

# Multi-MPO Planning: A Transportation Practitioner’s Guide

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## Purpose

This guide provides transportation practitioners a roadmap and framework for collaborative planning across multiple neighboring or proximate MPO planning areas. It builds on the foundation established in “Multimodal Planning at the Megaregional Scale” (FHWA-HEP-17-091, June 2017) and compliments the *Regional Models of Cooperation Handbook* (FHWA-HEP-17-030, December 2016).

## Goals

The primary goals of this guide are to (1) provide a unique and systematic approach to operationalize multi-MPO planning and (2) build the technical, institutional, and policy capacity of state departments of transportation (DOTs), metropolitan planning organizations (MPOs), and local agencies to accomplish these goals.

## Audience

The primary audience for this guide is transportation practitioners working for metropolitan planning organizations (MPOs). However, transportation practitioners working for state departments of transportation (DOTs), transit agencies, and local governments can use the guide to learn more about how they can support collaborative planning efforts across multiple neighboring or proximate MPO planning areas.

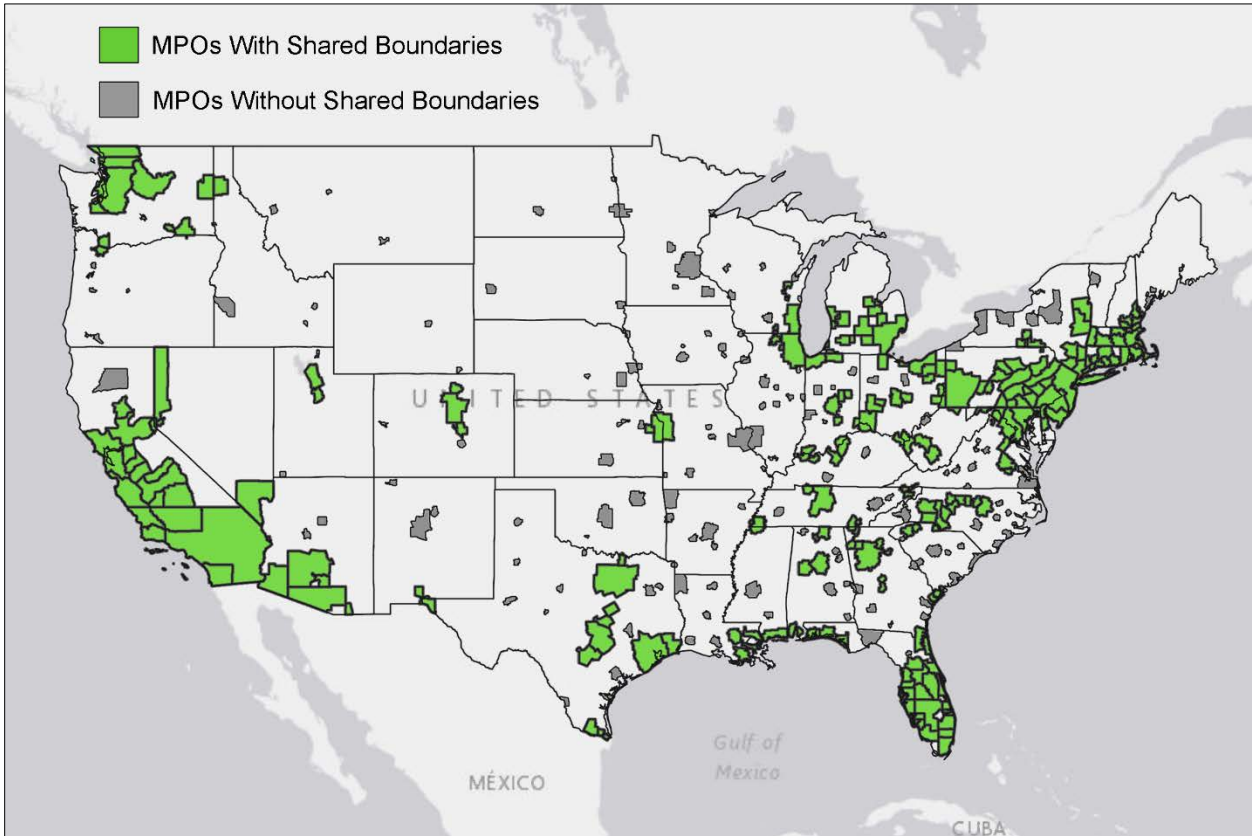
# 1. An Introduction to Multi-MPO Planning

The metropolitan transportation planning process is designed, primarily, to improve transportation policy making and investment decisions across a single metropolitan planning area. Federal law ([23 USC §134](#)) assigns principal responsibility for this process to metropolitan planning organizations (MPOs).

In concept, each MPO is responsible for planning on behalf of the local jurisdictions in a single urbanized area. The MPO planning area includes both the census-defined urbanized area and a contiguous area expected to become urbanized over the next 20 years.

More than half of all MPOs share planning area boundaries with at least one other MPO (see figure 1). Areas with clusters of neighboring or proximate MPOs have distinct challenges and opportunities that affect metropolitan transportation planning. These areas often share transportation infrastructure and environmental conditions. Furthermore, they are typically economically interdependent.

Figure 1. MPOs with and without shared boundaries (Sources: HEPGIS, Esri, HERE)



Meanwhile, federal statutes and regulations governing the metropolitan transportation planning process emphasize coordination between and among neighboring or proximate MPOs. This emphasis creates opportunities for collaborative planning and decision making.

MPOs are natural leaders for collaborative planning efforts spanning multiple metropolitan areas. Their policy boards consist primarily of local elected officials, and their plans and investment programs must align with state plans and programs. Consequently, MPOs are

already serving as a bridge between local and state-level planning initiatives. Formal multi-MPO planning is a logical extension of this bridging function.

Furthermore, highway and rail corridors often traverse multiple neighboring or proximate MPO planning areas, and MPOs routinely make transportation policy or programming decisions that affect environmental conditions and economic opportunities beyond their jurisdictional borders. In fact, multi-MPO planning is necessary to efficiently address recurring transportation planning topics—such as traffic congestion, air quality, and economic development—that transcend metropolitan area boundaries.

## Federal Requirements for Multi-MPO Coordination

Federal statutes and regulations detail the requirements for a “continuous, cooperative, and comprehensive” (3-C) metropolitan multimodal transportation planning process ([23 USC §134](#); [49 USC §5303](#); [23 CFR §450.300](#) et seq.). Because all MPOs share the same fundamental responsibility to carry out this 3-C process, these requirements provide a basis for a wide range of collaborative efforts between and among MPOs.

More specifically, all MPOs must periodically produce five distinct work products:

1. Metropolitan transportation plan (also known as an MPO’s long-range transportation plan or LRTP)
2. Transportation improvement program (TIP)
3. Annual listing of obligated projects
4. Public participation plan (PPP)
5. Unified planning work program (UPWP)

Additionally, federal statutes and regulations reference other optional work products, including corridor or subarea planning studies, programmatic mitigation plans, and, for MPOs operating in Transportation Management Areas (TMAs), congestion management plans. Furthermore, multiple neighboring or proximate MPOs may produce joint work products that document mutual or interregional goals, priorities, projects, or activities.

Furthermore, there are four circumstances in which federal laws or rules require neighboring or proximate MPOs to coordinate their long-range transportation planning efforts:

1. Multiple MPOs share authority for planning within a single urbanized area ([23 CFR §450.310\(e\)](#)).
2. Multiple MPOs share authority for planning within an air quality control region designated as a nonattainment area for ozone or carbon monoxide under the Clean Air Act ([42 USC §7407\(c\)](#); [23 USC §134\(g\)\(1\)](#); [49 USC §5303\(g\)\(1\)](#)).
3. An urbanized area principally located in one MPO planning area extends into another MPO planning area ([23 CFR §450.312\(h\)](#); [23 CFR §450.314\(g\)](#)).
4. A proposed federally funded transportation investment is located within multiple MPO planning areas ([23 USC §134\(g\)\(1\)](#); [49 USC §5303\(g\)\(2\)](#); [23 CFR §450.314\(e\)](#)).

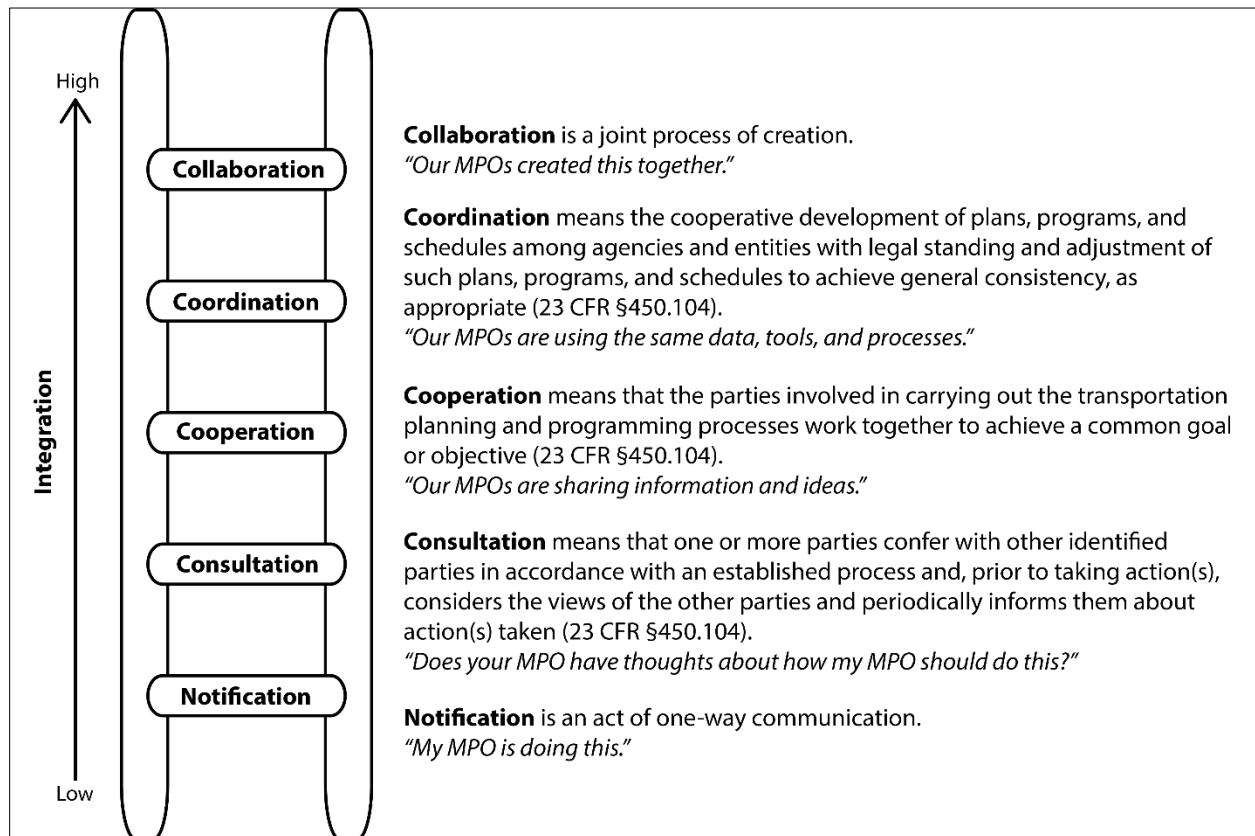
In each circumstance, federal requirements encourage coordination between or among MPOs (as well as other state, regional, and local agencies) on data collection and analysis, planning assumptions, performance measurement, and public participation.

Collectively, these activity areas provide ample opportunities for collaborative events, studies, and outreach.

## Planning Across a Spectrum of Integration

Cooperation and coordination between or among multiple MPOs on long-range planning processes or activities is common. However, the level of cooperation and coordination is deeper in some areas of the U.S. than in others, and it naturally changes over time, as conditions and priorities shift. In some cases, cooperation or coordination between or among MPOs leads to collaboration, that is, working jointly on new activities or work products. Figure 2 illustrates how cooperation, coordination, and collaboration between or among MPOs fit on a continuum of integration.

Figure 2. A ladder of multi-MPO participation, adapted from Arnstein (1969).



Healthy cooperation is the baseline status for effective multi-MPO planning. Cooperation minimizes the likelihood of neighboring or proximate MPOs unintentionally duplicating efforts or pursuing mutually exclusive goals. However, cooperation alone does not imply shared perspectives or strategies or maximum efficiency in carrying out the long-range transportation planning process. For example, multiple MPOs may routinely provide information to each other about traffic congestion along an interregional highway corridor without ever agreeing on a consistent mitigation strategy.

Healthy coordination means that multiple MPOs are working together efficiently. At a minimum, this entails harmonizing planning assumptions and strategies to pursue shared goals within each respective MPO planning area. Coordination between or among neighboring MPOs is often most effective when there is, at least in some respects, a distribution of labor that allows each MPO to contribute in ways that play to its strengths. For example, larger MPOs often have specialized staff members that perform modeling or analysis work, and these staff members may be able to provide technical assistance to smaller MPOs that lack staff expertise in these areas.

Healthy collaboration means that multiple MPOs are conducting activities or creating work products that explore interregional issues or build or reflect a consensus on interregional policy goals or investment priorities. Multi-MPO collaboratives work at a scale not explicitly addressed by federal statutes or regulations governing the metropolitan or state long-range transportation planning processes. They are innovating a new approach to interregional planning that builds on the existing metropolitan transportation planning framework. This new approach requires a high degree of public transparency to explain the benefits of collaborative activities and work products to skeptical community stakeholders.

## Benefits of Multi-MPO Planning

Multi-MPO planning helps transportation agencies use their limited resources more efficiently. However, state departments of transportation (DOTs), individual MPOs, and local communities all experience the benefits of collaboration between or among neighboring MPOs in different ways.

