities; compared to the percent of the population in Priority Equity Communities, the investment is lower for highway projects, and slightly higher for transit and bikeway projects. Specifically, there are fewer investments in mixed-flow lanes and more bus and commuter rail revenue miles in Priority Equity Communities.
Investments vs. Benefits	Analysis of Connect SoCal investments by income quintile and race/ethnicity	The Plan is expected to invest a greater proportion into projects that benefit the lowest income quintile, and White, Black and people who identify as another race (i.e., Native American, Native Hawaiian/ Pacific Islander, some other race alone, and two or more races) compared to other income quintiles and Hispanic/Latino and Asian populations.

TABLE 5.3 Continued Summary of Equity Performance Measures

PERFORMANCE MEASURE	DESCRIPTION	SUMMARY OF ANALYSIS
Revenue Sources in Terms of Tax Burdens	Proportion of Connect SoCal revenue sources (taxable sales, income and gasoline taxes) generated from low-income households and people of color	Understanding the "regressive" nature of sales and gasoline excise taxes, gasoline and transportation sales tax burden is greater for lower income quintiles, though the share of taxes paid increases as income increases. Taxes that help fund projects in the Plan are expected to fall more heavily on White and Asian households.
Impacts from Mileage-Based User Fees	Examination of potential impacts from implementation of a mileage-based user fee on low-income households and people of color in the region	Although mileage-based user fees are the less regressive option compared to the current gas tax approach, with the shift more likely to impact higher earners, it is crucial to ensure user fee programs are designed to be equitable to ensure that vulnerable communities experience the benefits of road user fees without regressive financial impacts.

Equity Analysis

The Connect SoCal 2024 equity analysis concludes that, although racial inequities currently exist within the region, implementation of the Plan will not cause disproportionate or adverse impacts on low-income communities or people of color in most performance areas. Specifically, conditions will improve regionally for Priority Equity Communities relative to the region in most performance areas, including travel time and distance savings, some measures of accessibility to parks and schools, planned safety projects for bicycle and pedestrian safety improvements, expected shifts in overlapping climate hazard zones and emissions impacts along freeways and high-traffic roads. Investments of the Plan, especially transit improvements, are expected to benefit Priority Equity Communities, both in the geographic location and because they are expected to benefit the modes most used by people in the lowest income quintile. Connect SoCal 2024 investments by race and ethnicity are more complicated; the Plan is expected to spend more on projects that White and Black people are more likely to use compared to Hispanic/Latino and Asian travelers. Findings on the revenue sources in terms of tax burdens and impacts from mileage-based user fees conclude that although low-income individuals and people of color could benefit from the Plan's investments and strategies, alternative financing structures should be explored to revisit the regressive nature of some streams of transportation funding.

Current condition analyses on jobs-housing imbalance indicate that Connect SoCal implementation could improve the jobs-housing balance. Current conditions analyses on neighborhood change and displacement indicate communities of color may experience adverse impacts from gentrification. Several strategies can be implemented to secure affordable housing, particularly for immigrants and renters. With new technologies and neighborhood improvements, jurisdictions can coordinate to reduce roadway and aviation noise and rail-related impacts on communities in close proximity to sources, as they have in recent years. These three analyses all demonstrate existing disparities, showing that people of color and low-income communities are more likely to be impacted by noise and other impacts from proximity to transportation-related sources, though the Plan is not anticipated to worsen or exaggerate those disparities.

Without a region-wide movement toward more equitable planning practices and policies, the region will not see the equitable future we project and are aiming to achieve in the Plan. Keeping the status quo in our approach to transportation and land use will not be enough to create an equitable future for our region. One critical component to a more equitable future is to follow the lead of our community in implementing Connect SoCal. Empowering community members, particularly those who have been historically marginalized, to lead in decision-making processes will result in more equitable outcomes. Recommendations like this and other subject-specific topics are available in the updated Equity Resources for Action Toolbox (previously the Environmental Justice Toolbox).

LET'S GET TECHNICAL

See the Equity Analysis Technical Report to access the updated Equity Resources for Action Toolbox.