### Benefits for State DOTs

Each state DOT is responsible for coordinating its transportation planning and programming activities with all MPOs in the state to ensure consistency ([23 USC §135\(b\)\(1\)](#); [49 USC §5304\(b\)\(1\)](#); [23 CFR §450.208\(a\)\(1\)](#)). When multiple neighboring or proximate MPOs voluntarily plan collaboratively, they are streamlining the coordination process for their state DOT (or DOTs). If multiple MPOs already share perspectives and priorities, the state will not need to resolve potentially competing goals and project requests.

Similarly, multi-MPO planning can make it easier for state DOTs to share the state's perspective on transportation planning issues with MPOs. Instead of meeting separately with each MPO to share the same information and answer similar questions, state DOTs may have opportunities to participate in joint meetings of multiple MPOs.

### Benefits for MPOs

Multi-MPO planning can benefit individual MPOs by increasing the likelihood that their metropolitan-level policies and investments will have the desired outcomes. That is, when neighboring or proximate MPOs working together, they can more easily identify mutually compatible strategies for dealing with issues that transcend MPO planning area boundaries.

Multi-MPO planning can strengthen each individual MPOs position in the global economy. Rather than focusing on competition with neighboring or proximate metropolitan areas for economic activity, collaborative planning between or among neighboring or proximate MPOs can help individual metropolitan areas identify and build on their interregional economic niches. For example, one metropolitan area may specialize in research and development, while neighboring metropolitan areas specialize in manufacturing and professional services, respectively.

Multi-MPO planning can facilitate knowledge transfer and extend the capacities of smaller MPOs. When MPOs with different capacities and experiences join their efforts, they can select a distribution of labor that plays to the strengths of each MPO and share lessons learned from past experiences.

Finally, multi-MPO planning can help amplify MPO voices in state or federal policy discussions. Through multi-MPO planning processes, neighboring or proximate MPOs can develop shared positions and learn to speak with one voice.

## Benefits for Local Communities

The state DOT and MPO benefits of multi-MPO planning can produce specific positive outcomes for cities and neighborhoods, such as improved accessibility, environmental quality, economic opportunities, and equity. Multi-MPO planning can help correct interregional jobs-housing imbalances and transportation network deficiencies that decrease the number of destinations residents and visitors can safely and conveniently reach by multiple modes of transportation. It can decrease vehicle miles traveled, traffic congestion, and stormwater runoff, leading to improved air and water quality. It can promote business development strategies that emphasize local strengths over interlocal competition. And it can address the inequitable distribution of transportation system benefits and costs.

## Barriers to Multi-MPO Planning

MPOs face several distinct challenges that can limit their ability or will to plan collaboratively with neighboring or proximate MPOs. In some cases, MPOs can only overcome potential barriers by investing extra effort or resources. In others, state or federal legislative or policy changes may be necessary to dramatically increase the prevalence of multi-MPO planning.

## Differences in Perspectives and Capacities

The level of urbanization and the geographic extent of an MPO planning area often affects an MPO's perspective on transportation planning issues. MPOs with different levels of urbanization or physical sizes can struggle to find common ground.

Furthermore, the population of an MPO's planning area typically has a positive correlation with staff size and organizational budget (Kramer et al. 2017). Given that MPO jurisdictional populations range from nearly 20 million to less than 50,000, MPO capacities can vary considerably both within the same state and across the country. While all MPOs may struggle to invest extra staff time or financial resources to support multi-MPO planning, smaller MPOs face a special challenge if expected to contribute equally (Peckett et al. 2014; Kramer et al. 2017).

## Differences in Organization and Administration

The composition of MPO governing boards varies considerably across the country, but most governing boards consist predominantly of elected officials from the constituent municipalities and counties that comprise the MPO's planning area (Kramer et al. 2017). Consequently, MPOs typically prioritize work on local and regional issues, where the MPO has clear authority and responsibility to act, over issues that transcend MPO boundaries, where MPO authority and responsibilities are often more limited, ownership is diffuse, and there is no clear governance structure.

Similarly, some MPOs operate independently, while others have host organizations that affect (to greater and lesser extents) MPO staffing and work activities (Kramer et al. 2017). In some cases, the organizational complexity of hosted MPOs may make it more difficult for them to collaborate with other MPOs.

Finally, because states and local jurisdictions created MPOs at different points in time and because MPOs have different planning cycle obligations based on population, MPOs may have trouble aligning their planning cycles with neighboring or proximate MPOs. This can make it difficult to share data, harmonize assumptions, conduct joint planning activities, or produce joint work products.



## Differences in State Legislation and Policies

While federal statutes and regulations establish a baseline for MPO planning processes and work products, many states have statutes or regulations that provide supplemental requirements for their MPOs or authorize specific local-option transportation funding mechanisms. While some states, such as Florida and Utah, address multi-MPO planning directly, others do not. The differences in state rules related to transportation project funding and mandatory planning activities can make it more difficult for neighboring or proximate MPOs in different states to plan collaboratively.

Furthermore, some states have separate statutes or regulations governing other regional planning processes, such as water resource management, solid waste management, or economic development. These laws or rules do not typically specify any role for the MPO in the planning process and may give entities other than MPOs access to new sources of funding or specialized tools to develop and implement plans. When this happens, state statutes or regulations can, unintentionally, discourage neighboring or proximate MPOs from collaborating around specific issues. Without an explicit invitation to participate from the designated planning authority, MPOs may be reluctant to use limited resources on collaborative planning efforts that state and local officials could view as duplicative or redundant.



## 2. Identifying Opportunities for Multi-MPO Planning

Each MPO has its own set of priority issues that motivate planning action. While federal and state requirements define some of these issues, MPOs prioritize other issues based on the interests of their governing boards, access to funding, and staff capacities. MPOs seldom have the political will or adequate financial or staff resources to address every issue that may surface during a local or regional planning process.

Multiple neighboring or proximate MPOs are more likely to plan collaboratively in response to an interregional issue if their respective governing boards have identified and prioritized that issue. Furthermore, they are more likely to plan collaboratively in response to an interregional issue when that collaboration offers clear local or MPO benefits (Peckett et al. 2014). These benefits may be increased efficiency in carrying out mandatory planning tasks, transportation system or quality-of-life improvements for residents, economic growth, or access to additional funding.

Finally, MPOs will only choose to collaborate if they have compatible perspectives on an issue. Usually, this means a similar perspective, such as when multiple neighboring MPOs identify freight congestion on a shared highway as a priority issue. In some cases, though, MPOs can have different perspectives without those perspectives being incompatible. For example, one MPO may be interested in land conservation as way to focus regional growth in areas with existing urban services, while another may see land conservation as a tool to protect air and water quality. In this example, collaborative land conservation strategies can serve both goals equally.

There are a wide range of issues that transcend MPO boundaries. However, neighboring or proximate MPOs must share one or more priorities before they can effectively plan collaboratively.

### Planning Issues That Transcend MPO Boundaries

Highways and rail corridors routinely cross MPO planning area boundaries. Furthermore, transportation system conditions in one MPO planning area often affect system performance in neighboring or proximate MPO planning areas. In areas where multiple MPOs share boundaries, congested corridors often span portions of multiple planning areas.

Coordinating highway investments across MPO planning area boundaries is essential to maintaining transportation system performance. While state transportation agencies lead this coordination, MPOs can collaborate on project prioritization to increase the efficiency of this coordination process and improve outcomes.

The U.S. economy depends on efficient interregional goods movement. Each MPO planning area contains a mix of land uses that generate and receive freight as well as transportation infrastructure that accommodates trucks and trains passing through with shipments originating and terminating in other MPO planning areas.

Most MPO planning areas are served by interregional passenger rail or bus services, such as Amtrak or Greyhound. Some metropolitan areas also have regional transit services that cross MPO planning area boundaries. In areas where multiple MPOs share boundaries, or are otherwise located near one another, workers may routinely commute from one MPO planning area to another.

All MPOs place a high value on ensuring the safety of transportation system users, and all MPOs face similar challenges related to minimizing the frequency and severity of traffic

accidents. Meanwhile, connected and autonomous vehicles, unmanned aerial systems, Internet-connected infrastructure, and other emerging technologies are poised to transform multimodal transportation systems.

Air pollution from mobile sources, such as cars and trucks, generated in one MPO planning area can negatively affect air quality in neighboring or proximate MPO planning areas. That is, air pollution often travels between MPO planning areas.

Wildlands and sensitive environmental features, such as wetlands, provide benefits to humans—by filtering pollutants out of air and water—and habitat for wildlife. Additionally, lakes, rivers, and aquifers supply drinking water for metropolitan areas. In many cases, large natural or rural landscapes, as well as water bodies and sensitive environmental features, cross MPO planning area boundaries.

As global temperatures rise, many areas of the U.S. face severe multimodal transportation planning challenges associated with rising sea levels or increasingly frequent and severe storms, wildfires, or drought. Furthermore, any transportation system failures associated with these challenges are likely to have ripple effects across multiple MPO planning areas.

Metropolitan economies do not operate in isolation. In areas of the country with multiple neighboring or proximate MPO jurisdictions, it is not uncommon for residents to live and work in different MPO planning areas.

In some areas of the country with multiple neighboring or proximate MPO jurisdictions, a lack of affordable housing near employment centers is causing an increase in long-distance commuting. This can lead to economic inefficiencies as employers struggle to attract skilled workers and lower-income households struggle to access employment opportunities.

Airports and seaports serve as major intermodal transportation hubs. In areas of the country with multiple neighboring or proximate MPO jurisdictions, multimodal transportation planning can have far-reaching effects on port facility operations and related economic activity.

## Identifying Shared Priorities

Each issue highlighted above has the potential to be a point of collaboration for multiple neighboring or proximate MPOs under one set of circumstances or a point of conflict under a different set of circumstances. Before MPOs can plan collaboratively with other MPOs, they must have clear overlap in at least some of their priorities.

A shared priority is a collective understanding between or among MPOs that includes both a specific challenge or opportunity and the preferred strategy for responding to this challenge or opportunity. Shared priorities help MPOs focus their limited capacities and resources on mutually beneficial planning activities and programmatic investments.

While there is no set way to identify shared priorities, MPO staff members often learn about potential shared priorities through presentations or informal networking at conferences or peer exchange workshops; through formal notification and consultation processes involving neighboring or proximate MPOs; or by reviewing neighboring or proximate MPOs planning documents.

Typically, once an MPO has identified a potential shared priority, the next step is to invite potential partner MPOs to participate in a focused conversation at either a regularly scheduled policy board or technical advisory committee meeting or a special convening.

Once all partner MPOs have reached a tentative agreement on the priority, they still must share this tentative agreement with their policy boards and other regional stakeholders to verify that there is a broad base of support for action.

Generally, strong shared priorities are legitimate and widely embraced (CCI 2019). This means shared priorities must reflect the needs and desires of the stakeholders who are most likely to be affected by collaborative work. Ideally, these stakeholders either articulated the priority themselves or had a meaningful chance to shape the priority.

Additionally, strong shared priorities are appropriately scoped and sufficiently straightforward (CCI 2019). In other words, the challenge or opportunity and the associated strategy must require coordinated or collaborative action by multiple MPOs to succeed, without being overly broad or ambitious, given capacity and resource constraints. The priority should also be easy to state and explain to diverse audiences of stakeholders.

Finally, strong shared priorities are mindful of system interactions and timely (CCI 2019). The priority must be rooted in existing authorities and responsive to interactions with other priorities and actors. And the priority must be taking advantage of a special moment of opportunity (e.g., a change in leadership or public sentiment, a new funding opportunity, emerging technology, etc.).

While shared priorities are a precondition for multi-MPO planning, these priorities naturally evolve over time as stakeholders, resources, and transportation system conditions change. The issue that brought MPOs together at one point in time may eventually fade in importance. Consequently, MPOs must be willing to periodically revisit and adjust shared priorities.

### 3. Creating and Sustaining Multi-MPO Collaboratives

In a recent nationwide survey of MPOs, more than three-quarters of respondents reported participating in at least one type of collaborative activity with a nearby MPO (Kramer et al. 2017). Table 1 lists a sample of these activity types.

However, this survey did not establish whether the joint activities and products reported in table 1 were the result of a broader, sustained commitment to common goals and actions, or if they were ad hoc or temporary. Furthermore, the respondents did not characterize their respective levels of participation in these efforts.

*Table 1. Multi-MPO planning activities reported in nationwide survey of MPOs (adapted from Kramer et al. 2017, p. 2-12)*

<b>Collaboration Type</b>	<b>Number</b>	<b>Percent</b>
Met with leadership on a regular basis	145	69.0%
Performed other joint planning tasks or projects	133	63.3%
Signed a memorandum of understanding or an interlocal agreement	120	57.1%
Jointly purchased data, software, hardware, or technical services	68	32.4%
Conducted joint air quality planning activities	63	30.0%
Conducted joint public involvement activities	57	27.1%
Developed a regional transportation plan	41	19.5%
Conducted planning and environmental linkages activities	36	17.1%
Developed a joint Metropolitan Transportation Plan / Long Range Transportation Plan	24	11.4%
Developed a joint Congestion Management Process (CMP)	19	9.0%
Other	37	17.6%

In the context of this guide, a multi-MPO collaborative is a network of multiple neighboring or proximate MPOs (with or without other partners) that have made a formal commitment to work on shared priorities. While written agreements form the basis for these collaboratives, their strength, effectiveness, and longevity depends on resource commitments, roles and responsibilities, and governance and communication mechanisms.

#### Formalizing Commitments

Most coordination and collaboration between or among multiple neighboring or proximate MPOs is informal. That is, the MPOs are not parties to a written collaborative agreement, but they do have open lines of communication and may even meet regularly to discuss shared priorities. In some cases, informal collaboration is enough to establish and make efficient

progress toward interregional goals. In others, MPOs may struggle to prioritize multi-MPO collaboration in the absence of formal commitments.

Multi-MPO planning collaboratives typically formalize commitments through written agreements. These agreements define the scope and nature of collaboration and may establish a new governance structure—such as a joint policy board, coordinating committee, or unit of government—to facilitate group decision-making or manage group activities. A written agreement between or among MPOs can contain legally enforceable commitments, but more commonly serves as a nonbinding, public statement of intent.

Multi-MPO collaborative agreements may be labeled as memorandums of understanding or agreement (MOUs or MOAs), interlocal agreements, or some other term or phrase intended to convey the nature of the agreement. This label may be statutorily defined as legally binding by the state or states governing the parties of the agreement (e.g., a joint powers agreement in California). Otherwise, the label does not determine the legal status of the agreement. In these instances, the stated purpose and the nature of the obligations determine whether an agreement between or among MPOs is legally enforceable.

An agreement does not need to be legally binding to be an effective instrument for structuring commitment toward collaboration and to defining the common goals and actions that are key to developing and sustaining relationships among the signatories. Multi-MPO collaborative agreements can vary in level of detail in order to provide the preferred level of flexibility and commitment.

The scope and level of specificity in these agreements is often influenced by the size of the individual MPOs, geographic extent of the collaborative, and number of signatories. At one end of the spectrum, multiple MPOs may sign an agreement describing the formation, membership, rights, powers, and operations of a joint policy board and defining the scope and nature of collaborative planning activities and joint work products. At the other end of the spectrum, multiple MPOs may sign an agreement outlining areas of mutual interest and opportunities for action without creating a new governance structure or listing specific activities.

Generally, shared priorities and high levels of mutual trust are necessary preconditions for successful agreements. While there is no set formula for initiating or negotiating multi-MPO collaborative agreements, planners and other transportation practitioners often play a pivotal role in the process of developing these agreements. MPO staff members who are considering opportunities to formalize commitments should, at a minimum, meet with staff counterparts at other MPOs, solicit feedback and guidance from their policy boards and other metropolitan stakeholders, identify the strengths of each potential partner organization, and list potential joint activities or work products.

Meeting with staff counterparts can be the easiest way to test a potential partner's willingness to enter into a written agreement. These meetings can also help MPO staff members identify any potential issues or agreement provisions that might be likely to derail negotiations.

Soliciting feedback from policy boards, transit agencies, and other metropolitan stakeholders is necessary to build the necessary political support for a written agreement. By involving these stakeholders early and throughout the process, MPO staff members can enhance transparency and learn more about local concerns.

Identifying the strengths of each potential partner organization can help MPO staff members design an agreement that provides meaningful opportunities for MPOs of different sizes and

capacities to play a meaningful role in the collaborative. This step can also help narrow the scope of the agreement.

Finally, listing potential joint activities or work products provides a concrete basis for subsequent discussion and negotiation. Often it makes sense to start with a relatively short list of realistic proposed commitments, rather than trying to create a comprehensive wish list of plans, projects, and governance mechanisms.

Multi-MPO collaborative agreements often contain one or more of the following commitments:

- Periodic joint staff, coordinating committee, or policy board meetings
- Data sharing or coordination
- Project-based or periodic joint planning activities
- Project-based or periodic joint work products (including models, plans, or studies)

Each formal commitment requires partners to devote time or other resources. Therefore, it is also important to address how each partner will allocate resources to support the collaborative and to establish a mechanism that allows signatories to revisit the terms of the agreement, either periodically or on an as-needed basis.

Several states and civic sector organizations have published guides with more extensive recommendations for designing and negotiating intergovernmental agreements (e.g., Burns and Yeaton 2008; Hildt 2006; Janusz 2006; Kurtz 2018). These guides can be particularly helpful with structuring draft agreements and preparing to answer questions from stakeholders about the potential costs and benefits of entering into a formal agreement.

## Strengthening Collaboratives

There are several approaches that can help multiple neighboring or proximate MPOs collaborate more efficiently or effectively. These include committing adequate resources, assigning roles and responsibilities based on organizational capacities, and creating effective governance and communication mechanisms.

Most MPOs struggle to find sufficient financial resources to meet core transportation planning requirements (Kramer et al. 2017). Multi-MPO planning can lead to resource efficiencies, for example, by pooling resources for data collection or public participation processes. However, direct cost savings are seldom the primary motivation for collaboration, and all multi-MPO collaboratives need adequate resources to be effective.

From a practical perspective, this means that MPOs need to include funding for collaborative activities in their unified planning work programs (UPWPs). This includes staff or consultant time for meetings, community engagement, and project work as well as funding to cover materials and, potentially, overhead (e.g., website hosting fees). In some cases, this may require MPOs to shift resources from other program areas. Alternatively, MPOs may need to seek new sources of revenue to cover additional costs.

Collaborative partnerships do not have to be equal, but they must be fair (Wagner and Muller 2009). Because different MPOs have different capacities and staff specializations, effective multi-MPO planning often depends on a division of labor that plays to the respective strengths of the partners. This can help smaller MPOs extend their capacity by tapping into the expertise of larger MPOs. However, for these collaborative relationships to be sustainable, each partner must perceive that it receives benefits that are proportional to its contributions.

While all MPOs have policy boards and most have technical advisory committees, these existing governance mechanisms may be insufficient for establishing and making progress toward interregional goals. Relatively few MPOs have representatives from neighboring or proximate MPOs on their policy boards or technical advisory committees (Kramer et al. 2017). For smaller multi-MPO collaboratives, the most logical governance reform may be reciprocal policy board or technical advisory committee membership. If every MPO has a seat at the table of every other MPOs official meetings, this would provide an ongoing opportunity to deliberate and act on shared priorities. However, adding seats may be politically or practically infeasible for larger collaboratives.

As an alternative to reciprocal policy board or committee membership, some multi-MPO collaboratives have established new joint policy boards or coordinating committees to focus on shared priorities. Joint policy boards are typically comprised of local elected officials from multiple MPO planning areas. Joint coordinating committees are typically comprised of staff members from multiple MPOs.

Similarly, new communication mechanisms can help facilitate interregional decision making and to share information with the public about interregional collaboration. These include periodic meetings of joint policy boards and coordinating committees and special collaborative planning events, such as interregional summits or conferences. While the frequency, timing, and protocols vary among collaboratives, member MPOs often rotate hosting responsibilities for these meetings and events.

Joint events and meetings flatten the learning curve for new and emerging problems. Periodic meetings create continual opportunities to learn about emerging challenges, develop an awareness of what neighboring MPOs are thinking about, and to identify opportunities for joint action, including taking advantage of new funding opportunities.

Collaborative events and meetings provide opportunities to compare experiences and share recommended practices. Regular conversations around long-range planning and other regional issues can prevent redundancies in investment decisions, and the ability to learn from other's efforts prevents investing in projects that are less likely to succeed.

These events and meetings also allow MPO members to formulate joint positions and bring issues to the attention of federal agencies, such as the Federal Highway Administration or the Federal Transit Administration, collectively, rather than through a series of one-off conversations. A unified voice also helps multi-MPO collaboratives effectively advocate for state and federal funding and to have a greater influence over legislation and policy decisions.

Finally, to be effective, multi-MPO planning must be transparent to local officials, residents, and other community stakeholders across the combined planning area. Planning processes are only legitimate when they serve the public interest, and professional planners have an ethical obligation to provide members of the public with meaningful opportunities to shape plans and implementation programs that may affect them (APA 1992; APA 2016).

The baseline requirement for transparency in multi-MPO planning is to include discussions of collaborative activities in open policy board meetings (including joint policy boards where applicable). Furthermore, MPOs should explicitly acknowledge collaborative planning work with neighboring or proximate MPOs in their statutorily required planning processes and work products. Some multi-MPO collaboratives have created dedicated websites or sections of websites to share information about their meetings, events, projects, and joint work products.



## 4. Measuring Multi-MPO Planning Performance

Performance management is a strategic approach to organizational management that uses performance data to support decisions and monitor progress toward achieving performance goals (Grant et al. 2013). Performance-based planning and programming (PBPP) applies performance management principles to long-range transportation planning and short-term transportation project programming.

MPOs, and other transportation agencies, use performance data to improve decision-making and monitor progress toward policy goals. The basic building blocks of this performance-based approach to planning and programming are metrics, measures, and targets.

In this context, *metrics* are quantifiable indicators of performance or condition ([23 CFR §450.104](#)). For example, average vehicle speed along a highway segment is a metric that indicates the level of traffic congestion, where values above a specific threshold equal an uncongested segment.

Meanwhile, *measures* are expressions based on metrics that transportation agencies use to establish targets and to assess progress toward achieving the established targets ([23 CFR §450.104](#)). In the example above, the percentage of uncongested miles across the highway network is a measure of traffic congestion.

Finally, *targets* are quantifiable levels of performance or condition, expressed as a value for the measure, to be achieved within a specified time period ([23 CFR §450.104](#)). For the example above, the target is a specific percentage of uncongested miles across the highway network that a transportation agency needs to achieve by a certain date.

Federal statutes and regulations require MPOs to coordinate their transportation system goals with state and national goals, and they require MPOs to measure progress toward achieving these goals within their respective metropolitan planning areas. However, there are no federal requirements to set, or measure progress in achieving, interregional goals. Consequently, collaboration between or among multiple neighboring or proximate MPOs on performance metrics is an emerging practice.

The literature on inter-organizational networks highlights the importance of measuring both processes and outcomes (Popp et al. 2014). There are at least three broad categories of metrics that can provide meaningful feedback on the performance of multi-MPO collaboratives: collaboration metrics, work product metrics, and transportation system performance metrics. Generally, these categories correspond to different stages in the development of the collaborative. Collaboration is a necessary precursor to producing collaborative work products. And collaborative work products are necessary precursors to changes in transportation system conditions or performance.

### Selecting Collaboration Metrics

Many private and public organizations view effective collaboration as a necessary precursor to the success of any program. However, measuring collaboration can be difficult. Consequently, many organizations skip direct measures of collaboration and focus only on process outcomes, such as customer or constituent satisfaction and product output. The problem with this approach is that it does not provide feedback that could help organizations proactively identify collaboration problems and design better collaborative processes in the future (Popp et al. 2014).

When organizations do measure collaboration, they typically rely on a mix of subjective self-reported ratings from partners or participants and objective metrics that focus on mechanisms that provide opportunities for collaboration or the amount of collaborative activity. In the context of multi-MPO planning, collaboration metrics can help neighboring or proximate MPOs evaluate their level of planning process integration (see figure 2). That is, they capture measurable information about formal commitments, governance structures, and activities that provide direct evidence of the degree of collaboration.

Collaboration metrics can provide multi-MPO collaboratives with feedback on interrelationships between or among members and help them characterize their level of effort or commitment. Furthermore, these metrics may yield useful insights that strengthen the prospect of developing joint work products.

Table 2 presents a series of potential collaboration metrics organized by broad performance measure areas. These metrics are for illustrative purposes only and may not be appropriate for every MPO or multi-MPO collaborative.

*Table 2. Potential collaboration metrics for multi-MPO collaboratives*

Potential Performance Measure Area	Potential Performance Metrics
Agreements	<ul style="list-style-type: none"> <li>• Number of MPOs (or host organizations) as signatories to an active coordination or collaboration agreement between or among multiple MPOs</li> <li>• Number of other public agencies as signatories to an active coordination or collaboration agreement between or among multiple MPOs</li> <li>• Number of nontraditional planning partners as signatories to an active coordination or collaboration agreement between or among multiple MPOs</li> <li>• Duration (in years) of coordination or collaboration subject to an agreement between or among multiple MPOs</li> <li>• Number of distinct areas of coordination or collaboration addressed by an active agreement between or among multiple MPOs</li> </ul>
Policy board composition	<ul style="list-style-type: none"> <li>• Number of neighboring or proximate MPOs with voting representation on each MPO policy board</li> <li>• Number of neighboring or proximate MPOs with non-voting representation on each MPO policy board</li> </ul>
Technical advisory committee composition	<ul style="list-style-type: none"> <li>• Number of neighboring or proximate MPOs with voting representation on each MPO technical advisory committee</li> </ul>

Potential Performance Measure Area	Potential Performance Metrics
	<ul style="list-style-type: none"> <li>• Number of neighboring or proximate MPOs with non-voting representation on each MPO technical advisory committee</li> </ul>
<p>Joint policy board, coordinating committee, or workgroup composition</p>	<ul style="list-style-type: none"> <li>• Number of MPOs (or host organizations) with voting representation on a joint policy board</li> <li>• Number of other public agencies with voting representation on a joint policy board</li> <li>• Number of nontraditional planning partners with voting representation on a joint policy board</li> <li>• Number of MPOs (or host organizations) with non-voting representation on a joint policy board</li> <li>• Number of other public agencies with non-voting representation on a joint policy board</li> <li>• Number of nontraditional planning partners with non-voting representation on a joint policy board</li> <li>• Number of MPOs (or host organizations) with representation on a joint coordinating committee or workgroup</li> <li>• Number of other public agencies with representation on a joint coordinating committee or workgroup</li> <li>• Number of nontraditional planning partners with representation on a joint coordinating committee or workgroup</li> </ul>
<p>Joint policy board, coordinating committee, or workgroup meetings</p>	<ul style="list-style-type: none"> <li>• Number of joint policy board meetings within the last 12 months</li> <li>• Number of joint coordinating committee or workgroup meetings within the last 12 months</li> <li>• Duration (in hours) of joint policy board, coordinating committee, or workgroup meetings over the last 12 months</li> </ul>
<p>Collaborative planning events</p>	<ul style="list-style-type: none"> <li>• Number of collaborative planning events within the last 12 months</li> <li>• Duration (in hours) of collaborative planning events over the last 12 months</li> <li>• Number of persons participating in collaborative planning events within the past 12 months</li> </ul>

When selecting collaboration metrics for multi-MPO collaboratives, members must have a shared set of goals related to institutional relationships, teamwork, and resource commitments. Each metric must have either a direct, or at least theoretical, relationship to one or more goals.

Once members have generated a list of potential metrics, it is important to screen these metrics against a shared set of criteria to evaluate their feasibility and usefulness. These criteria should, at a minimum, address the effort necessary to collect or calculate data for the metric and the degree of influence members have over the metric.

## Selecting Work Product Metrics

Many industries routinely measure work product output and quality. However, work product metrics are comparatively less common for organizations that are, primarily, engaged in providing services rather than producing tangible goods. Planning organizations are no exception. Relatively few local or regional planning organizations routinely use metrics to evaluate the quality of their plans (Berke and Godschalk 2009; Lyles and Stevens 2014). Furthermore, otherwise noteworthy guides on PBPP generally ignore plan quality assessment (e.g., Grant et al. 2013; Lyons et al. 2014; Osborne et al. 2015).

Work product metrics can help collaboratives consisting of multiple neighboring or proximate MPOs evaluate their level of work product integration (see figure 2). That is, they capture measurable information about plans, studies, programmed improvements, work programs, data tools, and communication platforms that provide direct evidence of shared priorities.

Work product metrics can provide multi-MPO collaboratives with feedback on consistency between or among work products and help identify instances where members may be pursuing mutually exclusive goals. Furthermore, these metrics may provide valuable feedback on the public transparency of collaborative efforts.

Table 3 presents a series of potential product-based performance metrics organized by broad performance measure areas. These metrics are for illustrative purposes only and may not be appropriate for every MPO or multi-MPO collaborative.

*Table 3. Potential work product metrics for multi-MPO collaboratives*

Potential Performance Measure Area	Potential Performance Metrics
Long-range transportation plans	<ul style="list-style-type: none"> <li>Percentage of objectives referencing interregional issues or collaboration in each MPO's current LRTP</li> <li>Percentage of projects supporting interregional goals in each MPO's current LRTP</li> <li>Number of MPOs adopting a joint LRTP</li> </ul>
Transportation improvement programs	<ul style="list-style-type: none"> <li>Percentage of project funding supporting interregional goals in each MPO's current TIP</li> <li>Number of MPOs adopting a joint priority project list</li> </ul>

Potential Performance Measure Area	Potential Performance Metrics
Annual listings of obligated projects	<ul style="list-style-type: none"> <li>Percentage of project funding supporting interregional goals in each MPO's most recent annual listing of obligated projects</li> </ul>
Work programs	<ul style="list-style-type: none"> <li>Percentage activities tied to coordination or collaboration with other MPOs in each MPO's current unified planning work program</li> <li>Number of MPOs adopting a joint work program</li> </ul>
Other joint studies or plans	<ul style="list-style-type: none"> <li>Number of interregional studies or plans (other than a joint LRTP) adopted or accepted by multiple MPOs over the past five years</li> </ul>
Transportation models	<ul style="list-style-type: none"> <li>Number of MPOs using the same travel demand model in their long-range transportation planning processes</li> </ul>
Data products	<ul style="list-style-type: none"> <li>Number of MPOs using a joint data product in their long-range transportation planning processes</li> </ul>
Information and data-sharing platforms	<ul style="list-style-type: none"> <li>Number of multi-MPO collaborative work products available from a single publicly accessible web page or website</li> <li>Number of updates to a publicly available web page or website documenting multi-MPO collaborative work products and activities over the past 12 months</li> </ul>

When selecting work product metrics for multi-MPO collaboratives, members must have a shared set of goals related to their shared priorities. These goals may be mutual, meaning each member has established the same goal for their planning area, or collective, meaning all members agree on a desirable outcome for the combined planning area of the collaborative. In either case, each metric must have either a direct, or at least theoretical, relationship to one or more goals.

As with collaboration metrics, it is important to screen all potential work product metrics against a shared set of criteria to evaluate their feasibility and usefulness. These criteria should, not only, address the effort necessary to collect or calculate data for the metric and the degree of influence members have over the metric, but also address how the metric connects to transportation system conditions or performance.

## Selecting Transportation System Metrics

The existing set of federally required performance measures are designed to provide feedback on the impacts of transportation planning and programming decisions on transportation system conditions and performance (see table 4). While multi-MPO collaboratives could use these measures to evaluate interregional transportation impacts, many MPOs are also interested in measuring the effects of transportation decisions on economic competitiveness, health, access to opportunity, equity, and quality of life (T4A 2017). Several agencies and organizations have documented potential additional transportation system metrics that transportation agencies could use at multiple geographic scales (e.g., ICF International 2011; Grengs et al. 2013; Osborne et al. 2015).

*Table 4. Federally required performance measures for MPOs*

Performance Measure Area	Performance Measures
Safety (PM1)	<ul style="list-style-type: none"> <li>• Number of fatalities</li> <li>• Rate of fatalities</li> <li>• Number of series injuries</li> <li>• Rate of serious injuries</li> <li>• Number of non-motorized fatalities and serious injuries</li> </ul>
Pavement and Bridge Condition (PM2)	<ul style="list-style-type: none"> <li>• Percentage of Interstate System pavement in good condition</li> <li>• Percentage of Interstate System pavement in poor condition</li> <li>• Percentage of other National Highway System pavement in good condition</li> <li>• Percentage of other National Highway System pavement in poor condition</li> <li>• Percentage of National Highway System bridges by deck area in good condition</li> <li>• Percentage of National Highway System bridges by deck area in poor condition</li> </ul>
System Performance, Freight and Congestion (PM3)	<ul style="list-style-type: none"> <li>• Percent of person-miles traveled on the Interstate System that are reliable</li> <li>• Percent of person-miles traveled on other parts of the National Highway System that are reliable</li> <li>• Truck Travel Time Reliability (TTTR) Index</li> <li>• Annual Hours of Peak Hour Excessive Delay</li> <li>• Percent of Non-SOV Travel</li> </ul>
Transit Asset Management (TAM)	<ul style="list-style-type: none"> <li>• Percentage of non-revenue service vehicles (by type) that exceed the useful life benchmark (ULB)</li> <li>• Percentage of revenue vehicles (by type) that exceed the ULB</li> <li>• Percentage of track segments (by mode) that have performance restrictions</li> <li>• Percentage of facilities (by group) that are rated less than 3.0 on the Transit</li> </ul>

Economic Requirements Model (TERM) scale.

Transportation system metrics that highlight connections between neighboring or proximate MPO planning areas may provide valuable feedback on interregional transportation system performance (i.e., system performance across multiple MPO planning areas). Table 5 presents a series of potential transportation system metrics organized by broad measure area. These metrics are for illustrative purposes only and may not be appropriate for every MPO or multi-MPO collaborative.

*Table 5. Potential transportation system metrics for multi-MPO collaboratives*

Potential Performance Measure Area	Potential Performance Metrics
Interregional Commuting	<ul style="list-style-type: none"> <li>• Percentage of working population traveling more than 50 miles and spending more than 90 minutes to reach their place of work (at least one time per week) (i.e., mega commuters)</li> <li>• Percentage of mega commuters residing in households earning 80% or less of the area median income (AMI)</li> <li>• Percentage of mega commuters who use interregional bus or train service</li> <li>• Percentage of mega commuters residing in households earning 80% or less of AMI who use interregional bus or train service</li> </ul>
Interregional Transit Accessibility	<ul style="list-style-type: none"> <li>• Percentage of population within one mile of an interregional bus or train stop or station</li> <li>• Percentage of jobs within one mile of an interregional bus or train stop or station</li> <li>• Percentage of households without access to a private vehicle within one mile of an interregional bus or train stop or station</li> <li>• Percentage of households earning 80% or less of AMI within one mile of an interregional bus or train stop or station</li> </ul>
Interregional Trail Accessibility	<ul style="list-style-type: none"> <li>• Percentage of population who can access an interregional trail or greenway by fixed-route public transit in less than 60 minutes</li> <li>• Percentage of households earning 80% or less of AMI that can access an interregional trail or greenway by fixed-route public transit in less than 60 minutes</li> </ul>
Evacuation route access	<ul style="list-style-type: none"> <li>• Percentage of population within five miles of a designated evacuation route</li> </ul>



Potential Performance Measure Area	Potential Performance Metrics
	<ul style="list-style-type: none"> <li>• Percentage of households earning 80% or less of AMI within five miles of a designated evacuation route</li> <li>• Average individual evacuation time</li> <li>• Average evacuation time for households earning 80% or less of AMI</li> </ul>
Public health	<ul style="list-style-type: none"> <li>• Percentage of households that can reach a level I or II trauma center within 60 minutes by ground ambulance</li> <li>• Percentage of households earning 80% or less of AMI that can reach a Level I or II trauma center within 60 minutes by ground ambulance</li> <li>• Percentage of population living within 500 feet of Interstate and other highways included in the National Network for Conventional Combination Trucks</li> <li>• Percentage of households earning 80% or less of AMI within 500 feet of Interstate or other highways included in the National Network for Conventional Combination Trucks</li> </ul>

When selecting transportation system metrics for multi-MPO collaboratives, members must have a shared set of goals related to a shared understanding of desirable system condition or performance outcomes. Again, these goals may be mutual, meaning each member has established the same goal for their planning area, or collective, meaning all members agree on a desirable outcome for the combined planning area of the collaborative.

Over multiple planning cycles, Utah’s MPOs, DOT, and the Utah Transit Authority have collaborated on a Unified Transportation Plan (UTP) covering the entire state (Markiewicz et al. 2017). During the 2015 UTP process, these agencies held a series of workshops to develop joint goals, objectives, and performance measures (Metro Analytics 2014). The partners used seven criteria to screen potential joint performance measures:

- Commonality: Do all partners care about and have influence over the measure?
- Understandable: Is it easy to explain the measure and its value to citizens?
- Value of measure: How important is the measure to transportation system performance?
- Level of control: To what extent do project and policy choices affect the measure?
- Trackable: Is it easy to obtain data and perform calculations for the measure?
- Predictable: Are there reliable ways to forecast the effects of projects and policies on the measure?
- Connection to goals: How strongly is the measure connected to one or more goals?

Multi-MPO collaboratives should consider each of these criteria when screening potential transportation system metrics.

## 5. Multi-MPO Coordination Area Experiences

Researchers from the American Planning Association (APA) and the Georgia Institute of Technology's Center for Quality Growth and Regional Development (CQGRD) conducted qualitative case study research to learn more about how and why neighboring and proximate MPOs in three distinct areas of the country are coordinating their long-range planning efforts (see figure 3).

*Figure 3. Multi-MPO Coordination Areas (Sources: HEPGIS, Esri, HERE)*



The research team, in consultation with Federal Highway Administration staff, selected these three “multi-MPO coordination areas” based on their reputations for sustained coordination and collaboration over many years. Through this process, APA and CQGRD staff reviewed MPO and partner plans, improvement and work programs, studies, formal agreements, meeting records, and websites. The team also interviewed senior MPO and local government staff members in each coordination area.

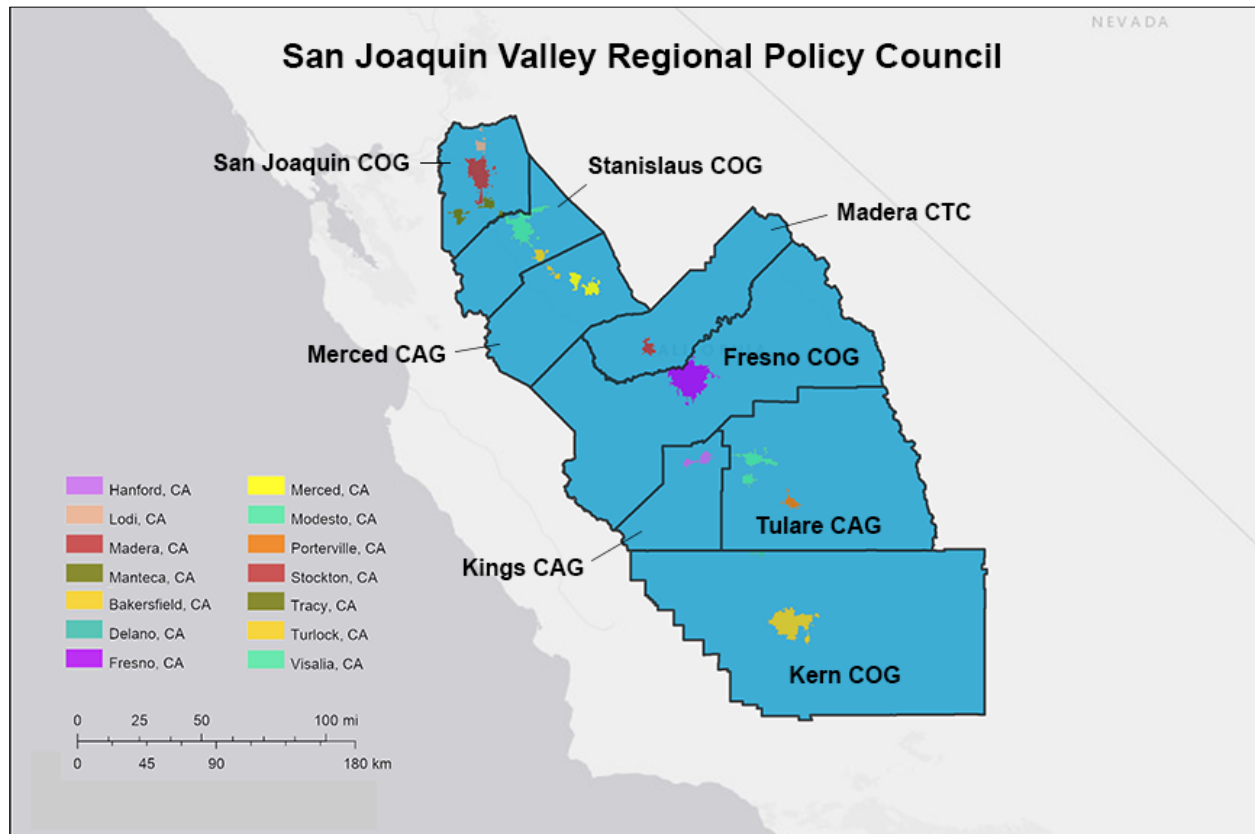
The following sections provide brief snapshots of each coordination area and summarize their multi-MPO collaborative planning experiences.

### San Joaquin Valley Regional Policy Council

The San Joaquin Valley Regional Policy Council (SJVRPC) coordination area comprises the southern half of California's Central Valley, with a contiguous combined planning area of more than 27,000 square miles and an estimated population of more than four million residents. The coordination area name refers to a joint policy board established through a

memorandum of understanding among eight MPOs (SJVRPC MOU 2006). Since 1992, these MPOs and their partners have been collaborating on long-range transportation planning.

Figure 4. Constituent MPO planning areas and urbanized areas of the San Joaquin Valley Regional Policy Council coordination area (Sources: HEPGIS, Esri, HERE)



### Issues Motivating Collaboration

California's San Joaquin Valley (SJV) is among the most productive agricultural regions in the world, and efficient goods movement from farm to market is a high priority throughout the valley. Furthermore, the SJVs position between the major population centers of Southern California and the San Francisco Bay Area, combined with its relatively low land prices, makes it an attractive location for logistics and distribution facilities (SJVRPC 2018b).

Meanwhile, the SJV is among the most economically distressed regions in the country. In 2017, the average unemployment rate for the valley was 8.5 percent, compared to 4.8 percent for California and 4.4 for the U.S. (BLS 2018). Meanwhile, only 16.8 percent of valley residents age 25 or older have a bachelor's degree or higher, compared to 32.6 percent for California and 30.9 percent for the U.S. (USCB 2019). Median household income in the valley is \$50,982, compared to \$67,169 for California and \$57,652 for the U.S. (USCB 2019).

Furthermore, the SJV has among the worst air quality in the country. Surrounding mountains block airflow and trap pollution, and stagnant weather systems cause nighttime temperature inversions that prevent the dispersion of pollutants. A growing population in the valley, growing demand for goods movement through the valley, and pollution transport from neighboring metropolitan areas as well as international destinations have contributed to the valley's air quality issues (SJVUAPCD 2018).

California State Route 99 (SR 99) passes through seven of the eight SJV counties and intersects with all major east-west corridors in the valley. Consequently, SR 99 serves as the key to moving freight by truck throughout and through the SJV. In 2014, an average of 12,457 trucks travelled each day along a sample of nine SR 99 segments throughout the valley (Cambridge Systematics 2017a). Cambridge Systematics projects truck traffic to increase 58 percent along these segments by 2040, reaching an average of 19,667 daily truck trips (2017a). Increasing demand for truck transportation, in combination with a growing population, have led to increased congestion and emissions. The SJV MPOs recognize that they need to work collaboratively to balance potentially competing priorities (SJVRPC 2018b).

Between 1970 and 2010, the share of California residents living in the SJV increased from 8.2 percent to 10.7 percent. Because the valley has few physical impediments to urban expansion and relatively low land prices, the valley's urbanized areas have primarily been spreading out from city centers, rather than densifying through infill development. A large majority of valley residents live in detached single-family homes, and a high percentage of these residents commute long distances to work (Kantor 2010).

The SJV MPOs recognize that unchecked urban expansion and an acute imbalance of jobs and housing threatens the agricultural economy, the natural environment, and quality of life across the valley (Mintier Harnish 2010). This recognition has motivated them to work collaboratively on a series of projects aimed at promoting more compact development patterns and protecting rural economies (SJVRPC 2018b).

Because the eight SJV counties (excluding eastern Kern County) constitute a single air quality nonattainment area for ozone and particulate matter, the SJV MPOs must coordinate their Clean Air Act compliance efforts. Federal statutes and regulations require the MPOs to demonstrate transportation conformity with air quality attainment plans for each iteration of their respective long-range transportation plans (LRTPs) and transportation improvement programs (TIPs) and any associated amendments. Consequently, the MPOs have synchronized their planning schedules, underlying assumptions, and methodologies to align with the federal air quality conformity process (SJVRPC 2018b).

Under California's Sustainable Communities and Climate Protection Act of 2008 (SB 375), each MPO in the state must prepare a Sustainable Communities Strategy (SCS) as a component of its long-range transportation plan. The SCS details a strategy for reducing greenhouse gas (GHG) emissions through coordinated transportation and land-use planning (SJVRPC 2018a). A lack of technical data led the California Air Resources Board (CARB) to establish the same placeholder GHG targets for each SJV MPO in 2010 (CARB 2018).

The SJV MPOs recognize the relationships among GHG emissions reduction goals and shared priorities related to air quality, goods movement, and growth management. This recognition has motivated them to work collaboratively on transportation model improvements, community engagement efforts, and responses to CARB requests (SJVRPC 2018a & SJVRPC 2018b).

### Formal Commitments

Prior to 1991, SJV MPOs met informally on an as needed basis to discuss transportation planning and air quality management issues. In March 1991, the eight SJV counties agreed to form the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD). In 1992, the SJV MPOs approved a memorandum of understanding (MOU) (effective September 21, 1992) to coordinate regional planning activities (SJVRPAs MOU 2006). Shortly thereafter, the SJV MPOs and SJVUAPCD signed an MOU (effective October 29, 1992) to coordinate transportation control measures to implement the district's air quality attainment plan and

the state's implementation plan (SJVUAPCD MOU 1992). This agreement established a staff working committee, specified a method for developing transportation control measures, and stipulated the district would consult with the MPOs on any of its plans or programs that affect transportation planning and that the MPOs would consult with the district on any of its plans programs that affect air quality.

The SJV MPOs reaffirmed their commitment to coordinate regional planning activities through an updated MOU dated September 21, 2006. Specifically, it stipulated that the MPOs would coordinate population, housing, employment, land use, and air quality forecast methodologies; prepare regional transportation plans addressing common transportation issues; prepare transportation improvement programs to implement transportation control measures; coordinate with the SJVUAPCD on emission reduction projects; coordinate with the state department of transportation (Caltrans) on transportation system planning; coordinate MPO planning efforts with state and federal agencies; develop and use a coordinated transportation and traffic modeling database; prepare interregional studies for corridor or plan alternatives; coordinate on passenger and freight rail issues; lead growth management activities; and acting as a forum for policy issues of mutual interest.

To help achieve these aims, the MOU established the San Joaquin Valley Regional Policy Council (SJVRPC) to provide guidance on interregional policy issues, represent the MPOs in public forums, and approve an annual work program and budget. It stipulated that the SJVRPC must meet at least twice a year. It also established the San Joaquin Valley Regional Planning Agencies Executive Directors Committee (SJVRPAEDC) to advise the SJVRPC and to implement the annual work program.

Through this MOU, the SJV MPOs also resolved to jointly fund staff support to coordinate collaborative activities. Each MPO's contribution to the joint funding of support staff is proportional to its population. This joint funding provides for the appointment of a private planning firm to serve as the "Valleywide Coordinator" to support the SJVRPC and the SJVRPAEDC activities, as well as the appointment of a private air quality modeling firm to serve as the "Air Quality Coordinator" to provide modeling services and analyses that each MPO uses in its long-range transportation plan and transportation conformity work (SJVRPC 2018a). Fresno COG manages the contract for the Valleywide Coordinator, while San Joaquin COG manages the contract for the Air Quality Coordinator, on behalf of the other MPOs.

In 2009, the SJV MPOs and SJVUAPCD reaffirmed their commitment to ensure the continued compliance of regional transportation plans with state and federal air quality requirements (effective September 9, 2009). Specifically, it stipulated that SJVUAPCD would join the SJVRPC; all parties would participate in regular conference calls with state and federal agencies; all parties would use the latest planning assumptions and emission factors, conduct regional emissions analyses, and coordinate motor vehicle emission budgets; all parties would coordinate on state and federal policy positions; the SJV MPOs would take the lead in developing transportation control measures and establishing and maintaining transportation conformity; the SJV MPOs would coordinate with SJVUAPCD to update that status of transportation control measure implementation; all parties will coordinate on greenhouse gas emission reductions and any future state and federal air quality regulations; the SJV MPOs would consult with SJVUAPCD before allocating Congestion Mitigation and Air Quality funds to projects; all parties will continue to coordinate transportation and land-use planning through a valley-wide initiative; all parties would work to achieve a unified position on air quality and transportation projects; and each party would establish a resolution coordination procedure and point of contact.

## Collaborative Activities

The SJVRPC is comprised of two elected officials from each of the SJV MPO's policy boards and one representative of the San Joaquin Valley Unified Air Pollution Control District (SJVRPAs MOU 2006 & SJVUAPCD MOU 2009). This board has the authority to adopt an annual work program and budget for valley-wide activities and to represent the San Joaquin Valley before the California Transportation Commission, the state executive branch, and state and federal legislative bodies (SJVRPAs MOU 2006).

The SJVRPC meets in person roughly quarterly, with the SJV MPOs rotating hosting duties. Members who can't join in person can participate via teleconference. Each meeting typically constitutes a mix of informational reports from member and partner agencies, action items, and a public comment period. Over the past two years, the SJVRPC has adopted regional transportation and legislative priorities, resolutions taking positions on state legislation, letters of support for specific projects, and annual work plans (SJVRPC 2019).

The SJVRPAEDC is comprised of the executive director of each of the SJV MPOs. It is responsible for implementing the SJVRPC's annual work program, creating the agenda for SJVRPC meetings, and coordinating and directing all administrative work necessary to develop plans addressing interregional issues (SJVRPAs MOU 2006).

Beyond these regular meetings, the SJVRPC hosts an Annual Policy Conference to discuss issues that affect the entire San Joaquin Valley (SJCOG 2018c) and annual trips to Sacramento and Washington D.C. to discuss concerns of San Joaquin Valley with state and federal legislators (SJVRPC 2018d, SJVRPC 2018e).

The SJVRPAEDC meets in person monthly, with the SJV MPOs rotating hosting duties. Members who can't join in person can participate via teleconference. Each meeting typically constitutes a mix of informational reports from directors, partner agencies, and the Valleywide Coordinator; issue discussions; and recommendations for SJVRPC agenda items or actions. Over the past two years the SJVRPAEDC has discussed (among other topics) long-range transportation plans, sustainable communities strategies, air quality, legislative affairs, funding priorities, and interregional corridor and goods movement studies (SJVRPC 2019).

## Joint Work Products

The SJV MPOs 2006 MOU includes the preparation of a Valley Chapter to be included in each MPOs long-range transportation plan as a rationale (i.e., a "whereas" statement) for establishing the San Joaquin Valley Regional Policy Council. The MOU stipulates that this chapter will address issues that cross jurisdictional boundaries. While the SJV MPOs never included a Valley Chapter in the body of their respective long-range transportation plans, each iteration of the SJV MPOs respective long-range transportation plans since 2011 has included an appendix that satisfies the spirit of the MOU directive.

The current version of this appendix, *One Valley: The San Joaquin Valley Profile*, provides a high-level overview of the SJV geographic context, population characteristics, and economic conditions. Then, it highlights coordinated planning efforts under five top-level headers: Air Quality, Sustainable Communities Strategies, Goods Movement, Advocacy, Other Collaborative Planning Efforts, and Passenger Rail. According to Fell, the SJV MPOs divvy up responsibility for drafting these sections. Consequently, the organization and level of detail varies from section to section. Multiple senior staff members of the SJV MPOs noted that this appendix has been a valuable tool for communicating shared priorities but that it is, perhaps, ripe for a reevaluation.

Following the adoption of their 2006 MOU, the SJV MPOs formed a committee to develop a common format for their federal transportation improvement programs (TIPs). This format includes common sections and map exhibits and presents project information in a consistent manner. One of these sections discusses the individual MPO as a component of the larger SJV. Another explains that the SJV is a single air basin and references MOUs to coordinate on transportation and air quality issues. Multiple senior staff members of the SJV MPOs report that maintaining a consistent presentation and syncing TIP preparation schedules makes it easier for the MPOs to speak with a unified voice about interregional priority projects.

Each year, the SJVRPC adopts an Overall Work Program, summarizing all planned coordination work among the SJV MPOs along with necessary funding commitments. The latest version includes sections on major highways and interstates, joint funding strategies, interregional goods movement, air quality transportation planning and coordination, sustainable communities strategies/regional transportation plans, relationship development with external agencies and entities, advocacy and policy development, model improvement, and other activities (SJVRPC 2018a).

Each MPO then uses this joint work program as an input to its unified planning work program (UPWP). Consequently, each SJV MPO UPWP includes a section on valley-wide coordination activities. Most of the UPWPs also include specific coordination activities in sections discussing air quality, passenger rail, modeling, or advocacy programs. Many of the UPWPs include the SJVRPC's 2006 MOU and the SJVUAPCD 2009 MOU as appendices.

In 2005, the State of California created a Regional Blueprint Planning Program to help regional planning agencies conduct scenario planning exercises to establish a preferred regional growth scenario for a 20-year planning horizon. The following year, the SJV MPOs jointly applied for program funding to develop a shared valley-wide Blueprint. Between 2006 and 2009, the SJV MPOs developed and evaluated alternative growth scenarios. In April 2009, the SJVRPC adopted 12 Smart Growth Principles and a preferred growth scenario for the valley (Mintier Harnish 2010).

Following the adoption of the San Joaquin Valley Blueprint, the SJV MPOs commissioned several studies to provide additional information to help with implementation. These studies included a Greenprint that provides valley-wide data on natural resources, an infill development analysis, a market demand analysis for higher-density housing, and demographic forecasts. The SJV MPOs also created a Planner's Toolkit to help planners across the SJV implement the preferred growth scenario and develop plans and programs consistent with the Smart Growth Principles. Finally, the SJV MPOs secured another state grant to provide technical assistance to 46 smaller cities across the valley to help them integrate the Smart Growth Principles into their local comprehensive (general) plans (URS Corporation 2013).

In 2011, the SJVRPC and Caltrans commissioned Cambridge Systematics to develop a valley-wide goods movement plan to guide investments and policy (2013). It includes extensive analysis of conditions affecting goods movement in the SJV and compiles a list of 48 priority projects, primarily sourced from the SJV MPOs long-range transportation plans or transportation improvement programs.

Following the completion of the *San Joaquin Valley Goods Movement Plan* in 2013, the SJV MPOs received a Caltrans Partnership Planning for Sustainable Transportation grant to address issues raised in the plan through a *subsequent San Joaquin Valley Goods Movement Sustainable Implementation Plan* (Cambridge Systematics 2017b). This plan designates first- and last-mile connectors, identifies areas of concern related to truck routing and



parking, presents a framework for improving and maintaining the valley-wide truck model, and includes recommendations for coordinating these efforts with the SJV MPOs long-range transportation plans.

In 2016, the SJV MPOs received a Caltrans Emerging Priorities grant to continue evaluating and refining the SJV's goods movement system. The resultant *San Joaquin Valley I-5/SR 99 Goods Movement Study* establishes the need for streamlining goods movement, identifies and evaluates projects and programs that could mitigate "pain points" in the system, and analyzes the potential for a demonstration project (Cambridge Systematics 2017a).

### Performance Measurement

During the San Joaquin Valley Blueprint process, the San Joaquin Valley Blueprint Coordinating Committee approved an initial list of performance measures tied to goals addressing transportation, mass transit and transportation choice, air quality, economy and jobs/housing balance, agricultural land preservation, and environmental conservation (Mintier Harnish 2011a). The SJV MPOs used these performance measures to analyze alternative growth scenarios (Mintier Harnish 2010). The SJVRPC did not adopt these performance measures as a component of the final preferred scenario, and the SJV MPOs have not been using them to measure performance after the project ended.

The eight SJV counties (excluding eastern Kern County) constitute a single air quality nonattainment area that violates federal health standards for ozone and particulate matter. This means the SJV MPOs must coordinate their efforts to reduce emissions under the California Air Resources Board's state implementation plan. The MPOs must demonstrate transportation conformity with air quality attainment plans for each iteration of their respective LRTPs and TIPs, and any associated amendments. Consequently, the MPOs have synchronized their planning schedules, underlying assumptions, and methodologies to align with the federal air quality conformity process (SJVRPC 2018b).

The SJV MPOs adopted their most recent LRTPs in the spring and summer of 2018. Under California's Sustainable Communities and Climate Protection Act of 2008 (SB 375), each MPO in the state must prepare a Sustainable Communities Strategy (SCS) as a component of its LRTP. The SCS details a strategy for reducing greenhouse gas (GHG) emissions through coordinated transportation and land-use planning. A lack of technical data led the California Air Resources Board to establish the same placeholder GHG reduction targets for each SJV MPO in 2010 (CARB 2018). Because these targets remained in effect until late 2018, the most recent version of each of SJV MPO's LRTP includes the same GHG reduction targets.

According to multiple senior staff members, the SJV MPOs have not, to date, established any other valley-wide performance metrics, measures, or targets in response to state or federal requirements or interregional goals. Six of the eight SJV MPOs have adopted the state's PM1 targets. Meanwhile, Fresno COG and Kern COG each adopted its own PM1 targets. The SJV MPOs have not yet adopted PM2 or PM3 targets.

### Factors Limiting Cooperation

Multiple senior staff members noted that the geographic extent and varying levels of urbanization across the SJV can make it difficult to reach consensus. For example, Kern County has distinct priorities related to the importance of the petroleum industry to its economy and growing influence from the Los Angeles basin. Meanwhile, the central counties of the SJV (Madera, Fresno, Kings, and Tulare) are primarily oriented toward agriculture, with very high income inequality. Then the three northernmost counties (San Joaquin,

Stanislaus, and Merced) are more urbanized with stronger connections to the San Francisco Bay Area.

Staff members emphasize that parochial interests can also limit cooperation. The SJV MPOs represent the collective interests of the local jurisdictions in their planning areas, and therefore, they don't always agree on priorities or approaches. Some counties are primarily focused on protecting their rural economies, while others are primarily oriented toward supporting job growth and housing development in urban areas. As state policy in California has increasingly emphasized investments in mass transit and higher-density housing, the SJV MPOs have, on occasion, struggled to reach unified positions.

During the San Joaquin Valley Blueprint process, the SJV MPOs explored alternative institutional arrangements that may help overcome some of these factors limiting cooperation. These alternatives included forming a single valley-wide MPO and consolidating the existing eight MPOs into three sub-valley MPOs while retaining a valley-wide policy board (Mintier Harnish 2011b). However, to date, the SJV MPOs have not taken further steps to explore these alternatives.

### Noteworthy Practices

- By aligning their long-range planning schedules, the SJV MPOs have maximized their opportunities to share information, harmonize strategies, and speak with a unified voice.
- By formalizing a collaborative relationship through multiple MOUs, the SJV MPOs have sent a powerful signal to state and federal partners as well as their respective constituencies that they are committed to working together to find mutually beneficial solutions.
- By adopting an overall work program and shared legislative and funding priorities, the SJV MPOs have found a way to act as a counterbalance to the more populous, affluent, and heavily urbanized MPOs in their state.
- The regular meetings of the SJVRPAEDC and SJVRPC provide the SJV MPOs staff and board members with a convenient mechanism for learning about projects, programs, and initiatives across the valley.
- Contracting with private firms to provide planning services on behalf of all SJV MPOs extends the collective capacity of the MPOs.
- Including an appendix discussing valley-wide collaborative planning efforts in each of the SJV MPOs long-range transportation plans provides a convenient primer for local officials and engaged citizens who may be unfamiliar with the scope and accomplishments of those efforts.
- Sharing information about collaborative efforts through a publicly accessible website heightens transparency.

*Table 6. Key components of the San Joaquin Valley Regional Policy Council coordination area*

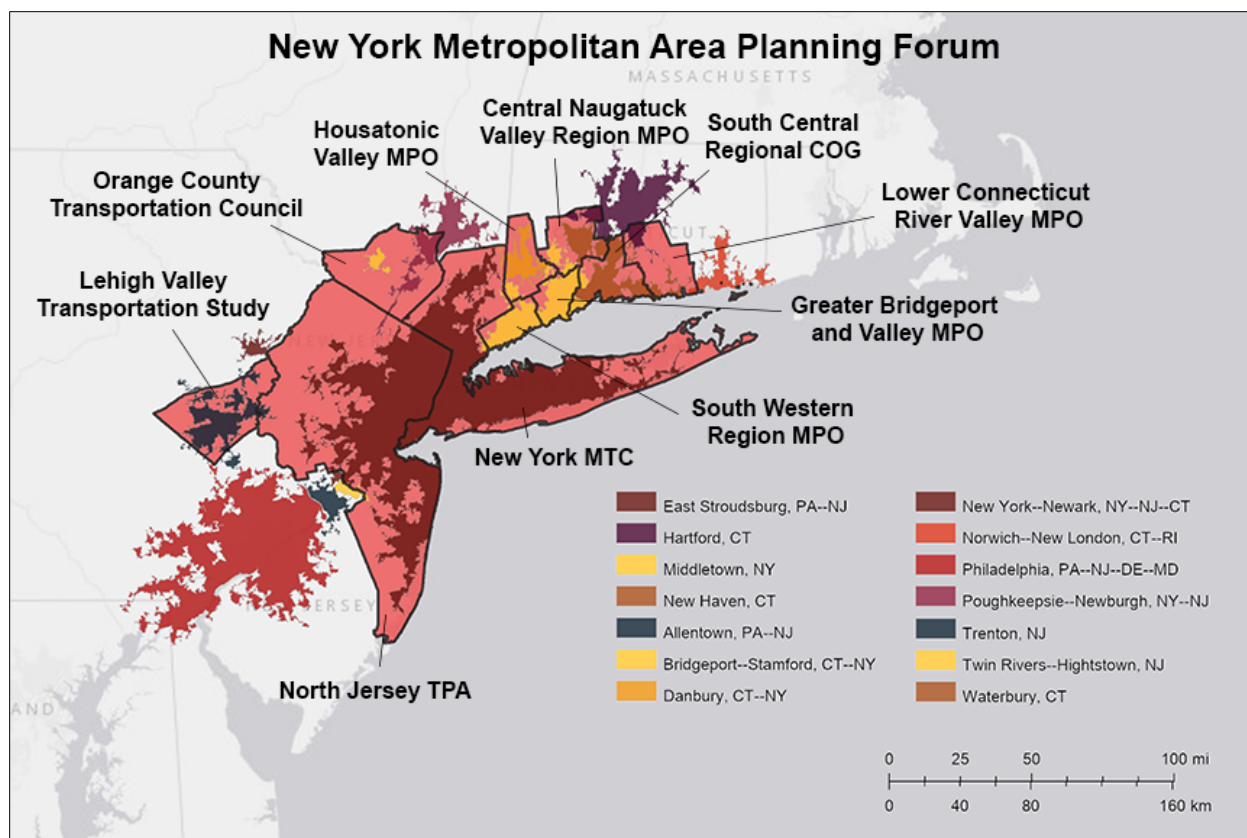
MPO	Counties	Planning Area Extent (sq. mi.)	2017 Pop. Est.	UZAs
San Joaquin COG	San Joaquin	1,425	745,424	Stockton; Tracy; Manteca; Lodi
Stanislaus COG	Stanislaus	1,514	547,899	Modesto; Turlock (partial)

<b>MPO</b>	<b>Counties</b>	<b>Planning Area Extent (sq. mi.)</b>	<b>2017 Pop. Est.</b>	<b>UZAs</b>
Merced CAG	Merced	1,971	272,673	Merced; Turlock (partial)
Madera CTC	Madera	2,152	156,890	Madera
Fresno COG	Fresno	6,016	989,255	Fresno
Kings CAG	Kings	1,391	150,101	Hanford
Tulare CAG	Tulare	4,838	464,493	Visalia; Porterville
Kern COG	Kern	8,161	893,119	Bakersfield; Delano

## New York Metropolitan Area Planning Forum

The New York Metropolitan Area Planning (MAP) Forum coordination area comprises parts of New York, New Jersey, Connecticut, and Pennsylvania, with a contiguous combined planning area of more than 10,000 square miles and an estimated population of nearly 23 million residents. The coordination area name refers to a consortium of nine agencies, representing a total of 10 MPOs, committed to cooperative transportation planning and decision-making. This consortium began in 2008 with five MPOs in the New York City metropolitan area and expanded in 2017 to include five additional MPOs.

Figure 5. Constituent MPO planning areas and urbanized areas of the New York Metropolitan Area Planning Forum coordination area (Sources: HEPGIS, Esri, HERE)



### Issues Motivating Collaboration

A collective desire to improve their federally mandated metropolitan transportation planning processes ultimately motivates the MAP Forum's collaborative efforts. The MPOs created the MAP Forum in response to Federal Highway Administration and Federal Transit Administration recommendations provided during the New York Metropolitan Transportation Council's 2006/2007 Transportation Management Area (TMA) Certification Review required under [23 CFR §450.336\(b\)](#). The combined planning area of these MPOs functions as a single commuter shed, and it includes multiple urbanized areas that cross MPO jurisdictional boundaries. The 2017 expansion of the consortium reflects an even broader understanding of the multimodal transportation system interdependencies in the four-state area.

MAP Forum members recognize that commuting patterns, shared transportation infrastructure, and economic relationships mean that their respective plans and programs affect neighboring and proximate MPOs throughout the coordination area. Consequently, the MPOs include projects that cross jurisdictional boundaries and projects in areas immediately adjoining but outside their jurisdictional boundaries in their long-range transportation plans (NYMTC 2017).

Historically, planning for efficient goods movement across the Hudson River and through the I-95 corridor has been a challenge for the MAP Forum members. In 2012, Hurricane Sandy damaged freight facility infrastructure and goods in New York and New Jersey and exposed transportation system vulnerabilities across the coordination area. Meanwhile, dramatic growth in e-commerce has dramatically altered freight operations across the coordination

area, and the eventual mass deployment of electric and autonomous vehicles may transform transportation infrastructure needs.

At their annual meeting in December 2018, MAP Forum members discussed conducting subarea analyses within the coordination area and identifying extreme weather adaptation strategies for vulnerable transportation corridors or areas where rainfall can be disruptive. During this same meeting, the MPOs discussed extreme weather modeling and scenario development. The MAP Forum members recognize a need for standardized extreme weather modeling methods across the coordination area. Currently, several agencies and universities maintain separate models. They also discussed green infrastructure planning, using data and modeling to develop mitigation and adaptation strategies, and new technologies and modeling methods to reflect the latest developments in the field.

### Formal Commitments

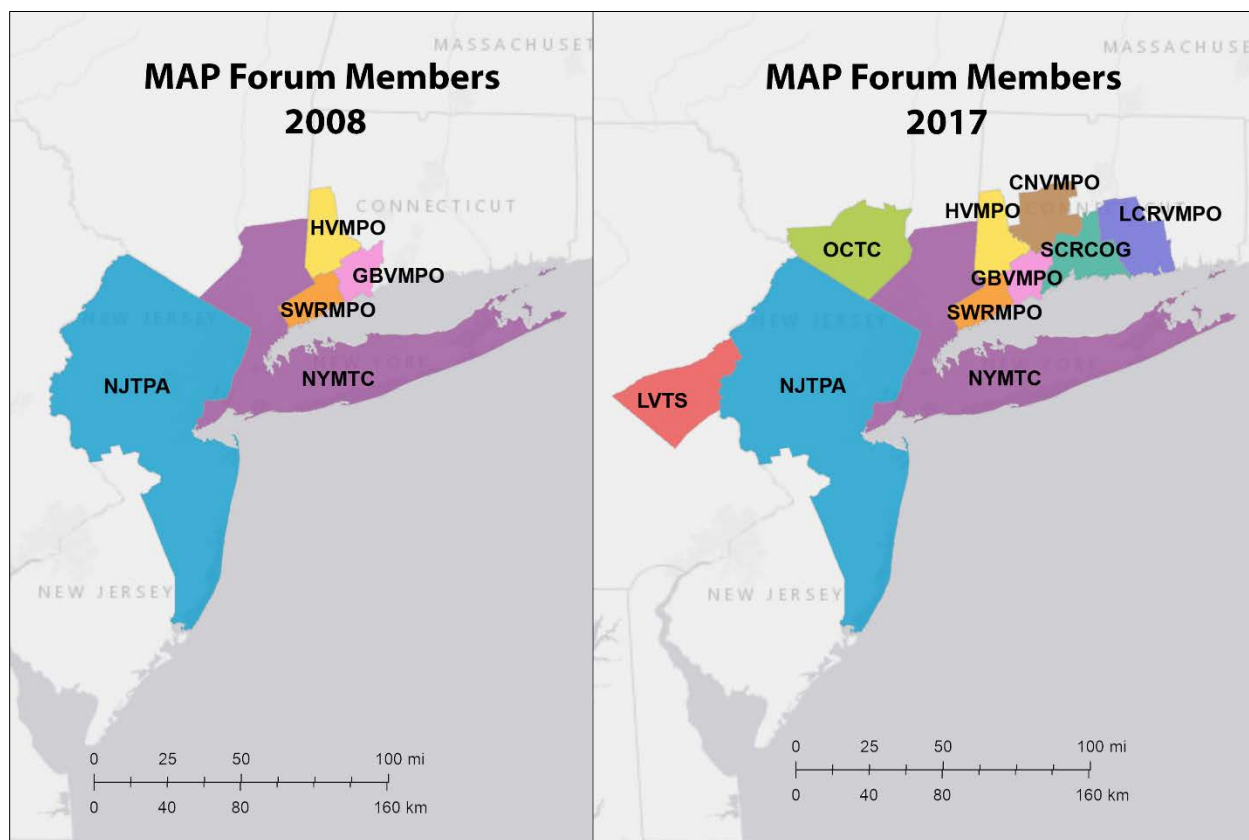
In January 2008, the New York Metropolitan Transportation Council (NYMTC), the North Jersey Transportation Planning Authority (NJTPA), the South Western Region MPO (SWRMPO), the Greater Bridgeport/Valley MPO (GBVMPO), and the Housatonic Valley Council of Elected Officials approved an MOU, establishing the MAP Forum. This MOU established a commitment among the MPOs to coordinate the following planning activities and work products:

- Unified planning work program (UPWP)
- Travel demand modeling
- Long-range transportation plan (LRTP)
- Transportation improvement program (TIP)
- Air quality state implementation plan (SIP) conformity

The agreement also stipulated that MAP Forum members would hold an annual meeting of executive directors, key managers, and interested policy board member agency representatives; communicate informally and share documents to achieve plan consistency; and participate to the extent practicable in other members respective transportation planning processes.

In 2017, MAP Forum members revised the MOU to account for changes in boundaries, designations, and names of member MPOs, as well as to include new members: the Central Naugatuck Valley Region MPO (CNVRMPO), the South Central Region Council of Governments (SCRCOG), Lower Connecticut River Valley MPO (River MPO), Orange County Transportation Council (OCTC), and Lehigh Valley Transportation Study (LVTS). Figure 6 illustrates how these changes affected the geographic extent of the MAP Forum.

Figure 6. The geographic extent of the MAP Forum in 2008 vs. 2017 (Sources: HEPGIS, Esri, HERE)



The revised MOU carries forward the commitments of the 2008 MOU and adds commitments to jointly develop a “metropolitan region” overview section to use in each member’s LRTP and TIP. However, both MOUs maintain that participation is voluntary and to the extent practicable.

### Collaborative Activities

The MAP Forum met annually from 2008 through 2017. Starting in 2018, the forum began meeting twice a year: once in spring and again in autumn. Specific meeting topics have included freight planning, sustainability planning, transit planning, modeling, and scenario planning, among others.

These meetings have served as a mechanism to ensure opportunities for information exchange and discussion of ideas. They facilitate relationship-building and allow members to explore joint needs and potential areas for collaboration in the foreseeable future. Additionally, members also routinely communicate informally at the staff level, including sharing data and drafts of work products, and occasionally present information at other members’ board or committee meetings.

NYMTC and NJTPA serve as “anchor members” that are able and motivated to provide the administrative support necessary to sustain coordination activities. This enables and incentivizes the participation of smaller MAP Forum MPOs. NYMTC and NJTPA also have staff specializations and knowledge that help broaden the MAP Forum discussions to better prepare for emerging issues.



In 2017, the MAP Forum created a Multi-State Freight Working Group to share information and formulate freight planning strategies. This group has met twice a year since November 2017. The first meeting included defining the charge to the group and charting roles and objectives. The next two meetings (April and October 2018) subsequently discussed regional freight activities (such as the Naugatuck Inland Port and Intermodal Transportation Hub), updates on freight planning activities by state DOTs and federal agencies, and a discussion of future Working Group priorities.

At its December 2018 meeting, the MAP forum resolved to establish a Transformative Technologies Working Group to consider the potential effects of emerging technologies on travel demand modeling, land-use patterns, and transit use, and to consider collaborations with utility companies or other nontraditional partners.

### Joint Work Products

In 2009, MAP Forum members collaborated on a study of truck stops and rest areas across the original coordination area (NYMTC 2009). This study evaluated and provided recommendations for enhancing existing, formal and informal, truck services as well as for providing new services across the tri-state area.

In 2013, the Federal Highway Administration commissioned the *Post Hurricane Sandy Transportation Resilience Study in NY, NJ, and CT*. This study brought together the departments of transportation from New York, New Jersey, and Connecticut and four MAP Forum MPOs to analyze transportation system vulnerabilities to extreme weather events across the tri-state metropolitan area (ten Sietfhoff et al. 2017).

### Performance Measurement

According to multiple senior staff members, the MAP Forum MPOs have not, to date, established Forum-wide performance metrics, measures, or targets in response to state or federal requirements or interregional goals. However, subsets of MAP Forum members have coordinated on target setting for PM3 performance measures.

Representatives of multiple MPOs shared the idea that the institutional complexity, as well as wide variation in urbanization and transportation conditions, across the MAP Forum coordination area made it infeasible to establish Forum-wide targets for federally required performance measures. They expressed concern that Forum-wide targets would make it more difficult identify MPO-specific responses to improve local conditions.

Because every MAP Forum MPO planning area contains portions of multiple urbanized areas, subsets of MAP Forum members are coordinating their target setting activities. For example, the New York Metropolitan Transportation Commission, the North Jersey Transportation Planning Authority, the Orange County Transportation Council, and the South Western Region MPO have coordinated PM3 targets with the Delaware Valley Regional Planning Commission (a non-MAP Forum MPO); the DOTs from New York, New Jersey, and Connecticut; and FHWA Divisions from New York and New Jersey (NJTPA 2017).

NJTPA staff members expressed interest in collaborating with other MAP Forum members to develop system performance, reliability, safety, air quality, freight, and asset management metrics. LVPC staff members indicated that transportation agencies across Pennsylvania have coordinated their performance management efforts. The staff members have shared the resultant performance measures with the MAP Forum and are in the process of figuring out the best way to coordinate with other MAP Forum members.

During the MAP Forum's annual meeting in December 2018, the members discussed the prospects of developing Forum-wide measures that would complement existing federal

measures. The MAP Forum Work Program also discusses the creation of a Forum-wide dashboard as a communication and data sharing mechanism for performance measures and asset management (2018). Multiple MPO staff members emphasized that the MAP Forum made collaboration on shared performance measures more likely since the necessary collaborators were already at the table.

### Factors Limiting Cooperation

The MAP Forum is a voluntary initiative and is not supported by a formal governance structure or dedicated funding. Member MPOs have planning area populations ranging from nearly 13 million to less than 200 thousand, and the two largest MPOs, NYMTC and NJTPC, have much larger budgets and staff sizes than the other MPOs. Multiple MPO staff members report that additional funding and staff capacity would enhance coordination.

Because the MAP Forum includes portions of four different states, variations in state requirements and expectations for MPOs can also limit coordination. Some states grant MPOs more autonomy to pursue activities that go beyond federal requirements than others. Meanwhile, differences in state timelines for planning processes mean member MPOs cannot easily synchronize their planning and programming activities.

### Noteworthy Practices

- MAP Forum meetings provide regular opportunities to learn about emerging issues, develop an awareness of the perspectives of neighboring MPOs, and discuss shared priorities.
- The range of populations and organizational capacities of the member MPOs provide opportunities for higher capacity MPOs to supplement the expertise of lower capacity MPOs.
- Having a formal commitment to coordinate and collaborate—without creating a new formal governance mechanism—reduces the administrative burden for member MPOs from different states.
- Having open lines of communication helps member MPOs respond to new funding opportunities and select better projects.

*Table 7. Key components of the New York Metropolitan Area Planning Forum coordination area*

State	MPO	Counties	Planning Area Extent (sq. mi.)	2017 Pop. Est.	UZAs
New York	Orange County Transportation Council	Orange	837	382,226	Middletown, NY; Poughkeepsie-Newburgh, NY-NJ (partial)
New York	New York Metropolitan Transportation Council	Nassau; Suffolk; Bronx; Kings (Brooklyn); New York (Manhattan); Queens; Richmond (Staten Island); Putnam;	2,726	12,893,600	New York-Newark, NY-NJ-CT (partial); Bridgeport-Stamford, CT-NY (partial); Danbury, CT-NY (partial)



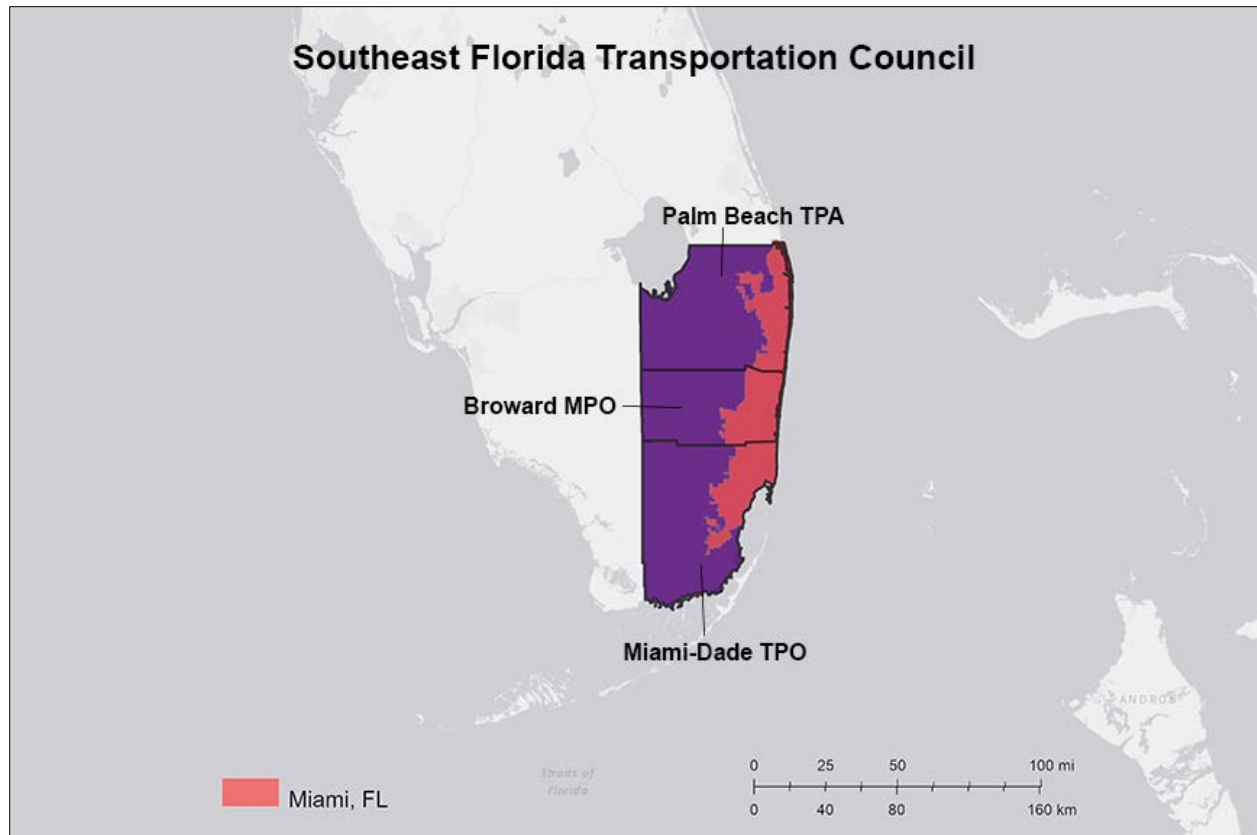
State	MPO	Counties	Planning Area Extent (sq. mi.)	2017 Pop. Est.	UZAs
		Rockland; Westchester			
New Jersey	North Jersey Transportation Planning Authority	Bergen; Hudson; Passaic; Middlesex; Monmouth; Ocean; Somerset; Union County; Essex; Hunterdon; Morris; Sussex; Warren	4,410	6,800,589	New York-Newark, NY-NJ-CT (partial); Allentown, PA-NJ (partial); Philadelphia, PA-NJ-DE-MD (partial); Twin Rivers-Hightstown, NJ (partial); Trenton, NJ (partial)
Pennsylvania	Lehigh Valley Transportation Study (hosted by Lehigh Valley Planning Commission)	Lehigh; Northampton	725	669,899	Allentown, PA-NJ (partial)
Connecticut	Housatonic Valley MPO (hosted by Western Connecticut COG)	Fairfield (partial); Litchfield (partial)	337	230,969	Danbury, CT-NY (partial); Bridgeport-Stanford (partial)
Connecticut	South Western Region MPO (hosted by Western Connecticut COG)	Fairfield (partial)	216	381,901	Bridgeport-Stamford, CT-NY (partial)
Connecticut	Greater Bridgeport and Valley MPO (co-hosted by Connecticut Metropolitan COG and Naugatuck Valley COG)	Fairfield (partial); New Haven (partial)	203	413,771	Bridgeport-Stamford, CT-NY (partial)
Connecticut	Central Naugatuck Valley Region MPO (hosted by	Litchfield (partial); New Haven (partial);	363	284,726	Waterbury, CT (partial); Bridgeport-Stamford, CT-NY (partial); Hartford, CT

State	MPO	Counties	Planning Area Extent (sq. mi.)	2017 Pop. Est.	UZAs
	Naugatuck Valley COG)	Hartford (partial)			(partial); New Haven, CT (partial)
Connecticut	South Central Regional COG	New Haven (partial)	377	596,467	New Haven, CT (partial); Hartford, CT (partial); Bridgeport-Stanford, CT-NY (partial)
Connecticut	Lower Connecticut River Valley MPO (hosted by Lower Connecticut River Valley COG)	Middlesex; New London (partial)	444	173,196	Hartford, CT (partial); New Haven, CT (partial); Norwich-New London, CT-RI

## Southeast Florida Transportation Council

The Southeast Florida Transportation Council (SJVRPC) coordination area is comprised of the three southernmost mainland counties in Southeast Florida, with a contiguous combined planning area of more than 5,000 square miles and an estimated population of more than six million residents. The coordination area name refers to a joint policy board established through an interlocal agreement among the three MPOs responsible for planning in the Miami urbanized area (SEFTC ILA 2006). Since 2006, various transportation, environmental, and economic issues have motivated these MPOs and their partners to collaborate on long-range multimodal transportation planning.

Figure 7. Constituent MPO planning areas and the urbanized area of the Southeast Florida Transportation Council coordination area (Sources: HEPGIS, Esri, HERE)



### Issues Motivating Collaboration

Low density development patterns and historically auto-centric transportation investments present challenges for mobility and transportation improvements across Southeast Florida. These conditions are further reinforced by a growing population: the tri-county area is projected to increase by 1.4 million residents between 2010 and 2040 (SEFTC 2015a).

In 2014, Transportation for America classified Southeast Florida as the fourth most dangerous metro area in the U.S. for pedestrians because of the high rate of pedestrian deaths per capita (SEFTC 2015a). Consequently, SEFTC's MPOs recognize that investments in multimodal transportation are necessary to improve safety for all road users, encourage residents to consider alternatives to car trips, and reduce first mile/last mile challenges.

Because of its geographic location, Southeast Florida is considered "the gateway to the Americas," serving as a space where goods are moved between the U.S., Central, and South America (SEFTC 2015a). The region processes about 40 percent of total U.S. exports to Latin America. An increase in imports and exports in the region will place greater demand on existing infrastructure to move goods, including highways, seaports, airports, and rail systems (SEFTC 2015a). Consequently, the coordination area MPOs recognize that the region needs to update existing systems to accommodate a greater volume of shipments.

The coordination area MPOs recognize that they will need to collaborate to implement consistent strategies that will protect transportation investments from the impacts of extreme weather events. As such events continue to impact the region, water management

becomes increasingly important in implementing resilient and adaptable transportation investments.

More than one-quarter of all households in the coordination area have annual incomes of less than \$25,000 (SEFTC 2015a). Furthermore, the economy of Southeast Florida is overly dependent on industries tied to population growth, which leads to dramatic boom-and-bust cycles (SEFRPC 2013). The top three industries are retail trade, health care and social assistance, and accommodation and food service (SEFTC 2015a). SEFTC's MPOs are interested in addressing these challenges by increasing capacity for trade, which requires regional investments in infrastructure that supports greater capacity for travel and movement of goods. Furthermore, the MPOs and a wide range of public- and private-sector partners have identified multiple objectives for growing the economy and encourage economic competitiveness, including growing Southeast Florida's capacity to serve as a global hub, supporting innovation clusters, and encouraging an entrepreneurial culture (SEFRPC 2013).

### Formal Commitments

In 2000, the U.S. Census Bureau redefined the boundaries of the Miami Urbanized Area to include parts of Palm Beach, Broward, and Miami-Dade County. This required the three existing countywide MPOs to coordinate their long-range transportation planning processes. Then, in 2005, Florida updated its statutes to authorize any MPO to establish an interlocal agreement for collaborative planning with any other MPO in the state and required all MPOs that share planning authority for an urbanized area to prepare a joint list of regionally significant projects (Florida Statutes [§339.175\(6\)\(j\)](#); [§339.175\(8\)\(b\)](#)).

Following several years of informal coordination, the three Southeast Florida MPOs created the SEFTC through an interlocal agreement in January 2006 (SEFTC ILA 2006). This agreement stipulates that the SEFTC will develop a joint LRTP, processes for prioritizing projects and public involvement, and performance measures to gauge the effectiveness of coordination activities. It designates the chairs of each MPO as voting members, requires unanimous votes to pass motions, directs the council to meet quarterly, charges the directors of each MPO with implementing SEFTC directives, and establishes a conflict resolution process, among other provisions.

### Collaborative Activities

Since its establishment, the SEFTC has typically met two to four times per year. In these meetings, council members discuss regional transportation plans, project prioritization, transit and freight systems, public involvement, performance measures, and transportation improvement programs for the tri-county coordination area (SEFTC 2019a).

The SEFTC has also created a Regional Technical Advisory Committee and four subcommittees: Modeling, Public Participation, Freight Advisory, and Transportation System Management and Operations (SEFTC 2019b). These staff-level coordinating committees generally meet quarterly and provide recommendations to SEFTC on technical matters (SEFTC 2019a). They include representatives from the Southeast Florida MPOs, state agencies, transit agencies, port authorities, and regional planning councils.

Since 2014, the three MPOs have jointly hosted an annual Safe Streets Summit that brings together local and regional stakeholders to discuss active transportation and mobility topics in a regional context (Miami-Dade TPO, Broward MPO, and Palm Beach TPA 2019). The MPOs enlist speakers from around the country to present innovative strategies that can help advance regional transportation goals. The event also serves as a training and information

sharing opportunity, where attendees can connect with others across Southeast Florida, including counterparts in other cities to discuss challenges and solutions.

### Joint Work Products

SEFTC adopted its first joint LRTP, the *Southeast Florida Regional Transportation Plan 2035*, in 2010 (SEFTC 2010). This plan includes goals, objectives, and measures of effectiveness for the combined planning area and presents information about major funded projects across the coordination area. SEFTC adopted a new version of this plan, the *Southeast Florida Regional Transportation Plan 2040*, in 2015, with updated goals, objectives, and measures and an expanded focus on transit, bicycle and pedestrian mobility, freight, and operations (SEFTC 2015a).

The MPOs share responsibilities for developing these joint LRTPs, with one MPO serving as the lead on an alternating basis. Palm Beach TPA led the original process, Miami-Dade TPO led efforts for the second version of the plan, and Broward County MPO is managing the next plan update, scheduled for adoption in 2020.

Periodically, SEFTC adopts lists of prioritized projects that qualify for Florida's Transportation Incentive Program Priority Projects funding. The latest version covers Fiscal Years 2018–2022. It identifies seven projects that are of high priority for the coordination area, including rapid transit corridors, regional rail improvements, an intermodal station expansion, multimodal corridor improvements, ramps to a transit terminal, and a road widening project (SEFTC 2017).

Additionally, the SEFTC MPOs have collaborated with the Florida Department of Transportation (FDOT) on a freight plan for the coordination area (Cambridge Systematics 2014). The original plan analyzed the freight system in Southeast Florida and provided recommendations for key freight infrastructure projects to include in SEFTC's 2035 LRTP. The updated version of plan summarizes progress to date and includes project recommendations for SEFTC's 2040 LRTP.

In 2015, the SEFTC MPOs and the Monroe County, Florida, Planning and Environmental Resources Department secured funding from the Federal Highway Administration for a climate resilience pilot study. The resultant study examined the impacts of more rainfall, sea level rise, and saltwater intrusion on existing infrastructure and provided planning and programming recommendations to minimize hazard risks (Parsons Brinckerhoff 2015).

### Performance Measurement

The SEFTC MPOs have adopted two joint LRTPs. The most recent version includes SEFTC-wide goals, objectives, and measures of effectiveness compiled from the MPOs respective LRTPs (SEFTC 2015a). In 2015, SEFTC prepared a technical memorandum on SEFTC-wide goals, objectives, and measures of effectiveness (SEFTC 2015b).

This memo refines goals identified in the previous joint LRTP by gathering performance management guidance material from national, state, and local entities, including the Federal Highway Administration, the Federal Transit Administration, FDOT, the Florida Department of Economic Opportunity Strategic Plan for Economic Development, and 2040 LRTP Goal and Objectives (preliminary or finalized) for all three MPOs in the region. Finally, it provides potential measures of effectiveness for goals and objectives in the most recent joint LRTP plan, which are informed by FDOT performance measurement activities, the SEFTC Outcomes Assessment Annual Report, technical advisory committee members, and citizen input.

SEFTC used these performance measures to prioritize regional transportation projects (SEFTC 2015a). For the prioritization process, MPO staff rated projects based on criteria developed for each SEFTC-wide goal.

The SEFTC MPOs adopted their most recent individual LRTPs in 2014, prior to the final federal regulations for PM1, PM2, and PM3 performance measures and the SEFTC-wide goals, objectives, and measures. The Miami-Dade MPO and Palm Beach MPO LRTPs feature performance measures included in the joint LRTP. The 2040 Broward MPO LRTP mentions that performance measures are in the works and identifies starting points for performance targets (Broward MPO 2014).

Additionally, SEFTC collaborated with FDOT to test mobility performance measures on a county level. The process served as a pilot program for measuring select mobility performance measures identified by FDOT. These performance measures are typically calculated and reported at a state level; however, this pilot was the first instance of measuring county performance (SEFTC 2015a).

### Factors Limiting Coordination

While SEFTC MPOs are responsible for planning across a single urbanized area, the coordination area is split between two FDOT districts and two regional planning councils. According to multiple MPO staff members, reporting to different FDOT districts adds a layer of bureaucratic complexity to the process of developing shared goals and priorities, and having multiple regional planning agency partners provides both opportunities for interregional coordination and challenges associated with building consensus.

While all three counties have local-option funding sources to supplement federal and state MPO funding, these sources do not have the same permissible uses. In some instances, this can make it more difficult for the MPOs to pursue shared priorities.

### Noteworthy Practices

- SEFTC illustrates how multiple neighboring or proximate MPOs can use their respective individual LRTP processes as a springboard for a joint LRTP.
- By aligning their long-range planning schedules, the SEFTC MPOs have maximized their opportunities to share information, harmonize strategies, and speak with a unified voice.
- By formalizing a collaborative relationship through an intergovernmental agreement, the SEFTC MPOs have put themselves in a position to secure additional state funding and have sent a powerful signal to state and federal partners as well as their respective constituencies that they are committed to working together to find mutually beneficial solutions.
- The regular meetings of the SEFTC and its coordinating committees provide board and staff members with a convenient mechanism for learning about projects, programs, and initiatives across coordination area.
- Sharing information about collaborative efforts through a publicly accessible website heightens transparency.

*Table 8. Key components of the Southeast Florida Transportation Council coordination area*

MPO	Counties	Planning Area Extent (sq. mi.)	2017 Pop. Est.	UZA
Broward MPO	Broward	1,225	1,935,878	Miami

Miami-Dade TPO	Miami-Dade	2,020	2,751,796	Miami
Palm Beach TPA	Palm Beach	1,980	1,471,150	Miami

## References

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## Glossary

**Agreement:** A document signed by official representatives of two more MPOs specifying roles and responsibilities for their respective organizations. This agreement may be a legally binding compact or contract or it may be a non-legally binding memorandum of understanding (MOU), memorandum of agreement (MOA), or letter of intent.

**Collaboration:** A joint process of creation.

**Collaborative Planning Events:** Joint or cosponsored workshops, seminars, summits, visioning exercises, open houses, or other activities that bring together stakeholders beyond MPO policy board or coordinating committee members to discuss interregional issues or to formulate or refine interregional strategies.

**Consultation:** A process in which one or more parties confer with other identified parties in accordance with an established process and, prior to taking action(s), considers the views of the other parties and periodically informs them about action(s) taken ([23 CFR §450.104](#)).

**Cooperation:** A process in which two or more parties involved in carrying out the transportation planning and programming processes work together to achieve a common goal or objective ([23 CFR §450.104](#)).

**Coordination:** The cooperative development of plans, programs, and schedules among agencies and entities with legal standing and adjustment of such plans, programs, and schedules to achieve general consistency, as appropriate ([23 CFR §450.104](#)).

**Interregional:** Pertaining to two or more overlapping, adjacent, or proximate metropolitan areas, or MPO planning areas.

**Joint Policy Board or Coordinating Committee:** A body created to discuss, coordinate, or decide policy of mutual interest to two or more MPOs. A joint policy board or coordinating committee does not replace the statutorily required policy board of any constituent MPO.

**Measure:** An expression based on a metric that is used to establish targets and to assess progress toward achieving the established targets ([23 CFR §450.104](#)).

**Metric:** A quantifiable indicator of performance or condition ([23 CFR §450.104](#)).

**Multi-MPO Coordination Area:** Two or more adjacent or proximate MPO planning areas with a history of sustained coordination or collaboration between or among MPOs.

**Statutorily Defined MPO Work Products or Processes:** Federal statutes define the long-range transportation plan (LRTP, also known as the metropolitan transportation plan (MTP) or regional transportation plan (RTP)), the public participation plan (PPP), the transportation improvement program (TIP), and the unified planning work program (UPWP) as essential components of metropolitan multimodal transportation planning. MPOs must develop each of these products through statutorily defined processes. Additionally, MPOs in Transportation Management Areas must develop a congestion management process (CMP). See [23 USC §134](#) and [23 CFR §450.308](#).

**Shared Data Product:** A shared data product is an interregional data set intended to provide a uniform basis for analysis for multiple MPOs. Examples include interregional GIS products, interregional demographic data sets, and interregional economic data sets.

**Target:** A quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the Federal Highway Administration ([23 CFR §450.104](#)).

**Urbanized Area (UZA):** A densely settled area with a population of 50,000 or more, as designated by the U.S. Census Bureau. These boundaries can be adjusted per [23 CFR §470.105](#).